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Universidad Tecnológica del Suroeste de Guanajuato

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Alentar la interlocución de la Comunidad Científica Internacional con otros centros de estudio de México y del exterior y promover una amplia incorporación de académicos, especialistas e investigadores a la publicación Seriada en Nichos de Ciencia de Universidades Autónomas - Universidades Públicas Estatales - IES Federales - Universidades Politécnicas - Universidades Tecnológicos - Institutos Tecnológicos Federales - Escuelas Normales - Institutos Tecnológicos Descentralizados - Universidades Interculturales - Consejos de CyT - Centros de Investigación CONACYT.

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#### Congreso Interdisciplinario de Cuerpos Académicos

Volumen III

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# Congreso Interdisciplinario de Cuerpos Académicos

Universidad Tecnológica del Suroeste de Guanajuato

Septiembre, 2018.

#### **Prefacio**

La Universidad Tecnológica del Suroeste de Guanajuato y sus capítulos de Ciencias Agropecuarias, Ciencias Naturales y Exactas, Ciencias de Ingeniería y Tecnología, Educación, Ciencias Sociales y Administrativas, Experiencias en la Formación de Cuerpos Académicos y Redes, CICA 2018. Así el CICA tiene como objetivo general Crear un foro para académicos e investigadores provenientes de diferentes países para presentar y discutir resultados y propuestas en relación a las áreas temáticas del congreso, promoviendo y fortaleciendo la divulgación de la investigación y desarrollo tecnológico de los grupos colegiados y de investigación académica y/o cuerpos académicos de las instituciones de educación superior, desde una perspectiva global. Este volumen III-2018 contiene 658 participaciones arbitradas que se ocupan de estos asuntos en Ciencias Agropecuarias, Ciencias Naturales y Exactas, Ciencias de Ingeniería y Tecnología, Educación, Ciencias Sociales y Administrativas, Experiencias en la Formación de Cuerpos Académicos y Redes, elegidos de entre las contribuciones, reunimos algunos investigadores y estudiantes de posgrado, a partir de 32 estados de México. Quisiéramos agradecer a los revisores anónimos por sus informes y muchos otros que contribuyeron enormemente para la publicación en éstos procedimientos repasando los manuscritos que fueron sometidos. Finalmente, deseamos expresar nuestra gratitud a la Universidad Tecnológica del Suroeste de Guanajuato en el proceso de preparar esta edición que podrás consultar en http://ecorfan.org/ collections.php

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#### 1 Ciencias Agropecuarias y Biotecnología

Composición química y la digestibilidad "in vivo, in Vitro e in situ" de Enterolobium cyclocarpun y Brosimun alicastrum

Chemical composition and digestibility "in vivo, in vitro and in situ" of Enterolobium cyclocarpun and Brosimun alicastrum

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#### **Abstract**

Study was made in Cabo Corrientes locality from Chacala, where species in study have natural distribution. Was studied "*in vivo*, *in Vitro* and *in situ*" digestibility. Chemical proximal analysis was made. Cellular wall components where determined: NDF, ADF, lignin as well as calcium, phosphorus, potassium, nitrogen, magnesium, Sulphur and copper. Differences between individual treatments where analyzed through multiple comparisons trial LSMEANS (SAS Inst., 1990). Obtained results in percent for *E. cyclocarpun* and for *Brosimun alicastrum* were: humidity 3.87 and 2.03, ashes 4.25 y 5.52, protein 22.90 and 10.88, grease 1.29 and 1.07, fiber 7.24 and 13.18, FNED 60.45 and 67.02, dry matter 96.13 and 97.97, organic matter 95.75 and 94.48, NDF 34.58 and 19.37, ADF 31.28 and 17.25, lignin 25.66 and 12.25, cellulose 5.62 and 4.25, hemicellulose 3.30 and 2.87, calcium 0.070 and 0.22, phosphorus 0.090 and 0.30, potassium 1.34 and 0.86, nitrogen 3.66 and 1.74, magnesium 0.78 and 0.76, Sulphur 0.22 and 0.24 and copper 0.55 and 0.55.

Fodder Trees, Sheep, Digestibility

Análisis canónico discriminante en la caracterización de frutos de chinene (*Persea schiedeana* Nees)

### Canonical discriminant analysis in fruit characterization of chinenes (*Persea schiedeana* Nees)

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#### **Abstract**

Objectives, methodology: The aim of this work was detect the relationships between several quality fruit parameters in chinene fruits, by mean of the canonical discriminant analysis, in order to enhance its commercial value and contribute to preserve this natural resource endemic from Veracruz, México. The Chinene fruits were collected in the central-east region from Veracruz State. The fruis were arranged in 16 groups according to color fruit and its collection site. The evaluated variables were the fruit (PF), flesh (PPUL) skin (PCAS) and seed (PS) weights; the slim (DDF), medium (DMF) and thicker (DGF) diameter; the seed length (LS) and diameter (DS); Chinene fruit length (LCH); flesh (DPULP) and skin (GCAS) thickness. Contribution: The results of the canonical discriminant analysis shown two canonical functions (FCD's). The FCD1 explain 42% of the variability and this were influenced by commercial desirables characteristics of fruit, including very long fruits, low weight of seeds and a generous flesh, although the general weight of chinene was low, the skin colour was predominantly purple, black and brown, and it is located in Ixhuatlan and Calcahualco, Veracruz. The FCD2 grouped small and ovoid fruits, similar qualities to reported for chinenes developed at lower altitudes (< 800 meters over sea level). Therefore, the altitude may be a factor that directly influences the chinene fruit quality.

Fruit quality parameters, Fruit morphology, Fruit analysis, non-traditional fruits

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# Evaluación de coliformes totales en sustrato de olote en la región del valle del Mezquital

#### Evaluation of total coliforms in cob substrate in the Mezquital valley región

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#### **Abstract**

The CT are bacteria that do not form spores and are facultative aerobic and anaerobic gram-negative, ferment lactose to a wide range of temperature. This group of microorganisms are indicator of bacterial contamination. This work was conducted at the Universidad Politécnica de Francisco I. Madero in two stages: S – SU, A - W, in order to evaluate the presence of total coliforms in different combinations of innoculous cob and from contaminated agricultural soil of the agricultural area of the Valle del Mezquital. A completely random design was established to homogenize the edaphoclimatic characteristics of substrates, subsequently the presence of CT was assessed in bile agar plates and violet red, under the standard 110-SSA1-1994 and the NOM-113-SSA1-1994. The results obtained that in treatments where cob are added, the UFC's CT decreases significantly, otherwise in witnesses (T4 and T5) where the incidence of such bodies was higher. The addition of substrate of cob allows to reduce the presence of microbiological organisms such as CT. The aggregation of cob is a viable alternative for use as a substrate and despite its high water retention capacity does not represent a risk to the proliferation of pathogenic organisms that put at risk the safety of the crops.

Substrate of cob, total coliforms, soil, pollution

#### Análisis de calidad en semilla de maíz durante su almacenamiento

#### Quality analysis in corn seed during storage

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**Abstract** 

The seed quality of three simple corn hybrids was analysed, after one year of storage at 5°C and 14% humidity. The objective was to establish the utility of the tests: Index of emergency speed (IES), length of plumule (LP), electrical conductivity (EC) and pH of the exudate to seeds (pH); non-routine in the analysis of seed quality. Before storing the seed, it was analysed to Tz viability, standard germination, IES, LP, EC and pH were determined. After one year of storage, these tests were repeated. Finding the values of IES, EC, and pH correlated with the percentages of germination and viability. The determination of electrical conductivity and pH of the seed exudate could be appropriate to detect alterations produced during the process of deterioration of maize seed. These tests can be used routinely, since they are fast, low cost and non-destructive tests. According to the seeds quality, it was maintained to such an extent that the standard germination was even increased.

#### Conservation, Electrical conductivity, pH

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Efecto de las bajas temperaturas en las características fisicoquímicas del aguamiel (Agave salmiana Xamini)

Effect of low temperatures on the physicochemical characteristics of aguamiel (Agave salmiana Xamini)

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### **Abstract**

The "maguey pulquero" or "manso" agave salmiana Xaminí is considered the most representative plant of the central plateau of Mexico and its main product is the mead, agave juice, or sweet sap. Among the varieties found, the Agave salmiana Xamini maguey was selected because it is the one with the highest yield and the most adaptable to the climatic conditions of the region in 4 to 8 years. The objective of this work was to characterize the physicochemical properties for the conservation of mead. The methodology consisted in subjecting the aguamiel to different temperatures under zero degrees Celsius for a period of 16 h, after which the samples were thawed after the proposed time, analyzing the fresh mead. By means of the application of a randomized experimental design and using the statistical test Chi square ( $X^2$ ), in order to verify if there are significant differences in the physicochemical characteristics with respect to the thermal treatment of the aguamiel (Agave salmiana Xamini). It was found that there is not significant difference ( $\alpha = 0.05$ ) when applying the different thermal treatments.

Aguamiel, Agave, Conservation

Adaptación y rendimiento del girasol (*Helianthus annuus*), bajo condiciones de temporal en Zapopan, Jal.

# Adaptation and yield of sunflower (Helianthus annuus), under rainfed conditions in Zapopan, Jal.

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#### **Abstract**

The high demand for important sources of food from other latitudes, in this case the sunflower, of which Mexico imports more than 80%, and which has been improved in other countries, gives rise to the knowledge of agronomic behavior in our western region. Therefore, the capacity of adaptation and performance of five sunflower hybrids in Zapopan, Jalisco, reported as high oleic content was assessed. Presenting earliness the hybrids P63HH111 with 61.66 and P63HE60 with 64.66 days to flowering. For the variable grain yield the hybrids P64HH98, P64HE118 and COBALT II with 3907.1, 3844.3 and 3591.2 tonha<sup>-1</sup> respectively, considered competitive under the conditions of temporal and low fertilization. The treatment P63HE60 presented lower yield probably to the presence of the disease Esclerotia

Oleic Acids, Adaptation, Genetic Breeding Sunflower

Evaluación de distintos sustratos mezclados con harina de cladodios de nopal (*Opuntia ficus-indica*) en la germinación de semillas de brócoli (*Brassica oleracea var. Itálica*)

Evaluation of different substrates mixed with cactus cladode flour (*Opuntia ficus-indica*) in the germination of broccoli seeds (Brassica oleracea var. Italica)

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#### Abstract

In Mexican agriculture there are different materials, which can be used as means of germination or growth, also called substrate, for plants. It is rare that there is a substrate that meets all the physical, chemical and biological characteristics necessary in agriculture. This makes it necessary that the substrates used in the germination of the seeds are mixed with other materials to enrich them and adapt them to the needs of the crop. Through this work we present the evaluation carried out with different substrates mixed with flour from the cactus cladodes waste to evaluate its effectiveness in the germination of broccoli seed. To carry out this study, a completely czar experimental design was used, where eight treatments with five repetitions each were evaluated. Likewise, the properties such as electrical conductivity, pH, and moisture retention capacity of the substrates under study were identified.

Substrates, Mixtures, Prickly Pear, Germination

## Resistencia antibiótica de estafilococos aislados de leche de vacas del municipio de Maravatio Michoacán

# Antibiotic resistance of staphylococci isolated from the milk of cows from the municipality of Maravatio Michoacán

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#### **Abstract**

The objective of the present work was to determine the antibiotic resistance of isolated staphylococci from cows milk of the municipality of Maravatio, Michoacán. The present work was carried out from September 2016 to January 2017, with 64 dairy herds from the municipality of Maravatio, Michoacán. 64 milk samples were obtained from the same number of herds of the aforementioned municipality. The identification of staphylococci was carried out through their colonial morphology, catalase test, Gram stain, coagulase test, mannitol test, gelatin and hemolysis. The antibiotic susceptibility test was carried out using the disk diffusion method on Mueller-Hinton agar with 34 staphylococcal strains, 25 (73.5%) of Staphylococcus aureus, and 9 (26.5%) of Coagulase Negative Staphylococci (S. epidermidis). It was found that of the 25 isolates of S. aureus, 100% had multiple resistance, being resistant to the 12 antibiotics tested. Observing greater resistance to Penicillin, Ampicillin and Trimetropin-Sulfamethoxazole (92%, 92% and 60% respectively) followed by a 52% resistance to dicloxacillin. As for the 9 isolates of ECN, 100% of these also showed multiple resistance as did S. aureus but in a lesser proportion (Penicillin 67%, Ampicillin 67% and Dicloxacillin 45%). However, they turned out to be more susceptible at the same time to the 12 antibiotics tested. It is concluded that Penicillin, Ampicillin and Dicloxacillin were the antibiotics to which both Staphylococcus aureus and Coagulase Negative Staphylococci showed greater resistance.

Antimicrobial resistance, Staphylococcus, Staphylococcus aureus, Staphylococcus Coagulase Negatives, Staphylococcus epidermidis

### Feocromocitoma en Caninos

### **Pheochromocytoma in Canines**

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#### **Abstract**

At the age of seven, canines are considered adults, from this age they are more predisposed to present diseases of different nature, there are no previous signs to prevent them. It is the case of Pheochromocytoma, is an endocrine tumor of the sympathetic nervous system, originates in canines from the chromaffin cells of the adrenal gland, the frequency of presentation is 0.01 to 0.13% in relation to the rest of the tumors. In this refers to a corpse of a canine, male, Creole, twelve years. The internal inspection saw a bulge in the abdominal vena cava of 3 cm. in diameter, which

Tumor (SNS), Pheochromocytoma, Age

## Características físico-químicas y perfil de ácidos grasos de dos cultivares de cacahuate de la Mixteca Poblana

## Physico-chemical characteristics and fatty acid profile of two peanut cultivars of the Mixteca Poblana

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### **Abstract**

In the Mixteca region there is not research about chemical characteristics and composition of the peanut ground in the area (mainly of the *Criollo* variety). The aim of this work was to determine the physical-chemical characteristics of peanut seed, to evaluate the quality of the oil and to identify and quantify the composition of total fatty acids (FA) of the oil. The samples analyzed were harvested in Huaquechula (H) and Tlapanalá (T). Using standardized procedures, the results obtained were: ethereal index,  $40.96\% \pm 23$ ,  $39.05\% \pm 4.19$ ; protein,  $24.98\% \pm 1.29$ ,  $22.96\% \pm 2.23$ ; ashes,  $2.15\% \pm 0.16$ ,  $2.03\% \pm 0.14$ ; humidity,  $4.20\% \pm 0.50$ ,  $3.8\% \pm 0.37$ . The quality of the oil was determined by three parameters: acidity index (mgKOH / g),  $0.25 \pm 0.05$ ,  $0.28 \pm 0.11$ ; peroxide index (meq O2 / Kg),  $2.87 \pm 1.08$ ,  $2.42 \pm 0.27$  and iodine index (g of I per 100 g),  $97.22 \pm 4.56$ ,  $99.50 \pm 3.25$ . The concentrations of FA (by chromatography) varied from 0.26 to 12.97 mg g-1 and from 0.24 to 36.91 mg g-1 of oil for T and H. The FA with the highest percentage for both regions was oleic, followed by linoleic, important for the stability of the oil.

### Peanut, Oil, Fatty Acids

Efecto de la aplicación de lixiviados de lombriz y ácidos húmicos en la producción de pimiento morrón (*Capsicum annuum* var. annumm)

## Effect of the application of earthworm and humic acid leaching in the production of red pepper (*Capsicum annuum* var. Annumm)

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#### **Abstract**

This research was carried out during 2017 in greenhouses of the Society of Producers of Ejido Urireo SPR de RL. The effect of the application via Drench of humic acids, earthworm leaching and the combination of these two, on the growth and height of the plant, number of flowers, buttons and fruits, polar and equatorial diameter, fruit weight and final production was evaluated. A completely randomized design was established with comparative bands and three repetitions. The results showed that for weekly growth no differences were found between treatments. The T3 excelled in plant of height and number of fruits, registering 225.2 cm of final height and 4.7 fruits (Tukey P> 0.05). In the number of flowers there were no differences, but in the number of buttons highlighting T2 = 3.8 and T3 = 3.9. Regarding fruit weight, polar and equatorial diameter, there were no differences between treatments except the control according to the Tukey test (P> 0.05). In production per  $m^2$  stood out the treatments of humic acids and combined T2 = 9.9 and T3 = 10.3 kg.m<sup>2</sup>. The results showed that the combined application of earthworm leaching and humic acids are a sustainable alternative to supplement pepper nutrition.

Greenhouse, Combined Fertilizer, Pepper

## Parámetros genéticos para pie de cría en ovinos de la raza katahdin

## Genetic parameters for breeading stock in sheep of katahdin race

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#### **Abstract**

The objective of this work was to observe the genetic parameters for breeding stock in sheep of the Katahdin breed, based on phenotypic characteristics and some productive parameters obtained through the records in order to select the animals that are most suitable for breeding. It was carried out in the ranch "El Chirimio" located in Acuitzio del Canje in the state of Michoacán, during the work records were obtained of the births of the females and of the weights of the calves at birth, the width measurements were also taken, The height and the height at the withers of the adult females, stallion and replacement males, also took the scrotal circumference of the males; equal with the objective of evaluating if they meet the characteristics of the race. With all these data that were collected, an average was taken, these results were compared with the literature and it was noted that both male and female animals do not comply with the standard weights of the breed and in the case of the females do not have the number of births per year, but this can be attributed to the neglect they have suffered from the animals for a long period of time, but leaving aside the weights of the animals and the number of births, in the case of the characteristics phenotypic animals meet the expectations of the katahdin breed, the conclusion reached is that the problem of animals to efficiently meet all the characteristics of the breed is carelessness on the part of the producer and the only way to improve these animals is to cover all the nutritional and management needs that they have in a timely manner.

Parameters, Genetic, Sheep, Breeading stock

## Ependimoma cerebral en caninos

## Brain ependymoma in canines

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#### Abstract

Some time ago, it was said that neoplasms of the Central Nervous System (CNS) were uncommon in domestic dogs, currently 3.0% are reported (Snyder et al., 2006). It is said that race and age are predisposing factors for the presentation of this type of tumors such as breeds: Canid Boxer, Goldern Retribver, Doberman Pincher, Scottish Terrier. (Park, 2003) .Pastor German and, English Pastor. Age after approximately 6 years (Meuten 2002). Ependymomas are soft, grayish or red tumors that may contain cysts or calcifications. This case was sent to the Animal Pathology Research Center (CIPA). They presented the corpse of a 6-year-old male Pitbull dog of color, 20 kg of weight, which presented vomiting, diarrhea, pain on palpation in lumbar area and generalized apathy, emission of urine with difficulty and sometimes with pain. Apathetic attitude and little active, does not present external parasites. euthanasia method acycromacin, pentobarbital and zolethyl. The macroscopic findings and microscopes are very important. The ependymoma is characterized by anaplastic changes, invasiveness and mitosis. Ependymoma is not always fatal, everything depends on good diagnosis, and the application of appropriate treatment.

Neoplasia (CNS) Ependymone, race, age

## Biocontrol de fitopatógenos e incremento del vigor en semillas de tomate (Solanum lycopersicum L.) por Bacillus thuringiensis y sus bacteriocinas

## Biocontrol of phytopathogens and increased vigor in tomato seeds (Solanum lycopersicum L.) by Bacillus thuringiensis and its bacteriocins

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#### **Abstract**

Entomopathogenic bacteria such as *Bacillus thuringiensis* (Bt) and/or its metabolites have been shown to be beneficial for the biocontrol of pests in agricultural crops. In this research, the antifungal potential of five Bt bacteriocins in vitro against F. oxysporum f.sp. lycopersici (Fol) and the effect of bacteriocins and the strains that produce them to stimulate germination (vigor) in tomato seeds (Solanum lycopersicum L. cv. Rio Grande) was determined. The antifungal activity of bacteriocins (100 µL) was determined by well diffusion method on dextrose potato agar (DPA) incubated at 30 °C for 7 days. Germination was evaluated in batches of seed treated by imbibition for 60 minutes at 28 °C in suspensions of Bt cultures (1x10<sup>7</sup> cells · mL<sup>-1</sup>) or bacteriocin solutions (500 U · mL<sup>-1</sup>), dried at 30-35 °C and allowed to germinate in total darkness at 28 °C for 96 hours. The germination (%) and also the length (cm), the vigor index and the fresh weight (µg) of the tomato shoots were registered and an principal component analysis (ACP) of the obtained results was carried out. The bacteriocins exerted a fungistatic effect on Fol (55-72 %), with greater effectiveness of thuricin H (m). The ACP indicated the greatest effect on germination by the bacteriocin tolworthcin 524 and the producing strain B. thuringiensis subsp. tolworthi, according to the registered value for the maximum vigor index in the tomato shoots. The strains of B. thuringiensis and their bacteriocins have the capacity to act as biocontrol agents of phytopathogens as fungi (Fol) and as germination stimulants in seeds of tomato type Solanum lycopersicum L. cv. Rio Grande.

Bactriocins, Bacillus thuringiensis, Antimicrobial, Phytopathogens

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Evaluación de cuatro sustratos sobre la producción de plántula de chile jalapeño (capsicum annuum)

# Evaluation of four substrates on the production of jalapeño pepper seedling (capsicum annuum)

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#### Abstract

In the production of vegetable seedlings it is very common to use substrates using peat (Peat moss). This substrate is organic from the partial decomposition of the organic matter of mosses of the genus Sphagnum. At the commercial level, a series of brands are offered to the market, where peat moss is the main substrate. However, not all substrates can produce high quality seedlings, which ensure a good development and high yield. Therefore, the present investigation has as objective to determine the best substrate in two varieties of jalapeño pepper, to obtain a high quality seedling. Two varieties of jalapeño pepper from the company Sakata Seed (Champion and Magno) and four types of substrates were used: Promix GTX, Promix FLX, Sunshine and Berger BM2. They were planted in unicel trays of 200 cavities, evaluating the speed evaluating the emergence speed (VG), emergence percentage (E), seedling size (LP), stem thickness (GT), number of leaves (NH) and percentage of root (PR) in the root ball. In all variables, significant differences were found between treatments and varieties ( $\alpha \le 0.01$ ). The Promix GTX substrate obtained the lowest values in the variables VG and E. In general, the highest vigor and emergence corresponded to the Berger BM2 substrate; as well as in the other variables (LP, GT, NH and PR). And the one that showed the least response was the Promix GTX substrate.

Chile Jalapeño, Substrates, Peat moss, Emergency speed, Emergency

## Producción de Estevia (*Stevia rebaudiana Bertoni*) mediante microorganismos en la Península de Yucatán

## Production of Stevia (*Stevia rebaudiana Bertoni*) by microorganisms in the Yucatan Peninsula

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### **Abstract**

The production of Estevia (Stevia rebaudiana Bertoni) mith microorganisms in the Yucatan Peninsula is aimed at the use and mycorrhizal bacteria during the process of organic production of the plant. The use of fungi and beneficial bacteria for the Organic Production of Estevia is significant due to a tail of the leaves and their glycosides have recently begun to be used as an important way as sweeteners, so organic production is considered as strategies for Prevention of health and improvement of it, especially for people with diabetes and with high degrees of obesity. The experiment was developed at the Universidad Tecnológica del Mayab. The Project Consists of Estevia Organic Production using mycorrhiza (*Glomus intraradices*) Bactocrop® bacteria (*Bacillus and Azospirillum*), 2 Estevia varieties (Morita 2 and Selection INIFAP) were used with three treatments each (Mycorrhiza, Bactocrop and control). The height of the plant is evaluated, yield in fresh and dry. The outstanding treatment was the INIFAP selection associated with mycorrhiza.

Estevia, Organic, Fungus, Bacteria

# Aislamiento y cuantificación de esclerocios de *Sclerotium cepivorum* en suelo contaminado: Mejoramiento de técnicas de determinación

## Isolation and quantification of sclerotia of *Sclerotium cepivorum* from contaminated soil: Improvement of determination protocol

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### **Abstract**

Objectives: To propose an improvement protocol to the detection and determination of the quantity of sclerotia presented in Sclerotium cepivorum contaminated field. Methodology: A bibliographical revision was made to propose a combined protocol to the isolation and quantification of sclerotia in soil. We compared the recovery efficiency of commercial saccharose versus ultrapure saccharose. Furthermore, a final step was added, the supernatant recovered at the end of the reported protocol was subjected to a vacuum or pressure filtration. Sterilized soil with known number of sclerotia was used as a control. Contribution: It was possible to standardized an improvement protocol for the determination of sclerotia in soil, the cost was reduced and the time of implementation with a recovering efficiency of 80%. Sclerotium cepivorum is the causal agent of white rot of anion and garlic; their resistance structures called sclerotia are latent for decades. The presence of 10-20 sclerotia/Kg of soil is able to cause the loss of the complete crop, the determination of sclerotia contamination is the first step to adequate treatment before sowing.

White rot of garlic, Sclerotium cepivorum, Sclerotia

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## Estudio preliminar de la repelencia de los ovinos a las garrapatas

## Preliminary study of the repellence of the sheep to the ticks

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#### **Abstract**

Objetive: A preliminary study was carried out on the repellency of sheep to ticks. To control this parasite, predators, physical means, chemicals, vaccines, selection of resistant animals and plants are used. However, the presence of ticks in sheep naturally is low. Therefore, a sampling was carried out in the state of Nayarit on 933 sheeps, 207 semi-hinged and 726 stabled and we found that the stabled sheep did not present ticks ( $P \le 0.05$ ) compared with the semi-inflamed sheep. With preliminary research data, we believe that pheromones from sheep can interfere with communication between *Amblyomma maculatum* and *Boophilus microplus* ticks.

### Sheep, Tick, Health

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# Conservación a largo plazo de *Gmelina arborea* por el método de crioconservación con crio-placas de Aluminio

# Long-term preservation of *Gmelina arborea* by the cryopreservation method with Aluminum cryo-plates

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#### **Abstract**

The Gmelina arborea is a species of Asian origin, however, is appreciated for its wood for its rapid growth. In addition, it is used in agroforestry systems and as a living fence. The objective of this work is to develop a method of long-term conservation of Gmelina arborea by the method of cryopreservation. In this work, the vitrification technique used by Yamamoto et al. (2015) to carry out the cryopreservation protocol of Gmelina arborea. The vitrifying solution was used for PVS3 plants (Plant Vitrification Solution 3: 50% glycerol + 50% sucrose), which is used for conservation under low temperature conditions, liquid nitrogen (NL) (-196  $^{\circ}$  C). With the development of this protocol, it is intended that genetic material of forest species, in this case of Gmelina arborea, be stored in germplasm banks in the long term.

## Forestry, Conservation, Liquid Nitrogen

## Aceite de higuerilla como inhibidor biológico en grana cochinilla (*Dactylopius coccus* Costa) para producción de nopal verdura

## Castor oil as inhibitor in spread cochineal (Dactylopius coccus Costa) plague in nopal

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### **Abstract**

Cochineal (*Dactylopius coccus* Costa) is an important plague in agroforest areas, being a problem for nopal vegetable production. In this investigation was evaluated *in vitro* the efect of castor oil as inhibitor of cochineal plague in nopal vegetable variety CAPENA f5 and its residually in cladodes before aplication. The treatments evaluated were seven: T1 crude oil; T2 crude oil and hexane (50:50); T3 crude oil and hexane (100:0), T4 refinaided oil and hexane (50:50), T5 water and soap (90:10); T6 water and soap (70:30) and T7 blank during 16 weeks. The phisicochemical test were humidity determination, ash, oil, acidity titulable (ascorbic acide) and pH after and before treatments for evaluate the residually. The results shown that the best treatment was crude oil 100 and 50% (T1 y T2) reduce the insect number and prevent the apread of these in cladodes of nopal vegetable in 100% as from week 8, in order to not show residual oil in nopales in coparation with the others treatments.

Cator oil, cochineal (Dactylopius coccus Costa), Nopal

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# Determinación del flujo de nutrientes en Biodigestores alimentados con excretas de ganado bovino lechero y porcino

# Determination of the flow of nutrients in Biodigesters fed with excreta from dairy and pig cattle

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### **Abstract**

Biodigesters represent an alternative to the management of residues of agricultural origin. The objective of this study was to evaluate the flow of nutrients within two biodigesters, one fed with bovine excrete and another with porcine excrete, and obtain the values of reduction of nutrients and contaminants in their effluents. The sampling of food, excrete, influents, effluents and biogas from the bovine and porcine area was carried out, from which the amount of nitrogen, phosphorus, potassium, in the feed, excrete and waters was evaluated; solids and chemical oxygen demand in wastewater; methane, carbon dioxide and oxygen in the biogas, this in order to provide useful information to develop technologies and knowledge that allow us to reduce pollutants from farms. In cattle, a reduction of the three nutrients in the excrete was obtained regarding the food, being significant (P < 0.05) in the case of nitrogen and potassium. The biodigester fed with bovine excrete significantly reduced (P < 0.05) the amount of incoming nitrogen with levels of 1.54 to 1.16 g / Kg. In the case of total solids and total dissolved solids they had a significant reduction (P <0.05), not in the case of suspended solids where the reduction of these did not reach a statistical significance. The chemical oxygen demand was reduced from 29000 to 17715 mg / L. The production of methane in the biodigester was 4,401 m3. In the case of pigs, the reduction of nutrients from the feed to the excrete did not reach a statistically significant difference (P < 0.05). In the effluent, the nitrogen obtained a reduction of 1.84 to 1.08 g/kg (P < 0.05). In the total and total dissolved solids, a significant reduction was found (P < 0.05) with values for the total solids from 19241 to 7684 mg / L and in the total dissolved solids from 16640 to 6531 mg/L. The chemical oxygen demand was reduced from 14450 to 5210 mg / L. Methane production reached levels of 4,328 m3. Potassium proved to have a positive correlation (P < 0.05) in the production of methane in the biodigester fed by bovine excrete. The biodigesters have been shown to significantly reduce the amount of nutrients in the wastewater, which is why they are a feasible option for the treatment of these.

### Biodigester, Nutrients, Excrete

## Adaptabilidad de híbridos trilineales de maíz en el área tropical de los estados de Veracruz y Tabasco, México

# Adaptability of three way maize hybrids for tropical area in Veracruz and Tabasco states, México

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#### **Abstract**

México. During the spring summer season in 2016, there were conducted an experiment of three way maize hybrids of in Cotaxtla and Carlos A. Carrillo in Veracruz state and Huimanguillo in Tabasco state. The experiment was distributed in blocks at random design with 20 entries and three replications in plots of two rows 5 meters long and 62,500 plants ha<sup>-1</sup>. From the combined analysis for the three locations, there was found high significant difference for Genotypes (G), Environments (E), and for Interaction GxE. According with the stability parameters, the hybrid (LT164xLT165) xLT156 registered better response in good environments but inconsistent, , one else had good response in favorable environments and was consistent (LT154xLT155) xLT166 another one with better response in disfavourable environments and consistent (LT171xLT172)xLT170, the rest were characterized as stables. Through the three evaluation environments, the best hybrids at 0.05 of probability were eight hybrids among them: (LT171xLT172)xCML247,H-567, T164xLT165)x LT155, (LT154xLT155)xLT165 H-520, (LT154xLT155)xLT170.

Heterosis, hybrids, tropic, Zea mays L.

## Híbridos triples en maíz alternativa para incrementar la producción en áreas de temporal

## Triple hybrids in alternative corn to increase production in rainfed áreas

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#### **Abstract**

The demand for white corn consumption in Mexico is complemented through imports. Self-sufficiency is a priority objective that leads to develop all available strategies, one of these is the development of improved cultivars that increase production and are within the reach of small and medium producers. In the Centro Universitario de Ciencias Biológicas y Agropecuarias of the Universidad of Guadalajara, the objective is to develop varieties that adapt to the subtropical and seasonal crops. The following research evaluated 14 white grain triple hybrids, simple hybrids MR 2008, triple hybrid MR 2009 and P3015 in the state of Jalisco, in a randomized block design with combined analysis for the Zapopan, Magdalena and Villa Corona localities derived from the crossing of a simple hybrid MR 2008 and inbred lines F8 of a population DK 2020, identifying 3 promising triple hybrids for this area. MR2008 X LUG P 609, QPM2006 X LUG P 603, MR2008 X LUG P 680 and MR 2009 with averages of 7.29 to 6.32 Ton ha<sup>-1</sup> and days to male and female flowering between 75 and 81.

### Corn, Triple Hybrids, Yield

# Efecto en la producción de calabacita italiana (Curcubita pepo L), bajo riego con agua de lluvia y de pozo

# Effect on zucchini squash ( $Curcubita\ pepo\ L$ ) production, under rainwater and water well irrigation

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#### **Abstract**

Vegetables growth better in good weather conditions, because their production is successful under rain water, the research main objective is the productivity evaluation on fruit production by Cucurbita pepo L. plants under irrigation with water well and the rain water collected by a rain water capitation system. Seeds were sowed in soil with humus 10%, the weight and fruit number were registered by plant, and the masculine flowers number and weight were registered too. The better fruit production was found in plants growth under rainwater irrigation, due to water pH minus alkaline than water well, the effect could be related with the minerals availability. The masculine flowers were high in plants under water well irrigation, the fruit production can be compared with masculine flowers but here the results were not corresponded with. The present results describe that rainwater is better in fruit production in Cucurbita pepo.

Squash, Vegetables, Fruit, Masculine Flowers

Producción de composta a base de residuos de orégano, (tallo y hoja) en el Municipio de Rodeo, Dgo.

# Production of compost based on oregano residues, (stem and leaf) in the Municipality of Rodeo, Dgo.

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**Abstarct** 

In the present project two types of compost (Leaf and stem) and a witness from the sowing of corn in a polyethylene tray were evaluated in the facilities of the Technological University of Rodeo, Dgo. It was determined which of the three treatments are the most feasible for the production of the 7573 maize seedling and the variables were evaluated such as: seedling height, stem thickness, and number of leaves, the selection of the seedlings was made completely at randomly; the sample size was established to obtain a confidence index of 95%. For the statistical analysis three repetitions were made, the data was entered into the software of the Faculty of Agronomy of the UANL to perform the analysis of variance (ANOVA). For the height variable an average of 8.697 cm was recorded (Witness) and 6.030 in (Sheet), for the number of leaves an average of 2.847 was recorded in the (Witness) and 2.197 for the (Sheet) for the thickness variable of stem an average of 0.374 mm was recorded. In the case of (Witness) 0.307 mm was obtained. In the (Sheet) with a value of significance of 0.05, which indicates that there is a significant difference between the three production systems for the three variables evaluated, and that the witness stood out among the other treatments in terms of seedling production corn.

Stem, Leaf, Oregano, Compost, ANOVA

## Indicadores fisiológicos del deterioro artificial de semillas de Physalis philadelphica

## Physiological indicators of artificial seed deterioration of *Physalis philadelphica*

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#### **Abstract**

The seed as a unit of reproduction, is the agricultural input of greater importance in the production process. For decades, the standard germination test has been the criterion most used to evaluate its physiological condition, likewise, its certification is based on this test. Like any living organism, the seed undergoes a process of deterioration mainly due to adverse environmental factors during its production, conditioning and storage, a physiological condition that can hardly be determined in the germination test. The objective of this work was to evaluate the deterioration of seed in three cultivars of husk tomato (*Phyasalis philadelphica*) through the accelerated aging test (EA). Seed from three commercial cultivars were exposed to a condition of high relative humidity and high temperature. The results obtained indicate that it is possible to establish differences in quality levels in lots of commercial seed with acceptable germination values through the accelerated aging test.

Accelerated ageing, Seed quality, Vigor, Husk tomato

## Adaptación climática y edáfica de *Solanum lycopersicum* var. *cerasiforme* en el Occidente de México

## Climatic and edaphic adaptation of *Solanum lycopersicum* var. *cerasiform* in Western Mexico

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#### **Abstract**

Geo-referenced collections were made in Jalisco, Michoacán, Colima and Nayarit, from 2002 to 2014. A matrix database was integrated including site, geographic and topographic descriptors. With the geographic coordinates, using the INIFAP environmental information system summarized in the IDRISI32 system, climatic and soil type were characterized; maximum, minimum and average temperatures, average accumulated precipitation and altitude. Minimum, maximum and average values of each climatic variable were calculated. Climatic ranges of distribution of *S. lycopersicum* var. *cerasiforme* in the study region showed that this species is distributed between 7 and 2000 m altitude, from 495 to 1591 mm of annual rainfall, 7.1 to 21.6 °C of average annual minimum temperature, 22.6 to 38.4 °C of average annual maximum temperature, and between 15.8 and 28.1 °C annual average temperature. It has a wide variability in its climate adaptation capacity, widely distributed in tropical and subtropical climates present in the study region, with preference for warm subhumid types. Regarding edaphic conditions, the species adapts to a wide variety of soils with a tendency to concentrate on Feozems and Regosols.

Plant Genetic Resources, Ecogeography, Adaptation Environmental Range

Caracterización metabólica de cepas promotoras de crecimiento de plantas y pruebas de germinación con lenteja (*Lens culinaris*)

## Metabolic characterization of plant growth promoter strains and germination tests with lentil (*Lens culinaris*)

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#### **Abstract**

The promotion growth plant rhizobacterias, are a group of different genera of bacteria that can increase plant growth and productivity, said bacteria could be a sustainable biotechnological tool as biofertilizer and biocontroller. Isolation of rhizobacteria was carried out in soil attached to trees, mesquite (*Prosopis laevigata*) and oak (*Quercus rugosa*) native to the Guanajuato region, within the state's Natural Protected Areas. A total of 100 strains with ACC deaminase activity were obtained, of which for 50 isolates characterization, confrontation of phytopathogenic fungi tests, germination of seeds in lentil (*Lens culinaris*) were carried out. Strains 112, 255, 258 and 303 obtained positive results in all tests.

Soil, Rhizobacteria, Biofertilizer

# Evaluación del extracto de epazote como control en la mosquita blanca (*Bemisia tabaci* Genn.) en el cultivo de jitomate

## Evaluation of epazote extract as control in the whitefly (*Bemisia tabaci Genn.*) In the tomato culture

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#### **Abstract**

In the investigation Evaluation of epazote extract as control in the whitefly (Bemisia tabaci Genn.) In the tomato crop, it is possible to evaluate the epazote extract as a sustainable alternative for the control of the whitefly (Bemisia tabaco Genn.) In the tomato crop. The evaluation was carried out at the laboratory level at the Higher Technological Institute of Salvatierra (ITESS). For the development of the research, a randomized block design with three repetitions per treatment was carried out. The treatments for the control of the whitefly were: T1 (10%), T2 (20%), T3 (25%), T4 (30%), diluted in one liter of water. For the evaluation 10 white mosquitoes were collected in adulthood by treatment, the total of mosquito collected to carry out the design were 120. The treatment with the highest mortality rate was T3. Therefore, the epazote extract is a good alternative as an organic insecticide for the control of whitefly in the tomato crop.

## Pest, Extract, Treatment, Control

Plántulas de dos tipos de tomate (Solanum lycopersicum) cultivadas con tres soluciones nutritivas diferentes

## Seedlings of two types of tomato (Solanum lycopersicum) grown with three different nutritive solutions

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### **Abstract**

The objective was to analyze the growth of seedlings of two types of tomato, ball and saladette, cultivate with the solutions of Steiner, Hoagland, with and without micronutrients (SCM, SSM, HCM, HSM) and a commercial formula (T). A greenhouse was used, and completely randomized design with a 5x2 factorial arrangement, with 10 repetitions. Seedling height, stem diameter, fresh and dry biomass of the aerial part, dry biomass of the root, and concentration of N, P and K were evaluated. The height and content of N, P and K in seedlings of saladette tomato was due to the interaction between the type of tomato and the nutritive solution. But the nutritive solution and the type of tomato, main factors, also had an effect, where SCM resulted with the highest values in the variables, although the highest nutritional content was for solution T. The ball tomato seedlings had the highest value of the variables evaluated except for the height and content of N, P and K that were lower in the saladette tomato. The microelements favored the growth

### Steiner, Hoagland, micronutriments

## Producción de maíz (Zea mays L.) mediante riego por goteo e inoculado con microorganismos benéficos

# Production of maize (Zea mays L.) by drip irrigation and inoculated with beneficial microorganisms

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### **Abstract**

The experiment was established from June to December of 2017 in a completely randomized design with four repetitions in the experimental plot 2 of the Sustainable and Protected Agriculture Career of the Technological University of the Southwest of Guanajuato (UTSOE), located in the municipality of Valle de Santiago. The objective was to evaluate the effect on plant height, stem diameter, adventitious roots, dry weight and yield in two native varieties and a corn hybrid established at a density of 80,000 seeds per hectare, inoculated with a product commercial based on fungi and beneficial bacteria, in addition to biostimulants. Significant differences were found ( $p \le 0.01$ ) for stem diameter variables with a mean of 1.86 m; so also for the yield, where it excelled for the native varieties, the white maize with inoculation (6.25 t/ha) above the red corn with inoculation (5.73 t/ha). In the case of the hybrid, treatment with inoculation produced 2.3 metric tons above the hybrid without inoculation.

Beneficial microorganisms, Inoculation, Maize varieties, Drip irrigation, Rield

## Producción de pepino (Cucumis sativus L.) orgánico bajo un sistema de invernadero

### Production of organic cucumber (Cucumis sativus L.) under a greenhouse system

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### **Abstract**

Negative effects of agricultural activities on the environment, have generated implementation of sustainable fertilization practices in all agricultural production systems. Vermicompost is an organic fertilizer that has acquired importance as a source of nutrients and as a component of development medium of horticultural crops. The objective of the present study was to evaluate different percentages of vermicompost:arena (VC:A) that increases yield and quality of cucumber fruit (Cucumis sativus L.) under greenhouse production. We evaluated the following treatments of Vermicompost and sand (25:75, 30:70, 35:65, 40:60 and 45:55.) Results indicate that in proportions of vermicompost (25 or 30%) had the highest yields (2655.6 to 1109.8 g plant-1, respectively) and fruit quality. However in high doses caused adverse effects. The use of vermicompost constitutes an attractive alternative in organic production of greenhouse cucumber because fruits are obtained free of agrochemicals and of high quality, which provides a competitive marketing for the producer and decreases the use of inorganic inputs contributing to the preservation of the environment. Incorporation of vermicompost in the substrate produced a significant difference in the growth, yield and quality of the fruits. Vermicompost: sand mixture at 25/75 followed by 30/70 showed the highest plant height, yield. Doses greater than 35% of vermicompost have negative effects in culture.

### Substrates, vermicompost, production

## Efecto de la escarificación con cautín de estaño en la germinación de cinco pinos mexicanos del Subgénero Diploxylon

# Effect of scarification with tin soldering iron on the germination of five Mexican pines of the Diploxylon Subgenus

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### **Abstract**

The effect of soldering iron method on the germination of five Mexican pines of the Diploxylon Subgenus was evaluated. The majority of seeds of the pine species studied was collected on natural populations in the Ejido de Pueblo Nuevo, Municipality of Chignahuapan, in Puebla State of Mexico except for *P. greggii* var. *australis*. The study was performed under lab conditions and the use of soldering iron and the germination between paper methods were tested. Statistical analysys shown significant differences on the percent of germination and the Maguire index for *Pinus patula* var. *patula*, *P. greggii* var. *australis* y *P. teocote* to germinate after 15 days; while *P. greggii* var. *australis* y *P. teocote* germinate after 22 days. We conclude that soldering iron method can contribute to reduce the period of time germination and increase the percentage of germination on recalcitrant pine species.

Pinus, Soldering iron scarification, Germination between papers

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Análisis sensorial y costos de tres formulaciones carnicas (chorizo, carne de hamburguesa y jamón) de conejo (Oryctolagus cuniculus)

Sensory analysis and Producción de pepinocosts of three rabbit (chorizo, burger and ham) formulations (*Oryctolagus cuniculus*)

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#### **Abstract**

This research aimed to evaluate the sensory characteristics and costs of three formulations rabbit meat (chorizo, hamburger and ham) (Oryctolagus cuniculus). 30 New Zealand White rabbits of 70 days and live weight of 2.0 kg were sacrificed. The carcass were transported from the National Rabbit Center to the Polytechnic University of Francisco I Madero under freezing condition (-20  $^{\circ}$  C  $\pm$  2  $^{\circ}$  C). Previously developed, validated and standardized formulations were used. A subjective evaluation was used with the qualitative characteristics of each product (color, smell, texture and taste). In the sensory analysis, 100 people participated (50% men and 50% women) from 20 to 35 years old. A survey was used as a measuring instrument with a hedonic scale of 7 points (7 = I really like it, 6 = I like it a lot, 5 = I like it slightly, 4 = Nor do I like or dislike me, 3 = I dislike it a little bit, 2 = I dislike it a lot and 1 = I really dislike it). The cost of preparation was \$ 145.60, 121.60 and 122.10 for chorizo, hamburger and ham. The sensory parameters were highly acceptable, especially for the hamburger. The elaborated formulations allow to diversify the offer of rabbit meat.

Rabbit, Sensory Analysis, Chorizo, Hamburger, Ham

Evaluación de tratamiento térmico de insectos comestibles (Acheta domesticus, Locusta migratoria y Gryllus assimilis) utilizando un test comercial de fosfatasa alcalina

Assessment of heat treatment of edible insects (Acheta domesticus, Locusta migratoria y Gryllus assimilis) using a commercial alkaline phosphatase test

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### **Abstract**

Assessment of heat treatment of edible insects (*Acheta domesticus*, *Locusta migratoria y Gryllus assimilis*) using a commercial alkaline phosphatase test. The main objective was to evaluate the effectiveness of heat treatment (pasteurization) in 3 edible insects for the elimination of pathogenic microorganisms by the Alkaline Phosphatase method. The insects were killed by freezing and homogenized with double- distilled water (1:10) in a Stomacher. The liquid was pasteurized during 10 minutes, changing the temperature every 5°C and analyzed using a commercial alkaline phosphatase kit. (Lactognost®, Heyl, HiIdesheim, Germany). The presence of the alkaline phosphatase enzyme indicates that the heat treatment was incorrect. A sample was considered active, when showed a blueish color, and inactive, when showed a brownish color. Once a color changed occurred, steps of 1°C were chosen between the last "active" and the first "inactive" results. Then the time was tested. The present work could be important to governments and organizations, both national and international, can establish norms that guarantee the safety of edible insects, as well as so that companies and producers can commercialize them.

Insects, Pasteurization, Alkaline Phosphatase

Microorganismos de montaña, *Azospirillum brasilensis* y fertilización foliar en parámetros productivos del repollo (*Brassica oleracea L.* var. Capitata)

Microorganisms of mountain, Azospirillum brasilensis and foliar fertilization in productive parameters of cabbage (*Brassica oleracea L.* var. Capitata)

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### **Abstract**

The intensive production of cabbage requires soils with a good amount of organic matter, the use of beneficial microorganisms is an alternative. The objective of the present investigation was to evaluate mountain microorganisms,  $Azospirillum\ brasilensis$  and foliar fertilization in productive parameters of cabbage. The treatments were: control (T1),  $Azospirillum\ brasilensis$  and commercial foliar fertilizer (T2) and mountain microorganisms (MM) with a biofertilizer made from calf excrement (T3). The parameters measured were leaf diameter, fruit diameter and fruit weight, the results were expressed as the mean  $\pm$  the standard deviation, and they were also subjected to an analysis of variance. It was observed that the treatments with  $A.\ brasilensis$  (T2) and with MM (T3) achieved significant differences with the control treatment (T1) (p<0.05) and between T2 and T3 there were no significant differences (p $\geq$ 0.05) in the parameters measured of leaf diameter, diameter of the fruit and weight of the fruit. The use of  $A.\ brasilensis$ , MM and biofertilizers represent an alternative in agricultural production to improve the conservation and fertility of soils, providing microorganisms that help fix carbon and nitrogen, solubilizing iron and phosphorus, and the production of enzymes that stimulate the development.

Azospirillum brasilensis, Beneficial microorganisms, biofertilizer, Inorganic fertilizers

## Métodos de germinación de semillas de acachul *Aridisia Compressa* K. colectados en Xicotepec de Juárez. Puebla

## Germination methods of *Ardisia Compressa* K. acai seeds collected in Xicotepec de Juárez. Puebla

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### **Abstract**

The native "ACACHUL" FRUIT berries 'Ardisia Compressa K', which are produced in the Sierra Norte of the Puebla State, are natural source rich in bioactive principles. There is little information regarding the cultural management and its propagation, the objective of this work was to evaluate the methods of germination and propagation of acachul seeds of the species (Ardisia compressa K). A completely randomized statistical design was used, with 4 experimental replicas and 3 repetitions. The sample was conditioned and then were used one scarification method physical., then the germination method was performed in 4 treatments, of which the best results were T1 35% and T3 55% which presented better percentage of germination. In conclusion, the germination treatment with GA3 55% is a recommended method for propagation in nursery of the crop acachul

## A. compressa K, Scarification, Germination

# Estudio comparativo de tres abonos verdes en la producción de biomasa y en algunas propiedades del suelo

## Comparative study of tree green manures in biomass production and in some soil properties

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### **Abstract**

Green manures counteract the loss of soil fertility because they contribute with nutrients, organic carbon and improve the physical and chemical properties of soils. The objectives of the present study are: 1) to evaluate the biomass yields of Avena sativa, Cicer arietinum and Lupinus mutabilis as well as C/N ratio, 2) to evaluate the effects of these species used as green manure on some chemical properties of soils, and 3) to quantify the effects of these species in promoting microbiological population of soils and its relation to CO<sub>2</sub> emissions to the atmosphere. Quantified variables were biomass yields, C/N, CO<sub>2</sub> emissions, soil microoganisms population, namely fungi and bacteria colony-forming units (CFU). The statistical evaluation demonstrated that Lupinus mutabilis was the most outstanding green manure with higher biomass production and nitrogen content. Although Avena sativa has lower values of nitrogen, it proved to be a good choice as green manure. L. mutabilis was the plant spieces with the best results in NO<sub>3</sub> generation and CO<sub>2</sub> emissions.

Key words: Soil sustainability, fertility amendments, CO2 emission, soil organic matter

## Respuesta fisiológica de Ficus benjamina l. A ambientes contaminados

## Physiological response of Ficus benjamina 1. To contaminated environments

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### **Abstract**

In urban ecosystems, pollution is an increasing problem. CO<sub>2</sub> is one of the most important greenhouse gases that contribute to the increase pollution. Photosynthesis is an economical and natural alternative to fix CO<sub>2</sub>. In Guadalajara, Mexico, *Ficus benjamina* L. is one of the most widely used species to reforest urban spaces as it is a perennial species of rapid growth. The aim goal of this study was evaluating the physiological response of *F. benjamina* to atmospheric CO<sub>2</sub> in two environments with high and low pollution levels; a comparative study was carried out to determine the capacity of carbon fixation in *F. benjamina* trees. Greenhouse gases were measured *in situ* (CO<sub>2</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>), the net uptake of CO<sub>2</sub> as well as the chlorophyll content was determined. *F. benjamina* trees respond favorably to pollution environments with high levels of CO<sub>2</sub>, the physiological response is related to greater photosynthetic efficiency and therefore greater uptake of this greenhouse gas.

Carbon dioxide, Ficus benjamina, Urban pollution

Evaluación de Chiltepín (*Capsicum annum* L.) Producido bajo condiciones de invernadero en Xicotepec de Juárez, Puebla

## Evaluation of Chiltepín (Capsicum annum L.) Produced under greenhouse conditions in Xicotepec of Juárez, Puebla

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### **Abstract**

The Chiltepin chili pepper (*Capsicum annum* L) is a product that is consumed as a condiment in the regional food of Puebla. In this work the objective was to evaluate seed germination, yield and fruit quality of Chiltepín chili pepper produced in a greenhouse in Xicotepec of Juarez, Puebla, Mexico. The cultivation trials were grown under greenhouse conditions during the production cycle 2015-2016, applying seed germination tests, production and crop yield tests and physico-chemical fruit tests (P = 0.95). The evaluation of seed germination dried fruit of Chiltepin indicated 92.6%  $\pm$  3%. The fresh fruit yield was 195 g  $\pm$  15 g per plant. In relation to fruit in fresh the weight was 1.3 g.  $\pm$ 0.5 g..., the distal diameter was 15 mm  $\pm$  5 mm., the acidity was 4.1%  $\pm$ 0.1% of citric acid, the humidity was 22.1%  $\pm$ 3%, the carotenoid content was A = 7.6  $\pm$ 0.1 and R = 3.5  $\pm$ 0.1 ASTA units. The selection of Chiltepín ripened fruit for obtaining seed and the natural process of scarification promotes germination. The controlled conditions of greenhouse production of Chiltepin pepper increase plant yield. The quality characteristics of weight, size and content of total carotenoids yellow and red of fresh fruit of Chiltepin chili pepper are varied.

Chiltepin, Germination, Yield and Quality Fruit

## Proceso de deshidratación osmótica y térmica en mango manila (Mangifera indica L.) variedad Tommy Atkins

## Osmotic and thermal dehydration process in manila mangoes (Mangifera indica L.) variety Tommy Atkins

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### **Abstract**

**Objectives, methodology**: In this paper we evaluate the effect of the osmotic and thermal dehydration of manila (Mangifera indica L.) mangoes variety Tommy Atkins. In the aim to obtain the optimal conditions for the osmotic dehydration process, were evaluated different heating temperatures and moisture contents until to obtain a dehydrated product with very acceptable sensorial parameters, such as color, flavor, texture and aroma. In the other hand, the shelf life and physico-chemical parameters like pH, °Brix, Aw and microbiological quality of the product were also studied.

**Contribution**: The osmotic and thermal dehydration process was favourable to obtain a good quality product with desirables organoleptic, microbiologic and physic-chemical attributes, maintaining good colour and avoiding the non-enzymatic browning. The dehydrated mangos were able to preserve its original attributes over than 8 months of shielf life.

Water activity, Dehydration steps, Sensory preferences, Shielf life

## Robot antropomórfico didáctico para nivel medio y superior

### Anthropomorphic didactic robot for middle and higher level

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#### **Abstract**

Today, teaching in middle and higher Schools has begun in Mexico, mainly in private educational institutions due to the high cost of foreign commercial robotic kits. The main objective of this paper was to develop a methodology to obtain a kit for teaching robotics. This methodology was a functional alternative to generate a series of devices that allow the creation of a robotic teaching kit. the kit, will contribute to the generation of new knowledge and new education techniques in terms of engineering and science covering areas such as mathematics, calculation, design computer assisted, programming, electronic design and automatic control.

Robot, Teach pendant, Position control, CAD Design, 3D Printing

## Dimensionamiento, instalación y puesta en marcha de un biodigestor de la Empresa Grupo AIPIR en la granja de San Juan Ixtenco Tlaxcala

## Sizing, installation and commissioning of a biodigestor of the AIPIR Group Company in the farm of San Juan Ixtenco Tlaxcala

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#### **Abstract**

It is necessary that we all use our own natural energies that we have at our disposal; renewable energies such as solar energy, biomass energy or biogas generated by methane gas. One of the main effects on health and environmental issues in rural populations is the generation of livestock waste generated by farms and pig farms, bovine, goat, etc., which are thrown into ravines, rivers and lagoons, this material Organic decomposes, producing gases that escape into the atmosphere or disperse in the soil, producing liquids that infiltrate the soil, reaching births and water wells, producing a decomposed mineralized and compacted waste contaminating the water. The main objective of this work is the sizing and installation of a 6 m3 mushroom-type biodigester, which was placed in the San Juan farm, located in Ixtenco, Tlaxcala, where 39.45 kg of livestock waste is produced per day for the production of biogas and its use as fuel for cooking, the return on investment is approximately 14 months.

Biomass, Biodigester, Biogas, Energy, Fuel

Precipitación de proteínas de suero lácteo mediante extractos de olivo (Olea europaea) caracterizados por perfil metabólico

## Precipitation of whey proteins by olive extracts (Olea europaea) characterized by metabolic profile

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#### **Abstract**

Milk is one of the most complete foods that exists in nature for its high nutritional value. It is composed mainly of water, fat, proteins, carbohydrates (lactose) and minerals. The whey is separated from the milk by coagulation to obtain cheese. About 70% of the crude whey protein are proteins with a nutritional value superior to that of casein. This suggests waste of nutrients and contamination. The objective of this work is to precipitate (eliminate) whey proteins with olive extracts from different tissues and variable maceration times. Among the results obtained are: 1) the physicochemical characterization of whey (total solids = 1.6136 g/L, suspended solids = 0.0569 g/L, pH = 6.6, fats = 2.4 g/L), 2) protein precipitation assays with olive extracts, obtaining the highest percentages (90-99%) with longer maceration times (20 days) for all tissues analyzed; green leaves (HV), yellow leaves (HA), bark (C) and juvenile stems (TJ) and 3) the metabolic profile of the extracts, predominating the hydrolysable tannins in HA, while the condensables in C and HV.

**Dairy Waste, Tannins, Olive** 

## 2 Biólogia y Química

Evaluación del proceso de electrocoagulación para remoción de Arsénico y Flúor presentes en agua de consumo humano

Technical evaluation of electrocoagulation process for the removal of Arsenic and Fluoride present in water for human consumption

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#### **Abstract**

In this work we evaluated the electrocoagulation (EC) process in a prototype to remove arsenic and fluoride from well water, in order to solve the problem of water for human consumption in the Valley of Guadiana, located in the town of Durango, which has historically presented fluoride concentrations between 0.18 and 27 ppm and for arsenic between 0.0049 and 0.3202 ppm. The study was conducted on a pilot scale, preparing synthetic water, with similar conditions to those of a source of water supply for human consumption. The treatment train was integrated by the EC, followed by sedimentation and filtration of the samples. With this process it was possible to obtain water that met the guide value of 0.010 mg/L for arsenic and 0.7 mg/L for fluoride, suggested by the World Health Organization (WHO), which is lower than the maximum permissible limit of 0.025 mg/L for arsenic and 1.5 mg/L for fluoride, established by the modification in 2000 year to the Official Mexican Standard NOM-127-SSA1-1994. The cost of treatment is low, because it requires few chemicals.

Arsenic, Fluoride, Electrocoagulation, Aluminum, Current density

## Estudio mineralógico de la disolución de la matriz Silícea en minerales con Plata Ocluida en Silica

## Mineralogical study of Silica matrix dissolution in minerals with Silver Occluid in Silica

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#### **Abstract**

The present work shows the mineralogical characterization of a sample of the cyanidation tails of a mineral coming from the Pinos Altos Mining District in Chihuahua with silver occluded in quartz; the ore has a silver grade of 56 gTon<sup>-1</sup> and gold of 0.3 gTon<sup>-1</sup>. The mineralogical characterization of the mineral treated with triisopropanolamine is shown, as a possible treatment for the dissolution of the quartz matrix and the possible de-occlusion of the metallic values. The characterization by SEM-EDS shows the partial release of the silver, the silver remaining occluded in sizes less than or equal to 500 nm. The chemical characterization and by XRD of the mineral and of the treated mineral, allow to distinguish that the main mineralogical phases that dissolve with the treatment are the phases of aluminiosilicate, the phases of Fe<sub>2</sub>O<sub>3</sub> and magnetite.

Silver occluded, Quartz, Mineralogy characterization

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Propuesta para el desarrollo de un prototipo del sistema ambiental inteligente para los espacios de la Dirección de Tecnologías de la Información y Comunicación de la Universidad Tecnológica del Valle de Toluca

Proposal for the development of a prototype of the intelligent environmental system for spaces of the Information Technology and Communication Department of the Universidad Tecnológica del Valle de Toluca

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#### **Abstract**

This article talks about the proposal for the development of a prototype of the intelligent environmental system for the spaces of the Information Technology Directorate of the Technological University of Valle de Toluca, with the aim of creating an optimal environment (temperature, lighting and humidity), using the reduced board (hardware and open software) Arduino, as well as electrical and electronic elements. The methodology used was proposed by the authors, according to their experience, which makes mention of requirements analysis, analysis of design specifications, creation of diagrams, cost analysis, electrical simulation, circuit assembly, implementation and testing. It is worth mentioning that for the design of the prototype it is necessary to analyze a series of Mexican Standards such as NMX-R-021-SCFI-2013 (Schools - Quality of educational physical infrastructure - Requirements), NOM-001-SEDE-2012 (Electrical Installations (utilization) and NOM-007-ENER-2014 (Energy efficiency for lighting systems in non-residual buildings) that allow establishing some essential parameters. It is also important to mention that it was developed until the electrical simulation phase in which it can be established if its development and implementation is feasible.

Internet of Things (IoT), Arduino, Environment

## Diseño de un filtro para desalación por el sistema de osmosis inversa centrífuga

### Design of a filter for desalination by the centrifugal reverse osmosis system

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#### **Abstract**

Water, as an engine of development and a wealth asset, has been one of the fundamental pillars for the progress of man and source of life on our planet. The management of water resources, which has always been a priority objective for any society, has historically been carried out under norms aimed at satisfying demand in sufficient quantities, from a supply policy perspective. It is well known that due to human intervention the environment is undergoing drastic changes that put our ecosystem at risk. In particular, one of the most serious problems that humanity will face is the shortage of fresh (brackish) water. Therefore, it is of the utmost importance that research be carried out aimed at developing new methods, or improving existing ones, to desalinate seawater or rainwater. Currently, one of the most successful methods to treat seawater is reverse osmosis. However, there are still several areas of opportunity that can be attacked. In this research work, some design methodologies will be applied for membrane filter innovation [1]. In conjunction with computational tools (CAD / CAE programs), with the aim of designing a design that represents a significant improvement in the performance of devices that use reverse osmosis to desalinate or to obtain water free of bacterial or desalinated contamination and here the design of a fltro and its innovation for a system of osmosis inverza.

Hydrics, Ecosystem, Desalinize, Reverse Osmosis, Membrane

## Determinación de parámetros fisicoquímicos y microbiológicos de un mole tipo poblano

## Determination of physicochemical and microbiological parameters of a mole type

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#### **Abstract**

The objective of the research is to standardize the process of elaboration of a mole type by means of the determination of physicochemical and microbiological parameters applying techniques and traditional comparative methods. The homemade mole is one of the most representative dishes of the country being a culinary specialty of the city of Puebla. Hence the idea of making a product where the same characteristics of a traditional mass that identify it, color, smell, taste and texture are preserved. It can also be said that common moles have a shorter conservation time, so it is intended to be elaborated by applying good manufacturing practices. Through the physicochemical and microbiological analyzes, the days of the product's useful life were determined by applying the Arrhenius Model and the optimal packaging for its conservation and commercialization. Currently it is necessary to look for new product alternatives to compete in an equitable way with other countries.

Conservation, Mole, Process, life of utility

Extracción y Caracterización Fisicoquímica del Aceite Esencial del Orégano (*Origanum vulgare*), en la Localidad de "Héroes de México" del Municipio de Rodeo, Dgo.

Extraction and Physical-chemical Characterization of the Essential Oil of Oregano (Origanum vulgare), in the Locality of 'Heroes of Mexico 'of the Municipality of Rodeo, Dgo.

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#### **Abstract**

Oregano is one of the main aromatic plants used in the country used for condiments in traditional dishes. In Rodeo, Dgo county there is a potential extraction zone of 374 tons per year of oregano, making the organizers obtain greater economic benefit. The specie that grows up in this region is the "*Origanum Vulgare*". In the present work, "The physical-chemical extraction and characterization of the essential oregano's oil (*Origanum vulgare*). The general purpose of the work is to obtain the extraction and at the same time characterize the essential oil of oregano, for which the density was determined by capillary of 5  $\mu$ l and a pycnometer of 25 ml at a temperature of 20°C with a result of 0.9539 g / ml. Another factor that was determined, it was the refractive index by a digital refractometer with a result of 1.5523 as well as the density at the same temperature. In the statistical analysis, it was done using a simple linear regression model, the H0: the independent variable in ° C does not explain a level of extraction in oil volume, and the Ha = is not. The level of significance is 5% or 95% confidence, for which the level is equal to 0.05 in which the critical value (F) must be less than this. As a result, the critical value is 0.0098. therefore, the Ho is rejected, in favor of which it is concluded that the variable ° C does explain the behavior of the volume of oil obtained.

Oregano, Extraction, Characterization, Picnometer, Essential oil

Caracterización fisicoquímica y contenido fenólico de extractos acuosos de la hoja de las plantas del género *Kalanchoe* (daigremontiana y pinnata)

Physicochemical characterization and phenolic content of aqueous leaf extracts of the plants of the genus *Kalanchoe* (daigremontiana and pinnata)

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### **Abstract**

Kalanchoe daigremontiana and Kalanchoe pinnata, are endemic from Madagascar and belonging to the Crassulaceae family. However, they are widely distributed in Mexican territory. These are attributed a high level of antioxidants. In the present investigation, an analysis of the physicochemical properties and the concentration of polyphenols in aqueous extract of leaves of plants were carried out using the Folin-Ciocalteau method, where Kalanchoe pinnata obtained a higher concentration of polyphenols, being this 120.60 mg EAG/L. However, a study is not ruled out to determine the rest of the antioxidants. Moreover, physicochemical studies were carried out.

Physicochemical properties, Polyphenols, Oxidative stress

### Simulación de un Sensor de Colisiones para un Brazo Manipulador

### Simulation of a Collision Sensor for a Manipulator Arm

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#### **Abstract**

In this work, a sensor simulation for collision detection for a robot manipulator is presented. In the industrial sectors there are installed a large number of robot manipulators, as well as in some educational institutions. In both cases, the robots are usually places in a cell or workspace where the robot performs a predefined task. However, an undesirable event may occur when a mobile object comes into the robot's workspace, so that a collision is going to occur. This can cause a serious accident. In this work a collision sensor is simulated where collisions can be detected. Additionally, tests are carried out on how many sensors are required and placed on the robot to avoid collisions; the sensor's parameters such as noise, response and rate are evaluated. In order to determine the parameters of the sensor, a grid of sensor is simulated and several cases of study are presented. The contribution of this work focuses on determining the parameters that the collision sensor must meet to guarantee its operation in a real environment.

Collisions, Sensors, Robot Manipulator, Computational Geometry

## Modificación de la técnica volumétrica de mohr para cuantificar sodio en queso fresco

## Modification of the mohr volumetric technique to quantify sodium in fresh cheese

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#### **Abstract**

The consumption of excess salt is related to health problems, so the determination of sodium chloride in food is of utmost importance. The objective of this work was to quantify the sodium in fresh cheese using the volumetric technique of Mohr, minimizing the amount of sample and reagents proposed in the original technique, in order to generate less chemical residues in the laboratory. The results obtained were multiplied by a dilution factor, and 2% NaCl was obtained in the cheese sample analyzed. By modifying all the quantities of reagents and samples, reliable and reproducible results are obtained, which allows to reduce the amount of chemical residues in laboratory practices.

### Fresh Cheese, Sodium, Chemical Residues

## Adición de PET reciclado al Mortero Portland como refuerzo: Estudio de las propiedades Mecánicas

# Addition of recycled PET to Portland Mortar as reinforcement: Study of Mechanical Properties

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#### **Abstract**

Cement is today the material that remains in force due to the physico-mechanical characteristics that positions it as one of the most required materials for construction. On the other hand, in the matter of waste, the waste that has most affected the planet for lack of a specific program of management and disposal are the containers manufactured with thermoplastic polymers such as the Polyethylene Terephtalate commonly known as PET. It's intended to prove and establish the following hypothesis: The addition and mixing of PET waste to Portland concrete maintains and / or improves the mechanical properties of Compression and Flexion in concrete beams. Five mortar mixtures were made. Mixture No. 1 cement, sand, water, Mixture No. 2 cement, sand, water and 0.5% PET, Mixture No. 3 cement, sand, water and 1.0% PET Mixture No. 4 cement, sand, water and 1.5% PET, Mixture No. 5 cement, sand, water and 2.0% PET. It's concluded that the mechanical properties of the concrete mix with the PET are improved and / or maintained with respect to the control mixture, with the highest results in the No 2 mixture with a PET aggregate of 0.5%. These results prove the hypothesis established in this research project that has not yet ended.

PET, concrete, compression, Mechanical properties

## Evaluación de la solidez del color en el teñido de lana y algodón con extracto de cáscara de cacao

## Evaluation of the color fastness in the dyeing of wool and cotton with cocoa shell extract

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#### **Abstract**

Currently there is a great interest to resume the use of natural dyes in the textile area. However, natural dyes must meet certain requirements to be introduced into the industry. One of them is the analysis of the stability of the color that they present, before certain tests. So, the objective of this work was to perform an evaluation of the color stability in the dyeing of wool and cotton with extract of cocoa shell (Theobroma). The methodology consisted in carrying out the dyeing of the fibers, with three concentrations of the extract of the cocoa husk (50, 75 and 100%). Stability tests were carried out, such as: washing at high temperatures, domestic washing, dry rubbing, artificial light, resistance to acids and alkalis. The color was measured on the stained samples before and after the tests, and the  $\Delta E$  value was calculated. It was found that the test that most affects the fibers is the washing at high temperatures and the greater solidity was presented in the artificial light test.

Natural Fibers, Natural Dyes, Dyeing, Cocoa

### Obtención de jarabes glucosados por hidrólisis ácida de yuca (Manihot esculenta)

### Obtaining glucosados syrups by acid hydrolysis of cassava (Manihot esculenta)

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#### **Abstract**

Bioethanol is used for the substitution of petroleum fuels, which is a non-renewable resource with problems of supply, polluting effects and contribution to climate change. Bioethanol production is currently focused on the fermentation of glucose from sugary or starchy biomass. The main producers of bioethanol are the United States and Brazil, which obtain it from corn and sugarcane. In this work we report results of the acid hydrolysis of cassava flour (*Manihot esculenta*) to obtain fermentable glucosed sugars for its subsequent ethanol production. For acid hydrolysis, an experimental 3X2X3 design was used with three variables: time, volume of the reaction and concentration of sulfuric acid, the reducing sugars obtained were characterized by Miller's DNS technique. The analysis of the results reports the optimal conditions for the hydrolysis of cassava in the range of the variables studied

Hydrolysis, Glucose syrups, DNS, Cassava

## Evaluación de variedades nativas y mejoradas bajo el sistema milpa

### Evaluation of native and improved varieties under milpa system

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The purpose of the present study was to analyse the agronomic behavior of local and improved varieties under the milpa system. The work was carried out in Oxolotán, Tacotalpa, Tabasco, for which an experiment was established with random blocks design with four replications in which two native varieties (Criollo Blanco and Bacalito) and two improved varieties (A7573 and V531) were evaluated. recorded the variables: germination, survival, lodging, days to male flowering, days to female flowering, days to physiological maturity, presence of weeds, cob height, plant height, stem diameter, ear length, ear thickness, number of rows, number of grains per row and yield and an analysis of variance was made with the SPSS program. Differences were found for the variables survival, physiological maturity, plant height, ear height, stem diameter and yield. Survival was lower in A7573, the days at physiological maturity, plant height and ear were higher for the native varieties, the Bacalito variety showed higher values of ear diameter. The yield was higher in the Criollo Blanco variety. The native maizes show advantages under the prevailing agroecological conditions in the Mountain of Tacotalpa, Tabasco.

Milpa, Corn, Varieties

## Latencia en semilla de colectas del genero Physalis

### Latency in seed of collections of the genus *Physalis*

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#### **Abstract**

The seed dormancy was identified from 14 accessions of seed collection of the genus *Physalis*, in a standard germination assay and viability analysis with tetrazolium. The effect of cold stratification and 5 treatments with gibberellic acid (Ag³) were evaluated. Ag³ concentrations were 100, 200, 300, 400 and 500 mg L-1. The evaluated variables analyzed were: percentage of germination, dormant seeds, dead seeds and index of emergency speed. Seed of the same species, collected in different site presented difference in degree of latency. The stratification with low temperatures, increased in some accessions the percentage of germination up to the total of seeds. The effect of Ag³ was more efficient for the elimination of seed latency with a greater degree of depth. The concentration dose of 100 mg L-1 significantly increased the emergency rate index values

Cold stratification, Gibberellic acid, Elimination of dormancy

## Obtención de licor de chile X-cat (Capsicum annuum) mediante maceración alcohólica

### Obtaining X-cat chili liquor (Capsicum annuum) by alcoholic maceration

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#### **Abstract**

Liquors are aromatized drinks obtained by various mixtures of natural vegetable substances, with distilled or flavored alcohols, or by additions of authorized extracts, essences or flavors, or by the combination of both, colored or not, with a generous proportion of sugar. A research work is presented on the elaboration of Chile X-cat liqueur (*Capsicum annuun*) by means of the cold alcohol maceration method. General topics of liquors are addressed, General characteristics of the X-Cat chili pepper (*Capsicum annuum*), raw materials used in its elaboration, own characteristics in terms of alcohol / sugar quantity classifications. The methodology used from obtaining the raw material to sensory evaluation by a group of judges not trained to generate market acceptance is presented. In this work, the elaboration process and the results obtained in the elaboration of X-cat chili have been captured, by means of a simple method where the acceptance was good for its use and innovation in the area of cocktails

Liquor, Maceration, Chile X-Cat

## Diseño de un modelo de transferencia tecnológica para la producción de la avicultura en Tabasco, auspiciado por dos Universidades

# Design of a technology transfer model for poultry production in Tabasco, sponsored by two Universities

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#### **Abstract**

The present research has aimed to determine the feasibility of implementing the poultry research technology of Jerusalem's Hebrew University. All this to design a technology transfer model for state farms, through the Universidad Juárez Autónoma de Tabasco, in order to increase profitability in the agricultural sector. The methodology used was a deductive type study with a qualitative approach and a transversal non-experimental design, as well as the interview with semi-structured questions to research professors and poultry farmers. This model was chosen because the investment can be recover in a medium term and it has contributed to Israel's economy in a constant way, besides the temperatures are similar in Tabasco including a vast productions in the desert, from 500 to 3,000 laying birds. The model exposed, considers differents aspects going from chicks' selection to the commercialization of the eggs and the meat of the birds.

**Technology transfer, Universities, Poultry Industry** 

### Diseño de prototipo para monitoreo de terrenos de cultivo y variables de suelo

### Prototype design for monitoring agricultural land and soil variables

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#### **Abstract**

The prototype design for monitoring croplands and soil variables has the objective of realizing in real time the monitoring of the variables of a terrain and storing these values in an internal memory of the device and then downloading the values of the variables in the base of data of the system, which will provide the data to a computational algorithm implemented in software under a free license that will generate the recommendation of the type of crop that is optimal according to the conditions that the soil presents at that moment. The areas that are involved in this prototype are: electronics, computers and agronomy, given that the benefits of each of these allows generating autonomous devices for the benefit of different sectors. The prototype will allow to offer a technological tool and of low cost to the agriculturalists that support them in the decision making of the optimum crop, obtaining better results in his harvests.

## Prototype, Circuit, GUI

## Adaptación de una población microbiana a los HPA (Hidrocarburos Policíclicos Aromáticos) en un sistema Bach

## Adaptation of a microbial population to HPA (Polycyclic Aromatic Hydrocarbons) in a Bach system

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#### **Abstract**

Scientific knowledge about the role played by microorganisms in the treatment of pollutants in the environment such as Polycyclic Aromatic Hydrocarbons (HPA) is essential to prevent and control the damage that may cause spills or leaks of these pollutants. The degradation of HPA is a process that can occur naturally by microorganisms native to contaminated areas taking advantage of their metabolic pathways. For this reason, at this time it is expected that microorganisms can offer this possibility in technologies based on the use of these in the remediation of environmental pollution. In the present work, we studied the adaptation of microorganisms from contaminated soil for more than 30 years to a Bach system, by means of an isolation made by adapting to a system added with auto-burned fat. Under the premise that microbial consortiums act jointly and not in isolation. The microbial metabolism was verified by achieving the reduction of the COD of the contaminated water from 869mg /1 to 300mg /1 and the improvement in the oxygen dissolution (OD). Also for identification purposes, 5 bacterial, 3 Gram positive and two Gram negative strains were isolated, which will be identified later. This work will be followed up; using isolated microorganisms in the treatment of contaminated soil and water.

Aromatic Polycyclic Hydrocarbons (HPA), Selection, Bach System

Efecto de la trehalosa en las propiedades fisicoquímicas de la pulpa del aguacate Hass (Persea americana 'Hass')

## Effect of trehalose on the physicochemical properties of Hass avocado pulp (*Persea americana 'Hass'*)

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### Abstract

The objective of this work was to determine how trehalose affects concentrations of 1%, 3% and 5%, the physicochemical composition of the pulp of avocado variety hass. The physicochemical and organoleptic analyzes were carried out in the Quality Control Laboratory of the Center for Agricultural Sciences of the Autonomous University of Aguascalientes (UAA). The organoleptic evaluation was carried out in a common way; smell, taste and color to the naked eye of avocado flakes. Regarding the physicochemical evaluation, they were determined according to the official methods of the AOAC. For the statistical calculation, a one-way ANOVA variance analysis was performed, using the Tukey multiple comparison analysis at 0.05 error probabilities. Based on the results obtained from trehalose at different concentrations in the avocado pulp, it was observed that this disaccharide modified the physicochemical properties of the avocado since its application, increasing its value of aw, humidity and brix degrees, on the other hand it decreased the acidity and pH. Also, there were significant differences in the percentage of fat and ashes.

Avocado, Trehalose, Hass, Oxidation

## Evaluación de las características Físico-Químicas y Sensoriales de fresa con cubiertas comestibles de Quitosano

## Evaluation of the Physical-Chemical and Sensorial characteristics of strawberry with coating edible Chitosan

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#### **Abstract**

In recent years there has been a need to develop new methodologies for the conservation of fruit and vegetable products. The strawberry is a fruit with a high content of antioxidants and highly appreciated for its sensory characteristics. In the present study, the behavior of the physical-chemical and sensory characteristics of the covers with different formulations of chitosan supplemented with sorbitol and calcium chloride was analyzed; Determining respiration, soluble solids, pH, firmness, color, perception of taste and aroma, visual quality, at different storage times. It was determined that after six days of storage in refrigeration the coated strawberry—with a mixture of chitosan-sorbitol (B) decreases the respiration rate with respect to the control (68 vs 183 ml / Kg h of CO2), while the pH, solids and color maintained with values similar to the control; Regarding the perception of flavor and aroma characteristic of the strawberry, the coverage with B was the greatest acceptance for the panelists that are perceived with greater intensity, likewise visually it was more striking. With the results obtained, it is demonstrated that the edible covers based on chitosan improve the storage conditions of the strawberries.

Coating Edible, Chitosan, Strawberry

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## Producción in vitro de cocones de la especie Eisenia foetida en diferentes sustratos

### In vitro production of coons of the species Eisenia foetida in different substrates

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#### **Abstract**

The *Eisenia foetida* annelid is very useful to transform organic waste into lombrihumus and be used as biofertilizers for soils.. The production of buds of the species *E. foetida* was evaluated in different food substrates. To evaluate the *in vitro* production, four substrates and their duplicates that were treated were, treatment 1 kitchen waste (T1), 2 citrus treatment (T2), 3 herbaceous treatment (T3) and 4 treatment of cattle manure (T4) where was deposited 1 kg of earth and 500 g of organic matter respectively with 10 young annelids without clitelo, during a period of 4 months, where they were monitored, humidity, pH, temperature and at the end the counting of cocoons was carried out. With the obtained data, a multiple pairwise comparison was performed after a multifactor ANOVA (multiple pairwise comparisons) including the Tukey HSD procedure (Tukey Honest significant difference) in the XLSTAT 2018.5.52040 software. A significant difference in cocons production between the different food treatments with respect to humidity was obtained, that the T1 treatment can be considered as the best food substrate for cocoon production, and it was found that the higher the humidity, the higher cocoon production.

E. foetida, Cocoons, Annelid, In vitro

## Identificación estructural de tres diferentes policloruros de vinilo

## Structural identification of three different polyvinyl chloride

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#### **Abstract**

In the present work, the structural properties of three different PVC tubes were identified, by means of infrared spectroscopy (IR). The differences in structure are presumably related to the antimicrobial properties of PVC pipes.

PVC, CPVC, PPR, infrared spectorscopy

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# Evaluación del pre-tratamiento ácido en la digestión anaerobia de residuos agroindustriales

### Evaluation of acid pre-treatment in the anaerobic digestion of agroindustrial waste

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#### **Abstract**

This research provides an alternative solution to the generation of agroindustrial waste in production processes that integrate agribusinesses. However, the complexity of these waste imposes the study of alternative methods that contribute to improving the efficiency of the process, recognizing that the limiting step is the stage of hydrolysis of complex organic material. The present study aims to assess the effect of the acid pre-treatment with doses of 4% v/v at 25° C for a time exposure 90 min of acetic acid of in the process of anaerobic digestion of a mixture of agro-industrial waste (excreta of broiler chickens, sludge and SCW). The mixture characterization of the agro-industrial waste, shows that it is rich in organic compounds such as carbohydrates (6.3 g/l), lipids (4.69 g/l) and especially proteins (30.20%). Solubilization degree obtained for acid pre-treatment was 12.9%, which contributed to the speed of the process of anaerobic digestion, decreasing in 7 days the HRT compared with the test control. Semi-continuous operation, the removal efficiency was 47.4% and yields of biogas and methane were 1.05 L b/g VSrem, and 0.81 L CH4/g VSrem respectively.

Biogas, Excreta of broiler chickens, Solubilization degree, Sludge, Sugar cane waste

## Diseño de elementos magnéticos para alta frecuencia en convertidores de tipo CC-CC

### Design of magnetic elements for high frequency in DC-CC type converters

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#### **Abstract**

Objectives: Study of the behavior of magnetic elements in high frequency focused on the design of magnetic elements for DC-DC converters. As well as the study of high frequency phenomena: skin effect, proximity effect, parasites, dispersion inductances. As well as obtaining some of these parameters that we must take into consideration for certain applications. *Methodology*: Given that the problem was the study of the phenomena in the design of high frequency magnetic elements for DC-DC converters, the following methodology was followed in order to understand them better and study the solutions proposed in the bibliography to take them into account in the design and optimize them, Study of the electromagnetic theory, Magnetic materials, Study of the phenomena in high frequency, Phenomena associated to the bad construction of magnetic elements, Validation of the method. *Contribution*: This work will provide a correct methodology for the design of high frequency magnetic elements for DC-DC converters, as well as the implementation of this methodology for the construction of a flyback transformer. With this work it is expected to provide this methodology for the area of Power Electronics.

### Magnetic flux, High frequency Magnetic elements

Efecto del tiempo de agitación de síntesis en SBA-15 modificado con ácido trifluorometansulfónico

## Effect of the agitation time of synthesis in SBA-15 modified with trifluoromethanesulfonic acid

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#### **Abstract**

Mesoporous SBA-15 was prepared and modified with *trifluoromethanesulfonic acid* (*TFA*, *triflic acid*). *Catalytic precursors of SBA-15* were prepared by a hydrothermal treatment studying the time of stirring during impregnation of triflic acid (1 or 5 h) over the total acidity and finally were calcined in air. The materials obtained were characterized by BET, FTIR, X-ray diffraction, n-bta-thermodesorption and 2-propanol dehydration. The material treated during 5 h showed the highest acidity (0.0040 mmoles of n-Butylamine/g) with respect to that stirred by 1 h (0.0023 mmoles of n-Butylamine/g), both materials were active in 2-propanol decomposition.

TFA-SBA-15, total acidity, n-bta thermodesorption, 2-propanol dehydration

### Germinación in vitro y callogénesis de una especie del género Digitalis

### In vitro germination and callogenesis of a species of the genus Digitalis

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#### **Abstract**

The objective was the establishment of a protocol for *in vitro* culture of *D. purpurea* for induction of callus from leaf by adding Naphthalene Acetic Acid (NAA) and Benzyl Amino Purine (BAP) at different concentrations. To obtain leaves, seeds were sown in MS (1962) without growth regulators. Subsequently a protocol callus induction on Murashige and Skoog (MS, 1962) supplemented with auxins and cytokinins were designed five treatments. The initial and final fresh weight of callus and morphogenetic response was evaluated for 4 weeks. The beginning of germination was obtained on day 8, while on 9 presented the peak of germination that was 12 seeds. As for the average initial fresh weight of the explants was 10.82 to 13.08 mg while the average final weight was more relevant for T3 (NAA 1 mg/L and BAP 2mg/L) with 300.28 mg.

Germination, in vitro, callogenesis, Digitalis

Evaluación del efecto de la presión de vacío y potencial Hidrógeno sobre la vida útil de embutidos de pollo (Gallus gallus domesticus)

Evaluation of the effect of vacuum pressure and hydrogen potential on the shelf life of chicken sausages (*Gallus gallus domesticus*)

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#### **Abstract**

In recent years, research on the safest and most effective way to pack food has progressed considerably. In this regard, numerous studies have been carried out on the packaging methods and the most adequate materials to contain the different foods, focusing on the interaction between the food, the packaging and the environmental impact of the different materials. Vacuum packing food is a fundamental technique to preserve the quality of the same and inhibit the growth of microorganisms that accelerate deterioration. The vacuum technique is based on modifying the atmosphere of a container, with the basic objectives of preventing the growth of certain existing microorganisms or preventing oxidative processes in the packaged food. To evaluate the effect of vacuum pressure and pH in a raw chicken sausage, the production of the latter was carried out in order to obtain the data to perform a completely random block type experimental design to determine if there was or no significant difference in useful life between packing at different pressures, which was verified by monitoring the pH for seven weeks, finding that the useful life of Chorizo under the established conditions was four weeks.

### Vacuum, Chicken, Sausage

Diseño del proceso para la elaboración de chorizo de bagre de canal (*Ictalurus punctatus*) y determinación de vida de anaquel

## Process design for the elaboration of channel catfish sausage (Ictalurus punctatus) and shelf life determination

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### **Abstract**

The objective of this work is to design the process for obtaining chorizo from catfish (Ictalurus punctatus) and to determine the shelf life, keeping the conventional characteristics of the chorizo, but with beneficial contributions for the consumer, as a high content of proteins, healthy fatty acids such as omega 3 and 6. The process was carried out in compliance with the specifications established in NOM-242-SSA1-2009, Fresh, refrigerated, frozen and processed fishery products. Two formulations were made (F1 and F2), the difference between the two was the variation in the salts and condiments to make the sauce with which the meat is mixed, which is then stuffed. After consumers applied the surveys to choose the formulation with greater acceptance, the preferred formulation was F1. To guarantee the useful life of the product, physicochemical and microbiological analyzes were performed on samples that were kept at refrigeration temperature ( $4 \pm 2$  °C) and at room temperature ( $25 \pm 2$  °C) to determine by statistical analysis if there was any variation between both temperatures or that it intervened in the conservation of the product, concluding that the temperature that offers better conditions for the conservation of the product is that of refrigeration.

Chorizo de Bagre, Shelf Life, Product Design

# Caracterización estructural y morfológica de películas de $Al_2O_3$ -Ni obtenidas por electrodeposición

# Structural and morphological characterization of $Al_2O_3$ -Ni films obtained by electrodeposition

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#### **Abstract**

Nickel electrodeposition was performed on anodic aluminum oxide films to determine selective films of solar radiation. The EDS technique was used to determine the concentration in atomic percentage of the elements that make up the selective films after the electrodeposition process and nickel coloring ( $Al_2O_3$ -Ni coatings). Through SEM the morphologies of the films were obtained, where the percentage and height of nickel deposited in the pores was determined and by X-ray diffractogram the existence of nickel deposited in the anodized films was determined.

Electrodeposition, Al<sub>2</sub>O<sub>3</sub>-Ni EDS, SEM

# Comparación fisicoquímica entre un biopolímero de sábila (aloe vera) y de nopal (Opuntia ficus-indica)

## Physico-chemical comparison between a biopolymer aloe vera and Opuntia ficusindica

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#### **Abstract**

Nowadays it is difficult to dispense with the use of plastics, both because of their usefulness and the economic importance they represent. Plastics are one of the world's largest pollutants, with an estimated 25 million tonnes of plastics being generated each year and their degradation lasting between 100 and 500 years. That is why it is important to use new alternatives to the use of petroleum-based plastics. The objective of the present work is to characterize two biopolymers, one derived from nopal opuntia and the other from aloe vera, in order to make a comparison of their physical and chemical properties and thus define possible applications. Various tests were used for the physico-chemical characterisation of biopolymers. The results obtained from the comparison of the biopolymers conclude with similarities in their properties so that they are viable for use as a substitute for some petroleum-based polymers.

Biopolymer, Nopal, Aloe Vera, Comparative

## Análisis de textura en piloncillo a través de procesamiento de imágenes utilizando la matriz de co-ocurrencia

## Texture analysis in piloncillo through image processing using the co-occurrence matrix

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#### **Abstract**

The sugar industry in Mexico operates its processes with great negative impact on the environment and health, so diversification is a priority issue. An alternative is to give greater value to the conventional derivative products of sugarcane, such as the piloncillo, which to be exported requires quality conditions such as color and texture. The objective of the present work is the analysis of the texture of the piloncillo to characterize the aspect uniformity through techniques of image processing. It is proposed to implement the co-occurrence matrix and the calculation of four textural descriptors: correlation, contrast, homogeneity and energy to determine defects in the surface of the product and thus strengthen export marketing. The research work was carried out in the Huasteca Potosina, Mexico, a sugarcane area par excellence with around 4500 producers of piloncillo.

Piloncillo, Quality, Texture, Matrix Co-occurrence, Huasteca Potosina

## 3 Ciencias Sociales

IPERC: Identificación de peligros, evaluación de riesgos y controles de una empresa elaboradora de botanas en la región sur de Sonora

IPERC: Identification of hazards, risk assessment and controls of a company that produces snacks in the southern region of Sonora

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#### **Abstract**

The company that produces the snacks under study, in this case, has as purpose the implementation of a methodology for the identification of hazards, risk assessment and controls based on section 4.3.1 of the OSHAS 18001: 2007 standard, to subsequently carry out preventive activities that are able to keep risks controlled. For them, industrial safety is one of the aspects that must be considered among the most important within it, since all of them have the presence of risks, which can lead to accidents that endanger the integrity of any person within the company. To address this problem and comply with the stated objective, responsibilities of IPERC were assigned for each position related to safety, hazards were related to each activity of the posts in the area under study, the classification of each risk was determined and control measures for risks classified as not acceptable, the findings were documented in a matrix format, the results were validated with the safety officer and an action plan for the control of risks was drawn up. IPERC Matrix was obtained with an organized description of the activities, risks and controls for each work area, as well as a plan of preventive actions that allows the risks to be controlled; Lastly, personnel were trained in the risks to which they are exposed and the importance of the use of personal protective equipment (PPE) and work positions.

IPERC, Dangers, Risks, Controls

## Recursos mercadológicos como forma de atracción de alumnos en la Universidad Tecnológica Fidel Velázquez

## Market resources as a way of attracting students at the Universidad Tecnológica Fidel Velázquez

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#### **Abstract**

Political, social and technological changes Have Transformed the Way in Which students are incorporated into public university education, combined social pressure are factors With That influence students to choose a career, Themselves Who should ask: what career to choose? What is the labor market Have you? What are the economic costs of pursuing it? In Which university will I study my career? Do I know the university and the study plans They offer? Do I enroll in college and career Because I want to, Because They recommended it to me or Because it is the option I have? The present investigation shows the perception That the students of the Technological University Fidel Velazquez Have on the way in Which Their educational programs offer them making use of the marketing resources so That They study a career.

Mercadotecnia, Promoción, Universidad Tecnológica Fidel Velázquez, Educación Universitaria

## Aplicación de los modelos administrativos para la intervención de la educación en la mejora de los procesos

## **Application of Administrative Intervention Models for Education in the Process Improvement**

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#### **Abstract**

Just like companies, the Educational Institutions, Arise as a result of the Existing needs in the society, esta to Achieve a capable goal of Achieving a benefit, not only personal social but, in the company the team work is Promoted for the achievement of the Objectives in the Education and the Teaching-Learning (EA) is to be able Promoted to be competent before the environment That surrounds them. Like the company, education Follows a process That Helps You Achieve the Desired objective, in case, as it is Known That the administrative process has stages to Achieve it, it Also has administrative models That can be followed to Improve the system, for the elaboration de este research, an analysis of some administrative models That can intervene in education to Improve Processes is made. The main objective is to analyze the administrative models That can intervene in education in the improvement of Processes, particularly all through the following Objectives:

- Know the elements of the administrative model to know how it intervenes in the improvement of processes.
- Describes the administrative model to know how it intervenes in the improvement of processes.
- Determine if indeed the administrative model Helps in the improvement of the company's processes.

For the elaboration of the present work, an analysis of the Existing bibliography on the phenomenon of study will be Carried out, Which Will Be Approached from the field study, since a Likert questionnaire is Elaborated With Affirmations That support for the analysis, It is a qualitative research due to the interest of showing the main Characteristics of the object of study.

### Innovation, Future Hypothesis, Sustainable developed

Análisis de competencias profesionales y académicas del programa T.S.U. Administración área capital humano vs las competencias profesionales y académicas solicitadas por empresas del sector industrial

Analysis of professional and academic competences of the t.s.u. administration human capital area vs the professional and academic competences requested by industrial sector companies

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#### **Abstract**

This research work is the result of professional internships carried on in companies of the Industrial Sector, which allowed identifying the real needs of the professional, labor and academic competences requested in the Productive Environment in order to develop a comparison analysis with the professional and academic competences used when forming in an integral way the students from the TSU Educational Program: Human Capital, Administration Area of the Economic-Administrative Area of the Technological University of Xicotepec de Juárez. To this end, a matrix of competencies was integrated, considering it as a reference handbook with the description of the functions and profile of the position, the students' graduation profile, generic and specific competences, as well as professional occupations. The analysis allowed to recognize the competences that are prominent in the companies of the Industrial Sector for professionals in the area of Human Capital among which are acknowledged: Human Resources Management, Occupational Health and Safety, Working Environment, Management by Objectives, Strategic Planning, Organizational Development; regarding skills there are: Leadership, Empathy, Teamwork, Ease of Speech, Service Attitude, Assertive Communication, Negotiation. It is important to emphasize that the competencies that must be strengthened are those developed in the criterion of the evaluation of the Being.

Professional Competences, Labor Competencies, Competency Matrix

Metodología para determinar la relación del emprendimiento universitario potencializado por la dimensión de relaciones del clima social familiar empleando el método de Tukey en ANOVA

Methodology for determining the relationship of university entrepreneurship potentiated by the dimension of family social climate relationships using the Tukey method in ANOVA

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### **Abstract**

Currently, the global level of students is why this topic has been studied in recent years with the public most noted for its relevance and impact that entrepreneurship has in innovation, competitiveness, job creation and economic growth. Nowadays, research is carried out on entrepreneurship, among which are traditional, social, feminine, innovative entrepreneurship and social innovation entrepreneurship. The present research work includes the idea of the entrepreneurial university, which is widely recognized, for what reason, the classic concept of university and its social contribution has evolved, that is why entrepreneurship in the university environment is one of the themes that has had dynamism and that occupies that many people, the majority of people related to the university environment; and that currently universities have a proactive role in this issue, not only are they restricted to education and research, but they have an active role in the development of university entrepreneurs, because society demands an active role of educational institutions; Many young people are putting into practice ideas that they probably did not consider before. Others focused on cognitive skills, entrepreneurial education and the characteristics of the entrepreneurial personality. University entrepreneurship, the entrepreneurial attitude, and the influence of the family social climate on entrepreneurship are subjects that attract considerable attention in research and practice. However, the overlap of these issues can still be found in this context, but the family can still be accessed in context. of university entrepreneurship.

Entrepreneurship, Family Social Climate, Entrepreneurial Intention, University Entrepreneurship

## Globalización y calidad de vida en los diversos tipos de productores agropecuarios de la región norte del Estado de Jalisco, México

## Globalization and Quality of Life in Different Types of Agricultural Producers of the Northern Region of the State of Jalisco, Mexico

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#### **Abstract**

In order to determine the positive or negative impact globalization has HAD Which Already 35 years in your development, on the quality of life of the various types of agricultural producers in the North Region of the State of Jalisco, was developed esta study. The work was Carried out in three of the municipalities MOST representative of the Region Mentioned: Villa Guerrero (VGRO), Huejúcar (HUE) and Mezquitic (MEZ) During the period of time from January to December 2017. It Surveyed 30 producers by municipality and 90 all producers for the region Mentioned above: The study was managed under a multidisciplinary approach, Evaluating the impact productive from the point of view not only economic, but Also the social, political, cultural and environmental impact, Emerged as a result of the implementation of the globalization. The results Indicate a clear disparity in the present impacts Among the three different types of producers in the municipalities Considered (small, medium and large) Determined on the basis of the technology, infrastructure and resources Implemented on Their farms. The negative effect are Observed in the decapitalization and the apparent abandonment of farms, Causing fewer income and Influencing a greater presence of poverty; Relevant factors presenting: such as the aging of the producers (61.8 years average age), and the presence of women Increased (40% of farms Have active presence of women), older adults and teenagers on farms; Increase in the national and international migration accelerated emergence of casual trade, impact on the recurrence to lenders in each production cycle, emergence of casual trade, impact on the recurrence to lenders in each production cycle, emergence of new types of family and family roles, as well as variations in the quality of the product produced. The 80% of the producers have cattle, planting corn for food only to Obtain Their cattle; 90% of the producers does not have a defined business vision and is not interested in joining a company. Actually, in the three municipalities Considered productive structure is 70%, 25% and 5% for small, medium and large producers, Determined on the basis of the number of animals and agricultural land available, in contrast to the tradicionally exposed by the Government Officials Establishing the presence of 60, 30 and 10% for These same producers. This situation sets That small, producers Have Increased Their presence (10%), while medium and large producers Have Decreased it by like Percentages (5%).

Globalization, Quality of Life, Type of Producer

## Estrategia de innovación: Mapa cognitivo de hipótesis futuras para alcanzar el desarrollo sostenible

## Innovation Strategy: cognitive map future scenarios for sustainable development

MUÑOZ-ROSALES, Alberto Francisco, FLORES-HERNÁNDEZ, Adelaida, RUEDA-HERNÁNDEZ, José Fermín Enrique and FERNÁNDEZ-PÉREZ, Jorge Alejandro

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### **Abstract**

The innovation is vital in our times, the education don't escapes to her. The innovative strategic learning for the "cognitive map of future hypothesis", created for REACH developed sustainable. It was thought for series of steps to Achieve active and constructivist role for the students, the TIC's let a significant mediation. The competence hypothesis Contributed to future gets to Thinking About sustainable, the student Such Strengthen to the profile of the and the graduation. Since the vision of the business administration, and make it was applied in students of esta career, to do This, it was Necessary used digital resources. One Resulted interesting, When question to their, if the strategic hypothesis of future Contributed to the knowledge over the sustainable develop, the answered, the 70% of the student be answered completely agreement, This was amazing. When one considers the above operation has-been successful, it was for the significant activates, the picture don't sustainable, the Conversation with the business man and the briefcase of briefcase

Innovation, Future Hypothesis, Sustainable developed

## Importancia de los negocios inteligentes aplicado a las ventas en los restaurantes para atraer turismo en Salvatierra Pueblo Magico

## Importance of intelligent business applied to sales in restaurants to attract tourism in Pueblo Magico Salvatierra

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#### **Abstract**

Obtaining knowledge of the satisfaction of Both the first and the last client arrives at the establishment That leads to a series of Circumstances That need to be identified. The objective of the research is to Identify If They carry out smart business to know the needs of Their customers and the management of Their information through the use of information from the ticket and the command to generate information That will lead to Proposals and Modifications in the operability of the restaurant with the purpose of attracting tourists. Qualitative Approach with an action research design and a sampling for convenience to the main restaurants in the city of Salvatierra Where the magical town more tourist affluence is marked by the location of the places. The research will help restaurant managers analyze the information can be generated That with a ticket and a command is very useful for the knowledge of your client

**Smart Business, Tickets, Commands** 

## Socio-environmental management and conservation of resources in priority areas of the state of Puebla

## Manejo y conservación socioambiental de los recursos en áreas prioritarios del Estado de Puebla

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#### **Abstract**

Aim: This proposal is Relevant Because of the interdisciplinary and multi-sectoral focus of the socio-environmental management and conservation of the natural resources in critical areas Which characterize the state of Puebla, Which have a strong pressure on the natural resources. Methods: The Interaction Among professors of the university is allowed and enhanced, as well as the complementarity of scientific skills When the dialogue and inter departmental analysis social Between and Natural Sciences and the inclusion social of, political and the cultural variables in a theme Which Has Been ITS predominantly addressed only in physical, biological, ecologic or geographic perspectives. Controbution: The training dimension of human resources Shall Be Actively included not only With under graduate and graduate students, but With social sensitive actors as well, in the face of various Alterations of the environment and culture of the communities, Which strengthens local decision making Processes , democracy, participation, cohesion and articulation soicla With governmental actors.

### Environment, education, social, cultural, multidiscipline

## Análisis del desarrollo organizacional en el Servicio Nacional de Empleo

## Analysis of organizational development in the Servicio Nacional de Empleo

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### **Abstract**

The Manual of Procedures for the Servicio Nacional de Empleo, is the result of an analysis where it is developed to facilitate the time of vacancy in the Department of Business Attention, occupying the methodology through an exploratory investigation, with the making of notes, constant tours and observation in the impact work areas, this study being supported by a university student of the Business Management Career of the UTEZ, in order to detect areas of improvement in their procedures. The contribution of this work impacted the Department of Business Attention, managing to facilitate the postulation of vacancies thanks to its restructuring and the order in the documentation delivered by the participating companies.

Analysis, Procedures Manual, Analytical Research, Restructuring

## La formalización contable-financiera de las microempresas y su impacto económico en Izúcar de Matamoros

## The accounting-financial formalization of microenterprises and their economic impact in Izúcar de Matamoros

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#### **Abstract**

Objectives: General: Determine the economic impact of the formalization of micro-enterprises in the Tax Incorporation Regime. Specific: Analyze and compare the micro-company registry of the Izúcar de Matamoros Region, Measure the economic results of having micro-companies as informal, In this paper we will analyze the impact on the local economy that informal workers register in the Federal Register of Taxpayers, based on an experimental investigation that serves to answer the question, meet the objectives of the study and submit the hypothesis to test and be able to measure the results, These micro-companies operate informally since they do not perform any procedure before the corresponding dependencies, nor do they obtain the operating permits, in view of this situation, the orientation for the incorporation into the Fiscal Incorporation Regime is very important since, when paying their taxes they will contribute to the growth of the economy of the region.

Micro-Enterprise, informality, incorporation, economy

Percepción de empresarios sobre la importancia del sistema de costos y la competitividad en empresas del sector maderero del Sur de Sonora

Perception of entrepreneurs on the importance of the cost system and competitiveness in timber sector companies of Southern Sonora

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#### **Abstract**

The vertiginous changes faced by organizations have led to the creation of more systematized environments for the optimization of economic resources. Part of these systems are those that provide cost systems, which help organizations to be more competitive when they increase their savings and reduce their losses, that is, produce efficiently. The research is carried out in Cajeme with microentrepreneurs of the timber industry and it is desired to provide an overview of the current situation. The methodology uses descriptive statistics as well as quantitative analysis of the results obtained. Among the main findings, it was found that entrepreneurs are not familiar with the systematization of the controls that must be handled to control the raw material, it is difficult for them to apportion GIFs for each of the products they commercialize.

(150-200 words)

**Cost Systems, Indirect Manufacturing Expenses, Microentrepreneurs** 

Evaluación del proceso de liberalización financiera en términos del crédito otorgado por la banca comercial al sector privado. Los casos de Argentina, Brasil y México (1990-2017)

Evaluation of the financial liberalization process in terms of the credit granted by commercial banks to the private sector. The cases of Argentina, Brazil and Mexico (1990-2017)

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### **Abstract**

During the last decades, the international financial system has been modified by different reforms under the McKinnon-Shaw paradigm, which supports the existence of a positive relationship between this sector and the productive sector. This explains the different processes of financial liberalization that took place in most developing countries during the nineties; with which it was sought to promote a better relationship between commercial banking and the productive sector; because by encouraging competition in the banking sector, theoretically the conditions of access to credit and its allocation would be improved. In this sense, the results obtained in three economies (Argentina, Brazil and Mexico) are analyzed, with common characteristics that allow their comparison. Thus, in the present work it will be evaluated in each case, if the commercial bank has really contributed to the development of the national productive sector and therefore, to the economic growth of the country.

Financial liberalization, Commercial banking, Credit, Economic growth

Impacto de los Costos de Calidad aplicados en Pymes Manufactureras Automotrices y Metal-Mecánicas en el Norte de Aguascalientes Municipio de San Francisco de los Romo

Impact of the Quality Costs applied in Automotive and Metal-Mechanic Manufacturing SMEs in the North of Aguascalientes Municipality of San Francisco de los Romo

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#### **Abstract**

This research is the result of 4 investigations carried out in the northern region of Aguascalientes. The municipalities on which this research is based are Aguascalientes, San Francisco de los Romo, Rincón de Romos, and Jesús María. The objective of this study is to investigate the costs incurred by companies in carrying out their operations in the municipality of Rincon de Romos. Likewise, it analyzes the aspects of the companies as they are: Leadership, Strategic Approach, Market Focus, Personnel Management, Process Management and the main area Costs of Quality. The realization of this research allows us to know the costs incurred by these surveyed companies in order to know in what percentage the highest quality costs applied, whether in prevention costs, evaluation costs, internal failure costs and external failure costs.

Quality Costs, Internal Failure Costs, External Failure Costs, Prevention Costs, Evaluation Costs

## Análisis del tratamiento contable de las partes relacionadas 2018

## Analysis of the accounting treatment of the parties related to 2018

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#### **Abstract**

Generally accepted accounting principles (GAAP), now (NIF) financial reporting standards, are the principles that seek to unify criteria presentation and valuation in accounting records; mandatory application in the profession, however, in recent years, control measures have given to this compendium of rules, unprecedented importance, same that must have always to be the sustenance of the figures in the business. Thus, this material seeks to explore what have these professional standards in the case of operations with related parties, theme that still seems so alien to the everyday transactions in a business group. This analysis is deductive, as part of a requirement of deductibility at ISR, to what in particular should apply in this type of operations, both domestic and foreign.

Legal requirements, Standards, Operations, Revelations

# Análisis del mercado de capital humano en Dolores Hidalgo, C.I.N., Guanajuato Analysis of the human capital market in Dolores Hidalgo, C.I.N., Guanajuato

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### **Abstract**

One of the activities of the Human Resources department is the planning of the personnel, so, it is necessary to identify the characteristics of supply and demand (labor market). This analysis aims to identify the characteristics, according to the information provided by people who have or have had a job in the region. We are expected to identify its main characteristics in the behavior of supply and demand in formal jobs. For the collection of information a documentary research is carried out and from it a survey is elaborated, the information is collected and documented to be analyzed by means of tables and comparative charts. The results obtained indicate that the behavior of the demand is identified mainly by restaurants, tourism, ceramics, factories, stores and agriculture. The Companies requesting a new employee ask for availability of hours, experience and studies according to the position (high school or middle school). The city has people ages 19 to 30 (millennials), applying for a job with a good salary, IMSS, bonuses and vacation time, as well as job contracts. The most difficult requirements to meet when looking for a job are the availability of hours and experience.

Human capital market, Supply, Demand, Benefit

Migración y descapitalización como consecuencia de la globalización en las explotaciones agropecuarias de la Región Norte de Jalisco

## Migration and undercapitalization as the consequence of globalization in the agricultural farms of the Northern Region of Jalisco

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#### **Abstract**

This study was developed with the purpose of determining the impact that Globalization has on migration and the decapitalization of the farms in the region north of the state of Jalisco. For this, we selected producers of the three main towns of the region in terms of its production of beef: Mezquitic (MEZ), Huejuquilla el Alto (HUE) and Villa Guerrero (VGR). The results indicate that 60% of the producers, migrate at least once a year did the United States or Canada, from six to eight months of this, working on farms in these countries, then return to their village. In that time, the farms are handled by adolescents, older adults and women in the family, that has influenced aspects as greater presence of senior producers and presence of women, as well as limited business vision and increase of the abandonment of farms, as well as stagnation in production levels and profitability of these. Represents another aspect of relevance the fact that 80% of the farms of the region receive an injection of resources from remittances. It is urgent that the municipal authorities of this region, observe the need to implement the necessary conditions to hold producers in your area through support schemes that encourage productivity and profitability of farms.

Globalization, migration, decapitalization, farms and Northern Region of Jalisco

## Origen y evolución de la matriz tows en la administración estratégica del siglo XXI

## Origin and evolution of the matrix tows in the strategic administration of the $21^{\rm st}$ century

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#### **Abstract**

The paper's objective is to remove the confusion of the origin and the evolution of the TOWS matrix, that is one of the tools most used for the strategic planning in administration, that flourish with the focus that the neoclassic Koontz's book produce. The historical, deductive and analytic methodology, has concentrated in a literature and chronology review, since the emerge of that matrix and until the actual times categorizing the stages that have passed. The contribution of this paper, is the origin's clarification and a today situation view of the TOWS of SWOT matrix, known as DAFO in Spain and FODA in Latin America.

TOWS, SWOT, DAFO, FODA, Origin, strategic planning

## Desarrollo de un Sistema de Gestión de la Calidad con base en la norma ISO 9001 en una empresa de espirales de plástico

## Development of a Quality Management System based on the ISO 9001 standard in a company of plastic spirals

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#### **Abstract**

In a spiral plastic producing company it was found that their processes were not standardized, because they had a Quality Management System (QMS) with partially documented information, which could cause the company to lose some customers, for that reason it was decided to develop its QMS to have systematized work. The method used for the development of the QMS consisted of three stages. In the first, the documented information was developed after analysis, which allowed its adaptation to the needs of the organization; this documentation had changes of substance and form. Thus, a manual of QMS was elaborated and documentation was generated to fulfill with the of ISO 9001 requirements. Later in the execution stage, the procedures were implemented, through: talks to sensitize the staff, induction and training. Finally, the performance was evaluated with an audit of the documentation, to check its systematized application in the processes and its impact on the QMS. All in all, it was possible to define and verify the controls over the processes to avoid that the personnel carry out their activities in their own way, as this would cause variation in results.

System, Documentation, Systematized Work, Audit

## El gasto público en Educación Superior en México y sus niveles de cobertura

### The public spending on Higher Education in Mexico and its coverage levels

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#### **Abstract**

The education sector in recent years is one of the areas where the government spends the most. The above, in order to increase the quality, coverage, equity and social relevance in Higher Education and improve the provision of this service. This paper aims to analyze how the government manages public spending in this sector in order to propose efficiency alternatives guaranteeing quality in education. The applied approach was predominantly qualitative and through its tools allowed to obtain documentary information from various sources on this subject. In addition, some quantitative techniques were applied, data on budget and public expenditure related to higher education were extracted, with which tables and graphs were elaborated, and some percentages or indicators were calculated to obtain detailed descriptions on the subject. Different studies have determined that Higher Education in Mexico has a lack of investment, deficiency in quality, coverage and equity, which do not allow the social and economic development required by the country, therefore, it is pertinent to establish policies that guarantee suitability and transparency, with the purpose of improving public finances at the top level.

Public spending; Higher Education in Mexico; Quality and Coverage; Science and Technology

## Análisis de la viabilidad de las SOFIPOS como estrategía de apoyo a consumidores en el sector salud

## Analysis of the viability of Sofipos as a strategy to support consumers in the health sector

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#### **Abstract**

This article purpose the viability to create a SOFIPO (Popular Financial Societies) that benefits customers of health institutions, seeking to remedy the economic part of these customers, usually of low resources, offering an alternative to solve the contingencies who present themselves. And in turn benefit health institutions offering the service to attract customers and improve service, quality in it and customer satisfaction (patients). This research has a mixed character approach, to carry out both observation, interviews, and statistics. After developing the present investigation, it is concluded that the creation of a SOFIPO focused especially on the health sector is definitely viable, since this sector is lacking in facilities to solve the unforeseen problems related to health, which without a doubt is of the utmost importance for all customers in the health sector.

### SOFIPO, Financial, Health

## Ergonomía en las operaciones de gestión

## Ergonomics in the operations of management

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### **Abstract**

A descriptive study is described to analyse the interaction of technologies or ergonomic methods in the operations of management, by means of the program of constant education, the use of the agreements with the companies and investigation. The contribution demonstrates in the improvement of the laboratory, in the development of investigation with added value and strengthening of the entail with Metalyzinc, company of anticorrosive protection. The function of the institutions of evaluation in educational centers is innovative, because an accredited institution develops educational programs of quality that strengthens the entail and good practices in the industrial sector and of service. In the period in July, 2017 to June, 2018, there developed thesis, practical educational and technical work with the students, also, courses and graduate of education continues in the faculty and facilities of the company with the topics of ISO 9001:2015; internal ISO auditor 19011; management of the organization, proposed of laboratory and workshop for the educational program of industrial engineering. The work has fortified for both periods August - December 2016 and 2017, where the classes of ergonomics developed consolidating the offers of the work of investigation with the analysis of cases in the classroom and workshop of institution.

Management, Ergonomics, Processes, Operation, Linking

## Evaluación del Desempeño a la Coordinación Regional de Desarrollo Educativo No. 7 Izúcar de Matamoros

## Performance Evaluation to the Regional Coordination of Educational Development No. 7 Izúcar de Matamoros

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### **Abstract**

The evaluation of people is as old as man himself. Individuals have almost always considered the worth of their peers in a variety of situations, and most likely will continue to do so. However, most of these evaluations are carried out occasionally and not systematically. On the other hand, evaluation programs are different, since they contain clearly defined objectives that are based on a well-structured system to achieve them. Evaluating the performance of a worker is a fundamental component for companies, because it helps to implement strategies and refine efficiency. The objective that has been raised in the following article is: Perform the Performance Evaluation in Cordero No. 7 Izúcar de Matamoros , identifying the strengths and weaknesses of the worker in the exercise of his position through the application of the Scale Method graphics and be able to generate strategies to improve the performance of the organization. The institution evaluated has clear figures and statistics to have evidence of the follow-ups made to the worker and also strengthen career plans.

Performance Evaluation, Efficiency, Efficiency, Productivity, Quality, Personal Growth

Las normas de calidad y su impacto en la comercialización de la fresa en el municipio de Irapuato, Gto.

Quality standards and their impact on the marketing of strawberries in the municipality of Irapuato, Gto.

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### **Abstract**

In this work entitled "The management of quality standards and their impact on the commercialization of the product" (specifically in the strawberry of the municipality of Irapuato, Gto.), Where the main objective was to determine, based on an investigation, the factors of consumer perception (quality, price, etc.) that impacts the commercialization of the product. In order to carry out the work, a survey was carried out where different points regarding the consumption of strawberries were seen, afterwards this survey was disseminated through the Internet, mostly aimed at housewives, since in general they are responsible for purchasing the products. food products of the home. With the obtaining of the results the corresponding graphs were made to be able to interpret what was obtained from the survey. Among the questions and results that most stand out are the following: Where do you often acquire strawberries? where it is possible to observe that consumers have a frequency of acquiring the product in markets and grocery stores, the most important and important question for the work are the reasons why strawberry is not consumed, where the reason that had the highest percentage was distrust in irrigation systems.

Strawberry, Consumption, Quality, Irrigation System

## Mejora de los procesos de venta y producción del Sistema de Calidad en una empresa productora de Racks

## Improvement of the sales and production processes of the Quality System in a Racks production Company

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#### **Abstract**

In the quality system of a company producing racks, it was observed that the traceability, planning and development of the sales and production processes partially complied with the requirements established in the ISO 9001 standard. For that reason it was decided to improve the processes, for which an action plan was drawn up where the stages to be followed were designed to redesign them. The processes were redesigned with the use of flowcharts to give a better traceability to the operations, turtle diagrams, were even indicators, indicators, inputs, outputs and the process operation resources were included. The information generated was reviewed and approved for usage. Subsequently, the impact of this project was evaluated, which was favorable not only because of the work laps but also because of the elimination of unnecessary operations and reprocessing that arose previously. Finally, not only the results of the sales and production processes were improved, but also the performance of the quality system.

### Process, Redesing, Improvement, Quality System

Impacto de los Costos de Calidad aplicados en Pymes Manufactureras Automotrices y Metal-Mecánicas en el Norte de Aguascalientes Municipio de Jesús María

## Impact of the Quality Costs applied in Automotive and Metal-Mechanical Manufacturing SMEs in the North of Aguascalientes Municipality of Jesús María

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### **Abstract**

This research is the result of 4 investigations carried out in the northern region of Aguascalientes. The municipalities on which this research is based are Aguascalientes, San Francisco de los Romo, Rincón de Romos, and Jesús María. The objective of this study is to investigate the costs incurred by companies in carrying out their operations in the municipality of Jesús María. Likewise, it analyzes the aspects of the companies as they are: Leadership, Strategic Approach, Market Focus, Personnel Management, Process Management and the main area Costs of Quality. The realization of this research allows us to know the costs incurred by these surveyed companies in order to know in what percentage the highest quality costs applied, whether in prevention costs, evaluation costs, internal failure costs and external failure costs.

Quality Costs, Internal Failure Costs, External Failure Costs, Prevention Costs, Evaluation Costs

## Cultura Organizacional en empresas hoteleras: Caso Bahías de Huatulco

## Organizational Culture in hotel companies: Bahías de Huatulco Case

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### **Abstract**

This research will develop fundamental concepts such as the organizational culture and the elements that converge in this, emphasizing human behavior and organizational communication. The approach of the problem lies in identifying the organizational culture of the 5-star hotels in Bahias de Huatulco giving rise to future research that can contrast the perception of the society in terms of the way in which the internal part of the organizations is conformed and the identity that they wish to generate before the eyes of society, in terms of the benefits / damages that their operation brings. This document shows in a critical way the results obtained generating an academic discussion with the intention of reflecting on the relevance of organizational culture, not only for tourism companies, but in terms of the macro environment, for society in general.

Organizational Culture, Communication, Human Behavior

Factores que se presentan como limitantes en la constitución de consorcios de exportación: Un estudio de caso para el sector agrícola

## Factors that are presented as limiting in the constitution of export consortia: A case study for the agricultural sector

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#### **Abstract**

A problem related to overproduction and lack of market diversification was identified. The export consortiums allow, through the association of small and medium producers to penetrate international markets, transferring local competition to an international framework. Previously a proposal of Samalayuca had been generated, however, with the specific characteristics of the agricultural areas, it has not been possible to achieve with an agreement in it, the main objective of this researching is to establish factors that have been presented as a limitation. The methodology is directed towards the qualitative approach, using the design of interpretative framework of the grounded theory. In the results, new components were identified that weren't considered in other works, besides that it can be used as a reference in the previous stage of the constitution of consortiums that are under similar circumstances that the Mexican field goes through.

Economic development, Export Consortium, Agricultural sector, Associate SMEs

## Análisis del nivel de gasto de los hogares de México en pescados y mariscos

### Analysis of the level of expenditure of Mexican households on fish and seafood

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### **Abstract**

The objective of this research is to examine the expenditure (consumption) of households in the country in fish and shellfish, since Mexico is characterized by maintaining high levels of production. There are many variables that influence decisions about households to consume fish and aquaculture feeds. This study focuses on the analysis of consumption in the socioeconomic levels whose information was obtained from the National Survey of Income and Expenses of Households 2014 of the National Institute of Statistics and Geography (INEGI). A qualitative and quantitative analysis of the information was carried out using the logistic regression methodology to predict the consumption probabilities of households located in urban and metropolitan localities according to education, social stratum, gender of the head of household, employed persons, expenditure quarterly, members, mainly. The results show that to the extent that the education of the head of household located in localities greater than 100,000 inhabitants increases, for example with incomplete high school, the probability of spending on fish and shellfish increases by 89.30%, ceteris paribus; In addition, as localities increase their living standards, consumption also increases.

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## Análisis de la oferta turística primordial del municipio de Cuichapa, Veracruz

## Analysis of the main tourist offer of the municipality of Cuichapa, Veracruz

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### **Abstract**

The present investigation arises from the need to analyze the tourist offer of the municipality of Cuichapa through an inventory that allows to identify the opportunities for the diversification of tourist products and that serves as base for the socioeconomic development. With the question: What type of tourism can the municipality of Cuichapa, Veracruz, develop from the analysis of its main tourist offer? The methodology used is of a qualitative nature. Through field technique, applying direct observation, developing the categorization and hierarchy of resources according to the proposal by the Ministry of Foreign Trade and Tourism of Peru. Based on the results obtained in the investigation, it is obtained that sufficient hydrological, geomorphological and paleontological natural resources prevail in the municipality, concluding that Cuichapa has the capacity to receive visitors with academic and scientific interests for the resources of great value found. In this way, having identified the resources of the municipality, a point of reference is generated for the proper ordering and use of them in the planning of future projects.

Inventory, Tourist Resources, Tourism Offer, Development, Municipality

## Análisis de la productividad en el servicio electromecánico a vehículos

### Analysis of productivity in the electromechanical service to vehicles

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#### **Abstract**

The productivity analysis in the electromechanical vehicle service has the purpose of identify the main causes that originate a low productivity applying basic qualitative tools and descriptive statistics, to establish actions and / or achievable solutions that increase the productivity in the service to the Electromechanical vehicles workshop. The present study was carried out in three workshops on the city of Orizaba, Veracruz. The tool known as GUP (Gravity, Urgency and Priority) was applied to analyse the defects that may affect the service process. Likewise, the cause-effect diagram (Ishikawa diagram) was used to find the main causes that cause the defects in productivity and was also determined by a Pareto diagram where the main improvement actions should be focused. The contribution of the present research is the application of three methodological tools to analyse productivity in an automotive electromechanical workshop, where to date they do not apply and identify the opportunities for improvement they offer.

Productivity, Qualitative Tools, Descriptive Statistical

Implementación de estrategia de inventario en una empresa de calibraciones e instrumentación en Altamira, Tamaulipas

## Implementation of an inventory strategy in a calibration and instrumentation company in Altamira, Tamaulipas

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### **Abstract**

The purpose of this project is the implementation of an inventory, followed by the ABC classification method, in order to obtain a Layout for a better distribution and location of the materials that are inside the warehouse of Calibrations and Instrumentation for the Industry S.A. of C.V., obtaining a control of the materials that are handled in the warehouse of the company already mentioned.

### Inventory, ABC classification

Eficiencia en las actividades de los profesores Universitarios a través de determinantes motivacionales

## Efficiency in the activities of university professors through motivational determinants

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#### **Abstract**

This research explains the importance of the motivation in the incorporation of the activities that the university professors play to increase the efficiency in their academic and research productivity. That full-time teachers are motivated is essential to perform their work optimally and achieve organizational goals, but lacking motivation is lost commitment to what they develop and lose credibility in the institution by not showing the quality of knowledge that is expected, as well as the loss of benefits granted by the federal government. In this sense these benefits allow them to give recognition to the institution where they work, since having such appointments ensure that the knowledge shared by them can transcend and be known worldwide.

Motivation, Academic productivity, University professors

Los Consejos Escolares de Participación Social (CEPS) ¿estrategia para la autonomía y la gestión escolar escolar en la Región V Altos Tsotsil Tseltal del estado Chiapas?

The School Councils of Social Participation (CEPS) ¿strategy for school autonomy and school management in Region V Altos Tsotsil Tseltal of the state of Chiapas?

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#### **Abstract**

The article describes the main elements that make up the research on the constitution, organization and functioning of the School Councils of Social Participation (CEPS) and if these contribute to raising the autonomy index and school management in general and indigenous primary schools in the Region. V Altos Tsotsil Tseltal of the state of Chiapas. The objective is to analyze the social and cultural process in the constitution, organization and functioning of the CEPS and its impact as a strategy for the strengthening of autonomy and school management in the general and indigenous primary schools of Region V Altos Tsotsil Tseltal of the state From chiapas. The research follows a mixed approach that involves the collection and analysis of quantitative and qualitative data, with an exploratory and interpretative scope. The contribution is to contribute to the sector, results of the strengthening of autonomy and school management from the CEPS and also recommend and suggest on how to implement this policy in a particular way, respecting the contexts and sociocultural conditions of the regions and not homogeneously.

Social Participation, School councils, School autonomy

## Evaluaciones Colegiadas para asignaturas académicas: Una propuesta de evaluación del aprendizaje

## Collegiate assessments for academic subjects: A proposal for evaluation of learning

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#### **Abstract**

Collegiate Learning Assessments for academic subjects. The evaluation requires a structured and consecutive process to achieve educational quality, therefore, Higher Education in Mexico and the Universities have sought to implement a system of homologation of criteria for the evaluation process of student learning. The objective of this research is to characterize the perception of teachers of the Bachelor of French (LEF) with respect to the evaluation criteria that underlie the classroom, allowing a general overview of the evaluation in the LEF, BUAP in order to evidence the need for collegiate evaluations for the subjects. To achieve the objectives, a quantitative methodology with a transversal design applied in the spring 2018 period was used, obtaining the following contributions: characterization of the teacher perception variable of the Bachelor in French (LEF) with respect to the evaluation criteria that underlie in the classroom. Now we know the status of the phenomenon of study and from this, we propose to carry out a collegiate evaluation in order to respond to the demands of the Minerva Unitary Model, typical of this Institution of Higher Education as well as to perform actions that pay this type of evaluation in the plans and programs of study.

### Perceptions, Learning, Collegiate Evaluation

## La función de la Calidad (QFD) y el proceso de enseñanza

## The function of Quality (QFD) and the teaching process

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### **Abstract**

The application of this quality assurance tool, applied to the study of the critical value factors of the teaching process compared to the requirements of the labor market, helps us understand which of them contribute to strength the competitiveness of the university graduate, and by consequence, to improve his performance in the company that he/she would work, considering the company as the client or user. When the information was collected in a group of companies, the requirements were identified by the client, that is, the minimum required characteristics that a graduate should develop during their stay at the university, additionally, we observed and analyzed the teaching processes of a group of universities and how those processes align with the established requirements. We have found that the critical factors or keys for the part time teachers in order to succeed in their teaching process are class planning, learning strategies and the development of methodologies in the teaching process.

QFD (the function of quality), Teaching process, Client requirements, Product requirements, Critical factors

Valoración de la calidad de los estudiantes vs profesores-coordinadores del área de cultura física y salud en la educación media superior

## Assessment of the quality of students vs teachers-coordinators of the area of physical culture and health in upper secondary education

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### **Abstract**

Since the beginning of the 21st century, quality is one of the priority objectives of organizations in all their fields. In this sense, more and more educational centers are joining the current to improve quality, applying the principles of quality management as it is done in the business world. (Hernández, 2009). For this reason, the present research aims to assess the perceived quality of students vs. teachers / coordinators in the area of physical culture and health in the baccalaureate of the state of Nuevo León (Mexico), taught at the Autonomous University of Nuevo Leon (UANL) ). The method of this investigation is quantitative of cross section, the SERVQUAL instrument was used (Parasuraman, Zeithaml and Berry, 1988). The study was carried out on 588 students, 25 professors and 30 coordinators of the area of physical culture and health of the academic institutions. This study is important for the search of the continuous improvement of the learning and of the educative and sport service provided, increasing the hours of class of physical education, the physical activity, and the recreation between the preparatory ones of the UANL, with these actions it is tried to diminish sedentary lifestyle and obesity in the youth population. Therefore, the improvement of the quality of the educational service directly affects the students considering them as external clients of education (Lepeley, 2001) in the academic institutions. As a conclusion, it is necessary to have valid, reliable and simple instruments so that those responsible for educational and sports services in the university can adequately monitor the perception of their users and offer educational quality plans.

Assessment, Education, Perceived Quality, Teachers, Students, Physical Culture

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## El monitoreo como acción preventiva en la asesoría virtual

## Monitoring as a preventive action un the virtual counseling

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### **Abstract**

Virtual Education has taken an important role in the superior educative options in our country, and worldwide. This demands the actors involved to assume an active role for achieving their goals. In these roles, the virtual consultant is the one who guides supports and a is involved monitoring, the formative process of each student, so they can get familiar with the virtual platform, can knows the methodology to follow and how to make the students to integrate with the other students, to appropriate contents designed for their study and do learning activities and to assess their achievements. In the face of needing to evaluate and assess the performance of the virtual consultant at ITESI, arises the monitoring of activities. Which is important because it allows to have a clear perception of how a virtual consultant guides and supports the online course. The monitoring is done by considering scores and participations of the students and consultants. The generated graphics reflect the attention and support which a student, the course and the consultant of the course receive. The results have been a great support for the coordinators, making possible to have a wide view at the evaluating moment and making administrative decisions.

### **Virtual Education, Monitoring, Prevention**

## Competencias digitales docentes en la Universidad Tecnológica de León

## Digital teaching competences at the Universidad Tecnológica de León

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#### **Abstract**

Within the national goals mentioned in the National Development Plan 2013-2018, proposed by the Mexican government there is Mexico with Quality Education of the Sectoral Program of Education, making an emphasis in promoting the incorporation of the teaching of new technological resources for the generation abilities proper of the society of knowledge. To achieve this national goal, the objective of this investigation is to present an analysis of the digital skills of the teaching staff of the Universidad Tecnológica de León, highlighting the importance and significance of the digital preparation to face the expectations and challenges raised by the introduction of the new information and communication technologies to the educational practices proper of the 21st century. The results of the diagnosis made to the teaching staff of the Oniversidad Tecnológica de León, through an evaluation instrument, designed by the departments of Innovation and Educational Technology, allow to identify the level of proficiency of the digital skills and will help to reassess objectives, goals, strategies and techniques to strengthen the teaching.

Teacher Training, Digital Competence, Technology, Innovation

### La Tutoría Individual y su Impacto en la Permanencia, 2016

### **Individual Tutoring and its Impact on Permanence, 2016**

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#### **Abstract**

On the permanence and strategy of the Institutional Tutoring Program (PIT), at the Technological University of North Aguascalientes (UTNA) for the accompaniment of the student in the educational trajectory, through Individual Tutoring (IT) and reflected in the documentation of the tutor. The objective of the text is to present an analysis derived from the follow-up that the tutor does to the student's academic performance, embodied in the formats of the IT and its relationship with the permanence, information integrated in the dispatch formats with the Coordination of Tutoring. Based on the records of student service, one of the primary functions of the tutor, an analysis of the data is made of a cut of the Individual Tutoring exercise, an important part of the follow-up and substantive function of the tutor and their coadyuvance in the permanence, in the students who attend the 3rd quarter of the period May-August 2016, of the educational programs of the Higher University Technical level of the UTNA

### **Individual tutoring, Monitoring, Permanence**

# Experiencia de una feria de Ciencia y su impacto en la enseñanza de estudiantes de Ingeniería

### Experience of a Science fair and its impact on the teaching of Engineering students

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#### **Abstract**

Science and technology in the world are currently in the Industrial Revolution 4.0, so the teaching of science, represents the central role in the development of the necessary skills of students, to respond to the requirements of the knowledge society in Mexico. The experiences obtained from the engineering students of the Autonomous University of Baja California (UABC), in a science fair through the STEM+A Network, in collaboration with high technology companies of the city and the State Center of Arts of the Institute of Culture of Baja California (ICBC-CEART).

Science teaching, Industrial revolution 4.0, University-company collaboration, STEAM model

# Estrategia de enseñanza para formar competencias profesionales en programación orientada a objetos

## Teaching strategy to train professional skills in object-oriented programming

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#### **Abstract**

Technological University (UTFV) is presented, with the aim of strengthening the teaching-learning process and for students to acquire skills in the analysis, modeling and coding in an object-oriented programming language. The strategy arises from a research that was carried out of the quantitative type, for which a survey was applied to third-semester students who already attended the subject. The instrument used was an examination with questions such as analysis and synthesis to identify the competences they have acquired, as well as a comparative analysis of the strategies used by the professors who teach the subject. In this article we present as a contribution a teaching strategy to train professional skills in object-oriented programming integrated by 3 aspects: planning, evaluation design and problem-based learning (PBL). In this last one a battery of exercises of application in the labor and daily context is shown.

Teaching programming, OOP, evaluation by competences

### El Modelo Educativo de la UAdeC, actores y procesos en el discurso subyacente

# The Educational Model of the UAdeC, actors and processes in the underlying discourse

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### **Abstract**

This study is an analysis of the second edition of the Educational Model of the Universidad Autónoma de Coahuila, and aims to provide elements to improve it in order to better serve the society that has entrusted the University with the education of its youth as mandates the University Statute. The texts of the Model were analyzed with the Atlas Ti program that implies the creation of a hermeneutic unit where texts were produced in quotations and 119 Codes as variables. With them, a matrix of co-occurrences was made, from which 364 were selected with the criterion of sigmatic cut of values greater than the mean plus one standard deviation. We obtained readings and graphs that are presented here, compared with the previous edition and contribute with specific proposals that state the possibilities for improvement. Another contribution refers to the statistical methodology for the selection of significant codes that denote the underlying structure of the discourse, and its variables and relevant leagues since the procedure in the software used is not included. (150-200 words)

Educational model, Texts Analysis, Discourse Analysis, Underlying structure

Uso de recursos abiertos de Internet como ambientes de aprendizaje didáctico una alternativa de apoyo académico en la carrera de tecnologías de la información área sistemas informáticos de la UTFV

Use of open Internet resources as didactic learning environments an alternative academic support in the career of information technologies area computer systems of the UTFV

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#### **Abstract**

The research work that was conducted is oriented to find mechanisms that allow innovation in the educational technological field of the Fidel Velázquez Technological University, within the process of elaboration of didactic resources on the Internet, as learning environments. A learning environment refers to the space where both the student and the teacher will be interacting daily. The research also seeks to examine forms of free Internet learning environments that can transform the work of learning in the classroom to generate actions that are useful and improve the quality of teaching for the student's student life.

Learning, Information technologies, Didactic resources, Innovation, method

## Medición de la satisfacción de la Tutoría en los estudiantes de nivel superior. Comparativa de la Licenciatura en Economía y Comercio Internacional

# Measurement of the satisfaction of the Tutoring in the students of superior level. Comparison of the Degree in Economics and International Trade

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### **Abstract**

Tutoring is a process of accompaniment to the student, where the tutors guide their academic, professional, vocational and personal training through tutorial actions: guidance, information and channeling, depending on the student's satisfaction in the tutoring provided by their academic tutor. This study aims to assess the degree of student satisfaction by making a comparison between two degrees on the performance of their academic tutors and their peer counselors. The applied questionnaire consists of two parts, the first part refers to the satisfaction of the students before the academic tutoring and the second part about the "Peer Counseling". The object of study was 69 students of the Bachelor in Economics and 211 in the Bachelor of International Trade surveyed from the range of ages between 18 and 26 years of age. Among the main results, it was known that students consider the importance of their training for the tutoring activity in those who consider it necessary for their academic tutor to guide and report on the most recurrent issues and current problems presented by students.

Satisfaction, Tutorial activity, Student profile, Tutoring program

## Aspectos Susceptibles de Mejora en la estrategia de Tutorías: Una propuesta al PAT-UJAT

# Aspects Susceptible to Improvement in the Tutoring strategy: A proposal to the PAT-UJAT

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### Abstract

This paper addresses Susceptible Aspects to Improve in the Tutoring Strategy as a proposal to the Institutional Tutoring Program in the Universidad Juárez Autónoma de Tabasco (PIT-UJAT), supported by the results obtained from the research "The Action of the Tutoring Program in the DACEA: Its Effects on the School Experience". Whose objective was aimed at identifying the perceptions of students, tutors and program managers about the changes, quality and experienced reality. The research methodology is quantitative & qualitative given the nature of the study problem and the three different subjects involved tutors, tutees, and the tutoring committee. Based on the perceptions of tutoring actors, this paper set proposals aimed at improving or innovating the PIT such as: enhancing the promotion of the program, considering the days and hours to carry out three work sessions with tutees and tutors, Implement the attention of group tutoring, annual consultation sessions and coaching possible students at academic risk on time.

Educational model, Institutional Tutoring Program, Mentoring strategies, Continuous improvement

# Contribución de las asignaturas a las competencias del perfil de egreso de un programa de posgrado

# Contribution of the subjects to the competencies of the graduation profile of a graduate program

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#### **Abstract**

The curriculum of the Master of Science in Agroforestry for Sustainable Development (MCADS) program has been revised and restructured to align with the needs required in the quality postgraduate programs of CONACyT and at the same time fulfill its mission to form updated students and at the forefront regarding Agroforestry topics. This paper describes the process of updating the MACDS study plan carried out from January to March 2018, in which the contribution of the subjects to the graduation profile of the graduates was evaluated. The assessment of the subjects to the development of the competences was based on the evaluations and self-evaluations of the students at the end of each academic session and upon completion of their graduate program. The results showed that the subjects contribute significantly to the graduation profile and give relevance to the current context of the MCADS. The contribution to the capacities is a function of the area of knowledge to which the course corresponds and of the activities that are developed in the same.

Abilities, Skills and knowledge, Teaching-learning activities

# Desarrollo del sistema automatizado de información integral y trayectorias educativas primera etapa

# Development of the automated system of comprehensive information and educational trajectories first stage

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### **Abstract**

This paper presents the first stage of development of Automated System of Integral Information and Educational Trajectories "SAIIyTE", for the unified integration of the bank data of personal, vocational, academic, socioeconomic, health and other aspects of students in the educational program of Information and Communication Technologies from the Technological University of Valle de Toluca (UTVT), collecting data through an online survey and the import of xls, csv and txt files, currently managed at the Institution; The objective is to obtain statistics and identify students in a vulnerable situation to drop out or fail, mainly in the first three school periods. The system development is based on the Rational Unified Process (RUP) methodology and software tools such as PHP, Jquery, Ajax, JavaScript, CodeIgniter, Bootstrapp, CSS3, MySql and Model View Controller MVC. Generating a systematized tool with advantages of usability and functionality, with acceptance major and interactivity of group tutors in the efficient management of student information.

Heterogeneous data integration, Web system, Software engineering

# Índice de sustentabilidad de los invernaderos de Atitalaquia, Progreso de Obregón y Tezontepec de Aldama, Hidalgo

# Sustainability index of the greenhouses of Atitalaquia, Progreso de Obregón and Tezontepec de Aldama, Hidalgo

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#### **Abstract**

The present research work was developed to analyze if the greenhouses located in the municipalities of Antialquia, Progreso de Obregón and Tezontepec de Aldama, Hidalgo are sustainable in the economic, social and envioremental aspects. The greenhouses being a a controlled production system, increase the production effectiveness, but thry do not assure their sustainability for this reason the present work is developed in which the following methodology was used: elaboration of a census of the greenhouses in the municipalities, aplication of a survey in which the social, economic and enviorenmental aspects were contemplated, treatment and analysis of the obtained data. The contribution of this work is to have a census and create a socioeconomic and environmental database of the greenhouses located in the municipalities of the Mezquital valley, to determine if they meet the conditions of sustainability by a sustainability index

Sustainability Index, Social Factor, Economic Factor, Environmental Factor

# Comité y protocolo para el manejo de la comunicación en una crisis institucional

# Committee and protocol for the management of communication in an institutional crisis

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### **Abstract**

This research deals with the management, prevention and management of the communication of institutional crises, including the tools that are to attend, manage and solve it, will guide in the prevention and management of unexpected adverse contexts. That at the end will constitute a tool an educational institución, that regulates the moments of crisis by means of an adequate communication emerged from a committee and a specialized protocol. In the professional period it is often seen the damage that leads to the leaders of the institutions, the answer with vagueness or without proper planning of the messages, that is why it is argued that an institutional crisis in the matter of communication It can be prevented, managed and, where appropriate, resolved, with the support of a Crisis management committee and a protocol on this. The final intention of this proposal is to preserve and if possible to position with the crisis, an adequate institutional image before the external and internal public and the mass media, as well as to avoid or mitigate the risks that affect the safety and well-being of an institution. A crisis plan helps if it is fully adapted to the work culture and is applied assertively by doing an exercise of reflection on the organization.

**Crisis management, Communication, Protocols** 

# Mejora de Conciencia Ambiental en el Instituto Tecnológico de Estudios Superiores de Zamora

# Improvement of Environmental Awareness in the Technological Institute of Higher Studies of Zamora

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#### **Abstract**

The climatic change and the environmental deterioration, are of urgent attention of the society and governments; the proposals of ONU have not been landed and the deterioration is advancing with devastating steps. The societies must become aware of the serious damage they cause. At the Technological of Zamora, World Environment Day was celebrated on June 5, with environmental actions and seeking to know the degree of environmental awareness that prevails. 600 students were summoned with an enrollment of 3,000, attending 150, which infers 75% apathy, an alarming result. By they talks, workshops and conferences are proposed to reduce the lack of CA Environmental Awareness and raise the level of participation in future events; We used the scientific method that explains phenomena, establishes relationships of facts and statements for applications to society. De Gortari, (1979). The universe of study was 3,000 students, it was experimental, by manipulating variables and analyzing results; cross-section when carried out a single occasion, where conditions could vary; heuristic with analysis of environmental deterioration. In the results, 30% is in CA Major, 50% with CA Minor and 20% subjects not conditioned with CA, which presents an area of opportunity.

**Environmental Awareness, Pollution, Participation, Society** 

# La ambidextría organizacional como estrategia competitiva en las organizaciones del siglo XXI

## Organizational ambidextry as a competitive strategy in 21st century organizations

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### **Abstract**

The present work presents a proposal of an organizational integrating conceptual model in which the dimensions to be considered are mentioned and it indicates how to relate the key processes of the organization as well as to understand and internalize the development of capacities for the employees and explains the importance of potentializing a organizational architecture for the generation of irreplaceable and incomparable competitive advantages taking as a main factor the management of human talent. The objective of this research is to propose a model that integrates the factors that the capacity for dual learning must have and its impact on an organizational architecture. A research design is presented, not experimental, transversal, descriptive and explanatory. The research techniques were based on a questionnaire grouped into the following dimensions: Teamwork, Communication, Management and Management of Human Talent, Leadership and Learning and Development applied to 52 employees. A conceptual model was designed for the development of an organizational architecture based on the postulates of different authors and the results of the research which aims to create favorable environments for organizational learning.

Organizational Strategy, Ambidextrophy

# El compromiso de los estudiantes de formación de profesores de las escuelas normales y la calidad de vida

## The commitment of normal school teacher students and the quality of life

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#### **Abstract**

The present study is a non-experimental, cross-sectional design with a quantitative approach. The objective is to show the best predictors that explain the Commitment that the students of teacher training in the Normal schools consider as an indicator of their quality of life. The population consists of 200 students who attend their training as teachers in the Normal School. A frequency analysis was performed to establish characteristics based on the items related to the personal data, descriptive analysis to obtain the consistent variables and a multivariate selection of variables to establish the predictive variables based on the students' proposals. The results show that young people consider personal, family, school, academic and professional commitments to be relevant, highlighting the following variables: keeping up with constant updating, respecting others, having a positive attitude in school, being educated, Respecting peers and teachers and having the ability to generate new ideas, commitment to follow the rules of conduct at home and being honest with the family, commitment to value the cultural aspects of their community and achievements within the center of work.

Commitment, Teacher training, Quality of life

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# Metodología y aplicación de objetos de aprendizaje

### Methodology and application of learning objects

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#### **Abstract**

Learning objects are digital tools that serve as support for student learning, these can be multimedia videos, games or audio recordings that are applied in determined subjects. At the Instituto de Estudios Superiores de Irapuato (ITESI) in addition to the face-to-face and quarterly modalities, the Virtual modality is also offered, where the career in Computer Systems Engineering and the Industrial Engineering course are offered. In both careers this tool is applied as a didactic support for the different subjects that are carried within the programs. The elaboration of learning objects is carried out at ITESI, this happens in a department called "Laboratorio de OA's", where this process is carried out. At the end of the development of the object is "packaged" to be mounted on the Moodle platform which is used to impart virtual materials and so the student can make use of learning objects as many times as necessary.

## Aprendizaje basado en proyectos que motiva el aprender

## **Project-based learning that motivates learning**

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#### **Abstract**

The general objective of this research was "Analyze the impact of Project-Based Learning on the motivation for meaningful learning of students of high school Level of the Universidad Autónoma de Coahuila". The Research Problem is: How from work with Project-Based Learning, meaningful learning is motivated in students of the High School Level? The data collection for the qualitative and exploratory analysis of the information was through non-participant observations, interviews and review of documents. The case study was used and data were triangulated to validate the analysis. The results point out that Project Based Learning is beneficial and significant for the development of "Motivation". The evidence suggests that this type of alternative actions raises values such as solidarity, companionship, responsibility; On the other hand, empathy and commitment can be worked with this type of activities. It is concluded that with this type of work, motivation is generated in the students, so that they carry out new and solid learning.

Motivation, Project-based learning, Quality of learning

Propuesta de técnicas de estudio en base a un diagnóstico de estilos de aprendizaje en alumnos del nivel de TSU de la carrera de Procesos Industriales de la Universidad Tecnológica de Tecamachalco (UTTECAM)

Proposal of study techniques based on a diagnosis of learning styles in students of the TSU level of the career of Industrial Processes of the Universidad Tecnológica de Tecamachalco (UTTECAM)

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### Abstract

As is well known, the efficiency of the school classes depends on the planning that the teacher previously performs, in order to provide significant learning and for the student to acquire not only knowledge, but also skills and values, as well as scientific and technological advances. he learns in a diverse way, every day he seeks to know what are the factors that affect learning and analyze the pedagogical methods that teachers use for their students; since in a process of teaching - learning not only matters the leadership that the teacher has in front of a group, but also the learning technique that applies and its relation with different styles of learning. In the Technological University of Tecamachalco (UTTECAM) at a professional level most teachers have no preparation regarding teaching, their training is only according to their professional profile, so they apply teaching techniques that were taught by their teachers, when They were students, so the purpose of this article is to give a proposal of teaching techniques according to the learning styles of students at the TSU level of the industrial process career, in order to provide the student with quality teaching-learning.

Study techniques, Learning Styles, Meaningful Learning

### La robótica educativa y la motivación de los estudiantes

### **Educational robotics and student motivation**

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#### **Abstract**

The general objective of this research was "To explore the impact of Educational Robotics in the development of the" Motivation" of students of the High School Level of the Universidad Autonoma de Coahuila (UAdeC). The Research Problem: How does Educational Robotics help the development of Motivation of students of High School Level of the UAdeC? The data collection for the qualitative and exploratory analysis of the information was through non-participant observations, interviews and review of documents. The sample was of 40 students of high school. Data was triangulated to validate the analysis. The results point out that the work with Educational Robotics is beneficial and significant for the development of the "Motivation". The evidence suggests that this type of alternative actions adopts values such as solidarity, companionship, responsibility; On the other hand, stress management and observation can be worked with this type of activities. It is concluded that the work with Educational Robotics is a means that motivates students to carry out new and solid learning.

Motivation, Educational Robotics, Quality of learning

Las tareas multidisciplinarias como estrategia de innovación para el desarrollo de las capacidades emprendedoras en los estudiantes

# Multidisciplinary tasks as an innovation strategy for the development of entrepreneurial skills in students

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#### **Abstract**

The present study gives an account of the level at which the entrepreneurial skills of the students who participated in the Multidisciplinary Tasks (TM) were developed, which were incorporated in the Technological University of Huejotzingo (UTH), as an educational innovation strategy to promote the development of projects and / or prototypes that allow fostering an entrepreneurial culture within the Institution. Among the important findings it was found that the students who participated in the multidisciplinary tasks responded in a majority percentage (68%), agree to continue participating, but there is also a number of students (32%) who do not wish to continue with this type of activity. But it is necessary to investigate what happened, to find the areas of opportunity that allow to reinforce the work that the teachers carry out from the classroom for the incorporation of innovative strategies that motivate the students to carry out these tasks.

Multidisciplinarity, educational innovation, entrepreneurial training

# Estrategias para disminuir el nivel de reprobación, deserción y eficiencia terminal de los alumnos de la Universidad Tecnológica de Chihuahua

# Strategies to reduce the level of failure, dropout and terminal efficiency of students in the Universidad Tecnológica de Chihuahua

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#### **Abstract**

In this investigation it is intended to think over the education in Mexico, mainly giving emphasis to the Higher Education of the Universidad Tecnológica de Chihuahua (Technical University of Chihuahua). It is proposed to reconsider the educational context that exists in the actuality in Mexico and the youth that dabble into the labor sphere. Three fundamental factors were analyzed, the level of failed students, dropouts, and completing efficiency, taking into consideration the years 2016 and 2017 from the statistics of the Technical University of Chihuahua and the national indicators. The main objective of this investigation is to create strategies for the youth to obtain good results and to lower down the failing percentage, as well as to control the dropout level that exists in some careers. During 2016 the failing index was lower than 2017 even though the national maintains an average index. The completing efficiency of studies increases from a 90% to a 93% in 2017. The students arrive with deficiencies from high school, which makes it difficult to comprehend some subjects in the curricula like logical mathematical reasoning, reading and comprehension and analysis.

Higher education, Dropouts, Failing, Completing efficiency, Education management

# Tutoría académica de apoyo a los estudiantes de la Facultad de Odontología de la Universidad Veracruzana

# Support tutoring for students of the dentistry Faculty of the Universidad Veracruzana

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#### **Abstract**

Academic tutoring is a teaching intervention in the educational process of an intentional nature, it consists of close, systematic and permanent accompaniment to the student, to support him and facilitate the process of learning construction. (Narro and Martiniano, 2013). The personalized attention made by an academic named Professor tutor, aimed at supporting students who so require, to strengthen their learning processes related to the theoretical, heuristic and axiological knowledge of educational experiences (EE), or to have an interest in a wider disciplinary training, through the development of Support Programs for Integral Training (PAFI). Objective. Reduce the risk of failure and dropout of students of the Faculty of Dentistry, Veracruz region, of the Universidad Veracruzana. Methodology. In the tutorial department, a comprehensive training support program (PAFI) has been implemented with the aim of assisting students who are at academic risk and improve their school performance. Results Through the attendance of the students to the tutoring sessions, the school performance has been improved in the EE that were with high failure rate such as Radiology, Operative Dental III with the implementation of PAFI.

### Academic tutoring, Students, Reprobation

# Desarrollo de competencias: Una percepción de la relevancia en la formación profesional

## Skills development: A perception of relevance in professional training

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#### **Abstract**

The objective was to identify the perception of the relevance of the development of generic competences and the achievement of them, from the point of view of the student of the degree in administration through a diagnosis for the strengthening of the new curriculum. The sample was non-probabilistic of 195 informants. The sections of the instrument: general information, learning process, social values, technological and international context, and interpersonal skills. Procedure: analyze information requirements, consult data sources, define sample, make adjustments to the instrument, apply questionnaires, capture and process information, graph and tabulate, analyze and interpret information. Results: regarding learning, the ability to learn and update was the most important with an average of 3.73, the lowest was the creative capacity with 3.03. In social values the ethical commitment obtained an average of 3.50, and the lowest the commitment with the socio-cultural environment with 3.28; in relation to the competences of the technological and international context, the use of information technology was the highest 3.64, the lowest ability to work in international contexts with 3.05. The study contributes to the state of the art of the subject, as well as to future research.

Competencies, Educational model by competences, Tuning model, Curriculum

# Resultados cuantitativos de proyecto para seguimiento en redacción de estadías empresariales

## Quantitative project results for follow-up in the writing of business stays

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#### **Abstract**

In this article the quantitative results from the intervention called Service of Tutoring in Writing the Professional Practicum Paper are shown. The purpose of this project is to confirm the feasibility of applying the service, due to it implies time, economical resources, and effort. The hypothesis is that the writing quality of the final paper increases with the support of a tutor. The relevance of replicating the project will be based on the results. The sample is the final papers written by students in sixth quarter. The method used is through analytical conglomerates. Final papers are divided in three groups to make a comparison of the results in each group. The results were analyzed with the software Statgraphics Plus Professional Edition for Windows 5.1. Through the use of this software the box-and-whisker plots were obtained and the charts presented were elaborated using Excel. The results show that at least in 50% of the analyzed quantitative results there is an improvement in the writing quality, proving that it can be useful to replicate the project.

Writing competency, Final paper, Tutor, Statistics

Avances del estudio comparado de la aplicación del modelo basado en competencias en los niveles educativos del Estado de Tabasco

Advances of the comparative study of the application of the model based on competencies in the educational levels of the State of Tabasco

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#### **Abstract**

This research is a process of three years with the firm intention and purpose of describing the perceptions that teachers on the issue of skills and competencies as based on different educational model is applied high, middle and upper level top- level in the State of Tabasco, Mexico, as mobilized and put into practice for the teaching-learning process and the development of ideal environments at different educational levels, all this for the best use of students and about teachers who put into practice their responsibilities, allowing at certain stages of their educational gait assessment processes for making the feedback concrete proposals for improving the teaching-learning. The research was to demonstrate that those who have been trained for years in education they could not understand and apply depth topics competency, it was necessary to publicize their professional performance and demonstrate that this is key to fostering changes in the processes of formation students.

Skills, Teachers, Tabasco

### Sistema de información en web como herramienta de apoyo a la tutoría (SIWAT)

## Web information system as a support tool for tutoring (SIWAT)

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#### **Abstract**

The project emerged as an improvement in the management of tutoring in the process of analysis of the Program of Services for Student Support (PROSAE) of the Fidel Velázquez Technological University (UTFV), a system is offered on the Web to systematize the filling and analysis of the results of the PROSAE questionnaire that is applied to new students to detect the factors of vulnerability that affects the student to the corresponding instances. To determine the requirements, a survey was applied to teachers who are group tutors. Determining that it is necessary to have a system on the web for the diffusion of the improvement programs of the educational process such as workshops, vocational and psychological orientation that the institution generates. The system allows generating the report of the vulnerability of each period. So the student or tutor can access any electronic device that has an Internet connection.

System, Web, Tutoring

# Experiencias para la formación integral en la licenciatura en bioquímica de la UASLP UAMZH

# Experiences for the integral formation in the degree in biochemistry of the UASLP UAMZH

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### **Abstract**

In this work, experiences of integral formation in bachelor's degree of Biochemistry of the UAMZH are presented, which strengthen seven dimensions of the University Model of Integral Formation of the UASLP. Activities designed to promote social responsibility and health care were designed. For this, Biochemistry students performed social work in rural communities of the Huasteca Potosina, where they collected stool samples from patients in kindergarten and primary school to perform stool analyzes. The samples were processed by standard procedures in the Microbiology Laboratory of the UAMZH. The results obtained were given to the father, as well as the corresponding antiparasitic treatment. With these activities, knowledge and skills for the parasite diagnosis were strengthened, while promoting the integral learning of Parasitology, in the real context of the Biochemist profession.

Biochemist, UASLP, UAMZH, Parasitology, Integral training

Uso de estrategias para la mejora de la comprensión lectora en alumnos de la Universidad Tecnológica Fidel Velázquez

# Use of strategies to improve reading comprehension in students of the Universidad Tecnológica Fidel Velázquez

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#### Abstract

The academic background from any student, no matter the field of study he belongs to, considerate a curriculum as well as different strategies to acquire it. The following research focuses on the description of the application of techniques, having as the main aim getting better results in the level of reading comprehension in a second language, English. An observation exercise (pre-test) was carried out to assess the degree of reading comprehension in the English language of the students. Based on the results, strategies were implemented to follow with the same sample. It is very important to clarify that these strategies can be used for any type of reading that it is, not only for texts in English, but also for any kind of texts.

Reading comprehension, Strategies, Instructions, Reading genders

# Aprendizaje basado en proyectos integradores y propuesta de monitoreo a través de un sistema informático

# Learning based on integrative projects and proposal of monitoring through a computer system

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#### **Abstract**

The practical description of the use of integrating projects as a teaching-learning strategy is presented, for the educational program (EP) Técnico Superior Universitario en Tecnologías de la Información y Comunicación, área Sistemas Informáticos (TSU TIC SI), of the Subsystem of Universidades Tecnológicas in México; carried out by the teachers of the Technological Universidad Tecnológica del Valle de Toluca (UTVT). Process, formats used and results of the monitoring of the projects are presented. An improvement proposal is also included, systematizing the monitoring of the integrating projects, which makes it possible to detect delays in a timely manner, which helps the teachers to guide the students, so that they can solve the detected problem. On the systematization the functional requirements are presented in the form of user histories, attached to the methodology.

### **Project-based learning, Automation**

### Implementación del sistema informático para compartir estrategias didácticas

### Implementation of the computer system to share teaching strategies

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#### **Abstract**

The implementation and publication of a computer system to share teaching strategies is presented, which was proposed last year in Congreso Interdisciplinario de Cuerpos Académicos 2017 (CICA 2017). The objective of the project is that teachers to share their teaching strategies among colleagues, describing their experiences through a website hosted on an Internet site, and in this way strengthen the resources of University professor's. The computer system was created under the RUP (Rational Unified Proscess) methodology that is commonly used for software development. We describe each of the phases that were carried out for its development and implementation, some user interfaces and the electronic address where the computer system is located to be used or consulted. The project involved teachers and students from the Universidad Tecnológica del Valle de Toluca, and its major contribution to the educational community is to strengthen communication among teachers to publicize the best teaching practices among universities.

Software development, Didactic strategies, Web system

## Proyecto de Inversión para un Dinner and a Show en San Juan del Río, Querétaro

### Investment Project for a Dinner and a Show in San Juan del Río, Querétaro

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#### **Abstract**

In this research work you will find a brief, but concise, guide for the establishment of an investment project called "Dinner and a Show" in the municipality of San Juan del Río, Queretaro. Based on the application of surveys and the analysis of these, it has been possible to conclude at the end of this work if market conditions and demand are favorable to start a project of such magnitude in said municipality. It is important to point out that market conditions are constantly changing, and that the result of this work is only a photograph of what happened at the time of their investigation, thus leaving the door open for a future follow-up to this investigation and reach real conclusions in the time they are needed. Given the above it is stated that the results of this work were not as expected, however, serve as a basis to discuss the very attractive possibility of establishing a "Dinner and a Show" in this municipality considering various variables such as tourism (which was not taken into account when carrying out this work) and that can tilt the balance even more towards the beginning of a project like the one described here.

### **Investment Project, Dinner, Show**

# La productividad de la Mano de Obra Directa: Factor clave para establecer la Inversión Extranjera Directa a largo plazo

# Direct Labor Productivity: Key factor to establish Direct Foreign Investment for the long term

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### **Abstract**

Objectives: Establish the relationship between the Foreign Direct Investment and the direct labor productivity. Demonstrate through a case study how a cultural change impacts productivity improvements for the long term. Demonstrate the importance of the culture when implementing continuous improvement systems, when normally manufacturing companies focus in the implementation of continuous improvement tools. Methodology: The research of this article is based on a qualitative methodology and in a case study of a transnational manufacturing plant established in Querétaro. Contribution: Better understand the impact of the culture in the typical metrics of transnational organizations, like productivity, and how a cultural change could have a positive impact in transnational organizations. In addition, the methodology and its application could be extended to local organizations as well.

Culture, Productivity, Tacit Knowledge, Competitiveness

## Determinación del Costo de Producción en empresas de manufactura

## **Determination of Cost of Production in manufacturing companies**

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#### **Abstract**

The cost of production is the cost of transforming raw materials into finished products and consists of three elements: Direct Raw Material, Labor and Indirect Manufacturing Expenses. Said cost is treated by a branch of Accounting, which is Cost Accounting. Cost accounting in a manufacturing company plays a crucial role since by optimizing processes it is possible to obtain information about costs and expenses that are made within the organization as well as monitor the behavior of the company's capital. With this process it is possible to implement a control system focused on collecting, recording and reporting information related to production, distribution, administration and financing costs of the organization. This research helps to understand, analyze and determine the elements that make up the cost of production for the taking of decisions by interested parties regarding the cost and sales price that is fundamental in the achievement of customer satisfaction, attention to the needs of the company and survival of the same.

Direct Raw Material, Direct Labor, Indirect Manufacturing Expenses, manufacturing company

Determinar la competitividad de las empresas del sector industrial alimentario específicamente las empresas panderas y las que producen tortillas típicas en la región de Cd. Obregón

Determine the competitiveness of companies in the food industry sector, specifically the panderas companies and those that produce typical tortillas in the region of Cd. Obregón

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#### **Abstract**

Determine competitiveness and the elements that make it up in the framework of work done by micro, small and medium enterprises (MiPYMES of a specific food industry sector: bakeries and tortillerías (corn-flour), adapting the concept of competitiveness and how to achieve a competitive entity in this century XX1. It is necessary to identify which are the characteristics and the way in which a group of MIPYMES should operate, dedicated to the production of regional foods in order to determine the competitiveness. That they develop currently. In the project, the strategic and operative administrative part of each of the businesses that participated in this investigation was analyzed; encompassing the organizational structure, and functional areas that range from the admiration of the business, the human resource, the production process, the use of the marketing, as well as the support of technology and quality policy, as well as the knowledge that we have in marketing plans and knowledge about supports that help the internationalization of their products. These factors are a challenge for each of the organizations to be able to compete in the field of business. To meet this end, the Ministry of Economy (SE) has created programs that support the productive sector to encourage and improve their processes, establish business practices and ongoing training. Competitiveness Matiz (1997) is the ability or challenge that entities have in increasing production by responding quickly to the various competitors, in relation to serving their customers and offering their products and services with the intention of remaining valid in the future market. It is said that to become competitive depends on the relationship and interaction of various elements, such as: administrative management in its areas of performance and strategic-operational management. Also in function in the innovation and use of technology, the organizational culture and the training of its personnel, among many other internal vs. external activities. When analyzing the functioning of the concept of competitiveness and the way in which it is raised, it is important to observe in the entities their way of working and performance, which is why in this research it is necessary to determine the competitiveness of MSMEs, and the key factors and indicators basic ones that are directly aimed at developing business competition.

Competitiveness, food sector, Micro Small and Medium Business

# Estrategias para dinamizar aprendizaje organizacional y calidad en empresa papelera líder

## Strategies to boost organizational learning and quality in paper company leader

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#### **Abstract**

Global conditions change, and the challenge is to learn to adapt and work systems in a strategic way. The company trash searches for the competitive with digital manufacturing leadership that streamline the work systems and collective intelligence for the understanding of regulated markets with new rules. Organizational learning is fundamental to achieving quality in their titanic processes. The research done as part of the interpretive social paradigm, phenomenological qualitative method, applied to the case study, descriptive transactional design, with a non-probabilistic sample. The research aims to identify strategies for organizational learning for its strengthening in quality and generate a model based on the particular situation. Develops in a tissue paper producer located in San Juan del Rio Queretaro and it was found that the company applies general strategies of alliance, stable work environment and innovation. Organizational learning based on values, in an environment with aspirational team work, moving toward self-control and quality as a result of automation, efficient processes, with key indicators to increase sales, the measure of the quality is given by the national leadership.

Strategies, organizational learning, quality

Modelo de Control Interno Administrativo como estrategia para microempresas en el Municipio de Tecamachalco Puebla, México

# Model of Internal Administrative Control as a strategy for micro-enterprises in the Municipality of Tecamachalco Puebla, México

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### **Abstract**

The objetive of this research Project is to make a diagnosis of MyPes in the Municipality of Tecamachalco, Puebla, in the retail trade. It was gathered that most establishments are grocery stores, a survey was applied n=226 establishments of N=1,875 retail trade in micro and medium enterprises, consulting the National Statistical Directory of Economic Units of INEGI. The most relevant aspects are described in the Municipality of Tecamachalco, Puebla. We found that most of the companies are of recent creation with a family relationship and a low level of investment, which do not perform an internal inventory control procedure a few of them use tecnology and financial services, in turn, most of them are not registered in the SAT (Tax Administration Service); therefore, they do not issue electronic invoices in a context with a rural predominance.

Diagnosis, Control, Micro and small enterprises (MSEs), Investment, Invoices

# Implementación del Modelo Balanced ScoreCard (BSC) para la Medición y Evaluación de la Productividad

# Implementation of the Balanced Score Card (BSC) for the Measurement and Evaluation of Productivity

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### **Abstract**

The measurement of organizational performance plays a fundamental role if a company seeks to be competitive and profitable, it will be essential to seek to evaluate all the processes carried out, considering not only results derived from production indicators, as most companies do but integrating fundamental aspects for any organization such as: customer and employee satisfaction, reduced expenses, increased sales, etc.; which will allow to evaluate the performance of the whole organization as such. The Balanced Scorecard (BSC) specializes in this, provides a control and management tool which complements the indicators traditionally used by the company, combining financial and non-financial indicators, thus achieving an organizational performance day by day and achieving compliance with the planned goals. This will facilitate decision making and will lead the company to fulfill its organizational mission.

## **Balanced Scorecard, Productivity, Omax Matrix**

# La Planeación Estratégica como promotora de la Rentabilidad Financiera en Mipymes Turísticas

## The Strategic Planning as promoter of the Financial Profitability in Tourist MSMEs

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### **Abstract**

The strategic planning is an important part of the administrative management in the organizations, it is investigated through this transversal, descriptive and correlational work the degree of association that it has with the financial profitability of the tourist Mipymes of Campeche. The duly founded planning allows to achieve the objectives of the agencies and the success of the projects, for this they take 20 companies and 200 workers to be surveyed during the first quarter of the 2018 in order to determine if the planning can be a Predictor to achieve the financial results of this type of companies. The results of the multiple correlation executed cast a mathematical model that can be taken as reliable to use as a predictor whenever the coefficient of correlation is 0.731 and adjusted 0.535, which means that planning as part of the Administrative management influences the results of the companies

Management, Profitability, Planning, Tourism mipymes

# Estrategias para el manejo integral de los residuos del Patronato Estatal de la Feria de León, Gto. 2018

# Strategies for the integral management of the waste of the State Board of the Feria de León, Gto. 2018

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### **Abstract**

The Fair of Leon generates approximately 600 tons during 26 days of event that is held in the city of León, Guanajuato, worried about this situation looking for alternatives to reduce or at least recycle their waste with certain companies. The objective of this project was that through the training of the personnel involved in the event there was greater awareness to generate the greatest possible recovery of waste for recycling, having a methodology where qualitative and quantitative issues were seen, through interviews, observation logs, among other statistical data. During the 2018 edition, 599 tons of waste were collected, of which just over 48 tons were recovered with five and a half million visitors, so the goal was achieved compared to the 2017 edition.

Recycling, Waste, Massive Events

# Estudio exploratorio sobre el uso de las herramientas de promoción de las MIPYMES en Cancún

## Exploratory study on the use of promotional tools for MSMEs in Cancún

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### **Abstract**

The purpose of this project is to determine the promotional tools used by 36 micro and small enterprises, through a marketing analysis applied by students from the Technological University of Cancun. 180 students from the area of Marketing and Business Development, assisted by professors from the Business Development Academy, identified 36 microentrepreneurs to apply a questionnaire to establish the marketing strategies used by them. The exploratory study was useful to identify the problems that the small company owners from Cancun face, because they are unaware of the different promotional forms that can be used to position the organization with competitive advantage in the market and increase their profitability, resulting in a stagnated growth. The results obtained in the study, will be used by the students to give specialized consultancy to the entrepreneurs about the promotional strategies they can do to enhance their market share within a medium term.

## Consultancy, Marketing strategies, Microenterprises

# Implementación del mantenimiento productivo total en la empresa Sofi de Chihuahua

# Implementation of the total productive maintenance in the Sofi company of Chihuahua

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### **Abstract**

This article shows the research and analysis for the development of the TPM. This, aims to design an efficient process for the implementation of the Total Productive Maintenance methodology, in order to reduce downtime and increase the overall efficiency of the equipment, increase the production in each machine by increasing the performance of the equipment and processes. The methodology is established according to the needs of the company, promoting a change of culture and mentality of employees through training in philosophy, disciplines and tools necessary to achieve knowledge, mastery and implementation of the pillars of the TPM, achieving the integration of employees at the plant level, as a single team to achieve common goals.

Total Productive Maintenance (TPM), Autonomous Maintenance, Preventive Maintenance, Preventive Maintenance, Global Equipment Efficiency

## Percepción de los servicios profesionales de mercadotecnia en Calvillo, Aguascalientes

## Perception of professional marketing services in Calvillo, Aguascalientes

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### Abstract

The main aim of this research responds to the need of knowing the perception of professional marketing services in the municipality of Calvillo, Aguascalientes, which has had an economic growth since it has been awarded as a "Magic Town", this situation has changed the way in which business they make themselves known and position themselves in the local, national and international markets. Currently, four marketing agencies are installed in the municipality. They offer marketing services, trying to meet the marketing needs of the commercial sector, however, there are limitations in their scope for some variables such as the infrastructure required by the agencies or the poor investment in the field of Marketing services by the entrepreneurs in the region. In this research we try to identify the perceptions of both entrepreneurs and agencies, lending interesting results, detecting opportunity areas, for example: offering public relations strategies or merchandising in the case of agencies and in the case of entrepreneurs create an enterprenurial culture of taking advantage of professional marketing services offered in Calvillo instead of creating marketing strategies on their own. It is an investigation that should allow to make better strategic decisions in the commercial relationships between marketing agencies and entrepreneurs in the region.

Services, Perception, Marketing, Professional

## Inserción de la mujer en el campo laboral a través de las Pymes en el Estado de Guanajuato

## Insertion of women in the labor field through Pymes in the State of Guanajuato

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### **Abstract**

Objectives, methodology the purpose of this research is to provide a general description of Mexican SMEs managed by women and men, revealing differences in performance as an instrument for managing actions in favor of women entrepreneurs in the state of Guanajuato. Contribution Women in the state of Guanajuato, not only exceed the numbers of the total population compared to men; they also have a greater participation in other activities such as the informal economy. Today it is known that States with greater gender equality have more competitive economies and faster growth, as mentioned by Trygve Lie, Secretary General of the UN; where women have education and power, that economies are more productive and solid because women are fully represented and societies are more peaceful and stable. In this sense, it is recognized that they still prevail in the State of things that limit the integral development of women and that it is essential to work in a new institutional culture where goals and objectives are shared, to guarantee that the State of Guanajuato has a comprehensive policy towards women and men.

Professional, Inclination, Company, Introduction, Property

La casa como lugar de trabajo productivo. Aproximación desde la habitabilidad para el estudio de las MiPyMEs que operan en el espacio doméstico

The house as a productive workplace. Approximation from habitability for the study of MiPyMEs that operate in the domestic space

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### **Abstract**

The objective is to make known the progress of Research in the Metropolitan Polytechnic University of Hidalgo in the field of the CA management, business development and gender perspective. It presents the theoretical-conceptual construct for the approach of MSMEs that contributes to its permanence and strengthening, through its study through habitability. The methodology is supported by this same theoretical-conceptual framework that indicates the route for its study, that is, the establishment of the variables to be observed through field work, with the use of an approach that was already applied in a different context, but with the basis similar with respect to the unit of analysis: housing, house or domestic space, now, in addition to the productive workplace. The greater contribution aims to generate knowledge on these productive units that before a proposal for its study takes into account an approach of habitability that to go beyond the usual methodological frontiers with which it has been studied and to commit to the sustainability with which it is desirable to operate this type of companies and to strengthen the efforts to understand the MSMEs as the productive base in the cities.

Habitability, Home, Domestic and Productive Space, Micro, Small and Medium Enterprises (MSEs)

Diagnóstico de sistemas de información de costos como fundamento en la generación de estrategias de mejora para el desarrollo de las PYMES

# Diagnosis of cost information systems as a basis in the generation of improvement strategies for the development of PYMES

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### **Abstract**

It is vital for companies to support on tools that provide them with useful information for decision making in order to improve their management. In the case of the industrial companies studied in this research, it was necessary to make a diagnosis that is directly related to the knowledge, the investigation of its costs and the way in which each of the participating organization works. Investigating the use of the cost system, the time worked with it, if unit costs are determined, sales price fixing, the types of costs used, the resources required in its production process, the establishment of internal control, the veracity that financial accounting information provided by the cost system; if the current system allows to make innovation in the products, and improvements in the design of its products. This type of study generates benefits in the industrial SMEs since from identifying the needs that must cover a cost information system, is how can support their decisions. The objective of this work is to elaborate a diagnosis on cost information systems used by an SME group industrial dedicates food processing. The results determine general aspects of the system, elements of the cost information system and activities that serve as a basis for generating strategies for improvement in the organization.

Costs, Strategy, SMEs

## Competitividad de las PYMEs de servicios en la región de las Altas Montañas

## **Competitiveness of service SMEs in the High Mountains region**

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### **Abstract**

Competitiveness of SMEs in the Service's Sector in the High Mountains region is the main objective of this work. In this sense, the aim is to determine the level of competitiveness of small and medium-sized enterprises (SMEs) in the sector comprised of lodging, food, tourism, education, financial, transport and communications, leisure, construction, etc., from companies of the High Mountains Region whose shares similar geographic, economic, and cultural characteristics. The methodology applied in this document was the analysis of the composition of the business fabric and the diagnostics of the level of micro competitiveness of the SME based on the proposal of Saavedra et al (2017) that seeks to obtain data as economic contribution, generation of employment, profile of the employer, profile of the company and the classification of SMEs. The main contribution of this paper is the determination of the competitive profile of SMEs in the region through the measurement of the main competitiveness indicators that allow the elaboration of strategies and policies that detonate the competitiveness of SMEs in the High Mountains.

Competitiveness, Service, SMEs

# Diseño de un plan estratégico para una empresa de localización vehicular Gps de Ciudad Obregón, Sonora

## Design of a strategic plan for a Gps vehicular location company in Ciudad Obregón, Sonora

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### **Abstract**

The objective of this research is to characterize the training of researchers according to the belief system of students of a quality postgraduate program. The approach of the problem defines the difficulties that the students present in the development of their formative process, in particular to their thesis and the relations with their advisor. The method is qualitative cut based on symbolic interactionism. The sample is not probabilistic of intentional character conformed by 15 participants of a postgraduate course that is oriented towards the formation of researchers in education with registry in the National Program of Postgraduate of Quality (PNPC). The results define the belief system of students in the following theoretical categories: a) Category Being a researcher, b) Category Development of the thesis, c) Category Relationship with the advisor. The conclusions define that being a researcher is a lifestyle, and that the training process implies the development of skills anchored in the development of the thesis and in intimate relation with the advisor.

Strategic plan, Indicators, Swot matrix

# Evolución de la obtención de ingresos a través de financiamiento y el gasto público de las entidades federativas en México

# Evolution of obtaining income through financing and public spending of the states in Mexico

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### Abstract

The sustainability of local public finances must be analyzed from different perspectives. One of them is public indebtedness. The objective of this paper is to identify the behavior of public revenues of the states that have been obtained through financing as well as the evolution of public expenditures related to the payment of financial obligations contracted. The study period is from 2007 to 2016. It is found that the proportion represented by financing in relation to total state revenues varies among the states; there are cases in which it almost represents 20% while in others less than 0.1%. Additionally, a direct association between the evolution of public investment and financing is not located, since the former presents a downward trend. On the other hand, current or operating expenses have increased in most cases. Finally, the average proportion that represents the annual payment of public debt in relation to total state expenditures is similar to the annual proportion of the income flow from financing in relation to total state revenues

Financing, Public Revenues, Public Expenditures

# Análisis en el servicio al cliente como elemento para lealtad en las concesionarias automotrices de Tehuacán Puebla

# Analysis in the customer service as an element for loyalty in the automotive concessionaires of Tehuacán Puebla

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### **Abstract**

The automotive industry has marked the history of the world, not only because it has become one of the main providers of jobs, but that it has provoked competition and rivalry between different brands originating in different countries. The automobile has gone from being a luxury to being an easy necessity to obtain, especially in countries like Mexico. The automotive industry has gone through different changes over the years, such as the decline of some brands or the empire that have formed some brands in this industry. In Tehuacán Puebla there are approximately 10 car dealerships, and for the Tehuacán market, Puebla found that the quality of customer service is poor.

Automotive industry, Dealerships, Competition, Customer service

## Inventario turístico de un destino. Caso ciudad de León Guanajuato

## Tourist inventory of a destination. Case of the city of León Guanajuato

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### **Abstract**

Tourism is a phenomenon that is exposed in a territory and that occurs as a result of voluntary displacement and in a determined time, by people who seek to satisfy some type of tourist motivation and who demand, in addition, some set of goods and services - public and private - individually and collectively during your trip (Madrid, 2012). The essential components that make up the tourist offer of a destination are: tourist resources, tourist attractions, tourist facilities and means of transport. In Mexico (SECTUR, 2018), tourism represents, at present, tourism contributes 8.8% of the country's Gross Domestic Product, surpassed only by oil and remittances. It is estimated that in the coming years it will represent 9 and 10% of GDP. In current times, the country is immersed in a political environment where the proposals of the candidates for republic and state are less common. Determine the tourist offer of a destination is essential in order to gauge the potential of this space in the market of its tourism competition. The present work presents an analysis on the tourist inventory in the municipality of León Guanajuato, in order to determine its potential of action and hierarchy of destination.

Tourist destination, Tourism inventory, Tourist product, Tourist offer

Diseño para los emprendedores de la región norte del estado de Guerrero de estrategias de financiamiento para la implementación e innovación tecnológica en empresas de nueva creación

Design for entrepreneurs in the northern region of the state of Guerrero of financing strategies for the implementation and technological innovation in newly created companies

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### Abstract

Iguala Institute of Technology has accredited by the INADEM incubator, but does not have a benchmark against which to compare the number and type of entrepreneurs to support the development of the area. In the city of Iguala, Gro., And its area of influence lack of opportunities has become a social and economic problem, which no companies or those that were closed, causes people to migrate and leave their place of origin in search of better horizons, this project will contribute to the design of strategies appropriate to the creation of new companies to generate social and economic development by generating jobs, paying taxes, improving the quality of life financings, among others contributing through innovation to domestic investment in technology to train human capital of high level, who believes training them entrepreneurial culture

Design, Entrepreneurs, Strategies, Financing, Innovation

## La cultura empresarial fuente de innovación y competitividad

## The business culture source of innovation and competitiveness

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## **Abstract**

The purpose of this research was to explore the relationship between business culture and innovation, in order to know the way in which entrepreneurs have achieved permanency and success in the market. This research was carried out through a mixed methodology which is focused from a qualitative perspective of hermeneutical exploration in the interpretation of the doxa and in the approximation of the organizational contextualization, as well as the quantification of the results in a descriptive way, taking as axis the research instrument that was a questionnaire applied through the interview. In the results found is the success of entrepreneurs, which is directly correlated with the closeness to their customers, their productive activity, innovation and technology, since these relationships were found associated. The strategies used by entrepreneurs to grow with the success of their companies were highly correlated.

Culture, Success, Innovation, Competitiveness, Business

Planeación de los recursos materiales para optimizar los espacios en una empresa distribuidora de productos de belleza de Salvatierra

# Planning of the material resources to optimize the spaces in a distribution company of beauty products of Salvatierra

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### Abstract

The concern today of the companies lies in having exact quantities of inventory so as not to generate excessive costs. Planning within microenterprises is still in gestation in the city of Salvatierra, so using techniques to forecast sales and capacity is part of this investigation. In the investigation Planning of the material resources to optimize the spaces in a distribution company of beauty products of Salvatierra, it is tried to determine by means of the identification of the pattern of demand, the type of forecast and to know the capacity that has the company as soon as to its growth considering future sales. For this, an inventory classification is made by means of the ABC technique, it is forecast in the short and medium term, making use of techniques such as simple moving average, weighted, exponential smoothing and simple regression, according to their product demand pattern. of selected beauty, and is compared according to the space capacity of the microenterprise. The planning by means of forecasts allows the company to have in inventory the quantities necessary to satisfy the demand and avoid unnecessary costs due to the excess in storage.

Planning, Optimizing, Forecasts, Capacity

## Gestión de inventarios en las microempresas de Salvatierra, Gto.

## Inventory management in the Salvatierra microenterprises, Gto.

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### Abstract

Currently, inventory management is paramount for companies, since they are one of the largest investments of the organization. In the research "Management of inventories in the Salvatierra microenterprises, Gto", it is intended to evaluate the business practices of inventory management in the Salvatierra microenterprises, Gto. Therefore, companies that belong to the micro category were identified. Second step is the application of the instrument, composed of questions that include how many related and administration of inventories and finally the descriptive analysis of inventory management in microenterprises. The type of research that follows this project is non-experimental and descriptive. The design that will be used corresponds to the transection, consisting of collecting data in a single moment, in a single time. The purpose is to know the business practices of inventory management in the Salvatierra microenterprises, Gto

Management, Inventories, Microenterprise, Administration

## Servicio integral de la intermediación turística en la ciudad de Guanajuato

## Integral service of tourist intermediation in the city of Guanajuato

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### **Abstract**

The tourist intermediation has evolved by leaps and bounds, in the last decade platforms have been developed that facilitate the reservations of hotels, restaurants, transport and other tourist services. This acceleration on the web has given rise in parallel to the emergence of professionals in the tourism sector such as community managers who are responsible for intermediating the relationship between digital platforms such as booking, expedia, takeoff, tripadvisor and tourism service providers, seek the best positioning, offer of rates, that is to say attraction of clients to the establishment, in general terms the comunity manager seeks to place in the search engines with the best rate according to season, inserting in the digital age those service providers that do not they have become involved with the use of technology and that it is a current necessity to make themselves known in the market. The object of study in this work is based on the comments presented by the clients and from there, as the Community Manager has the opportunity area to inform and / or complement the service offered to the providers of tourist services. Generating an operation proposal for the community manager within the tourism system.

Tourist intermediation, Communnity manager, Digital age, Tourist business

La gestión del cambio para la adquisición de nuevas instalaciones. Caso de estudio en una Organización Mexicana del Sector Químico

# Change management for the acquisition of new facilities. Case study in a Mexican Organization of the Chemical Sector

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### **Abstract**

Organizational change is a deep change that breaks the organization's past and it is considered irreversible. Thus, it is important that it be managed in the best possible way, to avoid that its multiple variables affect the entire organization at different levels of impact. The objective of the following paper is to present a study case that is carried out with the intention of elaborating a series of conclusions about the analysis made in a Mexican organization of the chemical sector, in order to verify the existing theories within the field of Organizational Change Management (OCM) and propose possible different courses of action with the use of existing models or tools within this field.

Case study, change management, Organizational change

# La Logística Interna y de información como herramienta para un Sistema de Gestión de la Calidad

## Internal Logistics and information as a tool for a Quality Management System

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### **Abstract**

The present article takes as study object the application of the main quality standards IATF 16949 and ISO 9001 major in the field automotive sector, these mains treat a lot of point focused at the product quality the customer satisfaction and continuos improviment focusing on the safekeeping of documentes that serves to support the fulfilment with the quality standars, so this Project pretend to achieve a better control in the safekeeping of the critical documentation about the product quality, wich was done threough about the obtainment information directly by means of a cause and effect diagrama as the impact of the problema on the operation in any Company cluster automotive, nowadays involve as a philosophy do better competitive Company brings about as a result the growth across world markets.

Quality standards, IATF 16949, ISO 9001, Automotive Cluster

# Vinculación Universidad-Empresa como estrategia para impulsar el desarrollo regional: Un caso de estudio

# University-Business Linkage as a strategy to boost regional development: A case study

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### **Abstract**

Applied research is particularly important in Higher Education Institutions, since it contributes to the solution of specific problems in the social environment. In this context, a particular case is presented in which, through the University-Company linkage, value added is added to the mass for tamales, transforming it into nixtamalized flour for tamales. In order to achieve the task, the current production process is analyzed and the process of obtaining nixtamalized flour for tamales is proposed, incorporating the stages of dehydration, packaging and storage. In the same way, the production line is adjusted. In order to guarantee the quality and safety of the new product, physico-chemical and microbiological tests were carried out. In this respect, it was found that the flour had 11% moisture, 77.89% carbohydrates, 6.41% protein, 3.44 ethereal extract, 1.21% ash and 1.41%. The water activity was maintained at 0.556  $\pm$  0.002; the safety during the entire process was guaranteed by microbiological tests that showed the absence of coliforms, fungi and yeasts. The humidity and microbiological control tests performed at weeks 0, 4, 8 and 12 of the product stored at 22 °C with the container in bags of kraft paper, give evidence of the stability of the product. As a result of the linking process, in addition to the development of the new product, regional development was strengthened through a project in which knowledge transfer was carried out and the competitiveness of the institution and the company was promoted.

Nixtamalization, Tamales, Flour

# Regresión logística ordinal aplicada a la identificación de factores de riesgo para la violencia de pareja

# Ordinal logistic regression applied to the identification of risk factors for intimate partner violence

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### **Abstract**

The identification of risk factors for intimate partner violence is crucial for the design and implementation of public policies based on effective diagnoses. These policies are decisive to improve the quality of life of many people. With this approach, this study was conducted in a sample of 426 young people from the North region of Jalisco, Mexico. For the data collection a questionnaire was used to know the sociodemographic characteristics of the population under study, also a scale to assess victims of intimate partner violence and a scale that measures social support. The analysis of logit ordinal regression was applied, whose dependent variable was partner violence and the independent variables were the age group, sex, employment, schooling, social class, normalization of violence and social support. In general, it is observed that the risk of experiencing violence increases for young people when they belong to the lower social class and when they tend to consider violent behaviors as normal. The rest of the factors did not have effects.

Partner violence, Risk factors, Young people, Ordinal regression

## Violencia en el embarazo en una comunidad Maya de Yucatán

## Violence in pregnancy in a Mayan community of Yucatan

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### **Abstract**

Violence in pregnancy is a real subject of study that is related to unplanned pregnancies, abortion, depression, suicide, social isolation, post-traumatic stress syndrome, preeclampsia, increased disease induced during pregnancy, premature rupture of membranes, childbirth preterm, intrauterine growth restriction and low birth weight, among other complications. Therefore, the history of violence in pregnancy is associated with an increase in health costs and a decrease in the quality of life. In Yucatan, little has been explored on the subject, although there are qualitative studies that extend in the municipality of Yaxcabá. The aim of the study was to determine the prevalence of violence in pregnant women who attended antenatal care at the Yaxcaba health center, Yuc. A cross-sectional study was designed from February to October 2016. With descriptive statistics, the frequency of violence using the indicators of the National Survey on Violence against Women (ENVIM) was determined. The results contributed to make visible the violence during the reproductive stage and some associated determinants, for its timely detection and proposal of preventive strategies.

Violence, Pregnancy, Mayan Women, Yucatan

# La violencia escolar o bullying: Presencia, modalidades e impacto en los adolescentes de Zacatecas

# School violence or bullying: Presence, modalities and impact on adolescents in Zacatecas

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### **Abstract**

In recent decades, along with the expansion of crime, which manifests itself with greater luxury of violence and is disseminated every day in the media, is seen with concern the increase in urban and rural populations of youth violence, among adolescents, within the Educational Institutions of the world, Mexico and Zacatecas, which is not exempt from this scourge. Currently the problem of violence among young people in school or Bullying has become a concern for; a) educational authorities, b) public safety authorities, c) parents and d) society; and despite the concern and investment of resources and the implementation of programs aimed at the prevention of violence between equals and their consequences, little has been achieved. Today, a good number of researchers agree that the violence that is lived on the streets, in the neighborhoods, and, in the communities, is cause and effect of the violence that is experienced in schools and homes. What happens in school and at home is a reflection of what is happening in society. In the present investigation it was proposed to make evident the presence of Bullying, as a form of violence among adolescents of Zacatecas of secondary level, as well as the modalities of this fact and its impact on the integrity of young people.

## Bullyng, School violence, Adolescents

# Estudio Bibliométrico sobre la eficiencia en México en un marco de las Ciencias Sociales y Económicas

# Bibliometric study on efficiency in Mexico within a framework of Social and Economic Sciences

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### **Abstract**

The aim of this paper is to present information concerning the variable *Efficiency Mexico*, with the fundamental purpose of identifying the authorities and frontier theory. The methodology is through a bibliometric analysis applied in the ISI Web of Science and Scopus databases. The results obtained by the search were sorted and quantified by author, journal, year of publication, institution of origin of the authors, type of document, as well as the country of origin of the publication, additionally a list was made in which they are placed the ten most cited documents of both databases consulted. The results include both theoretical and empirical studies within the public and private sector, as well as the use of techniques such as stochastic frontier production, Data Envelopment Analysis (DEA), structure interview, estimation of distributions and the literature review. It should be noted that more than forty percent of the publications on the efficiency variable in Mexico were published in the last 10 years, so it is considered that the interest in addressing this issue through scientific research is increasing.

Bibliometric Analysis, Efficiency Mexico, Social and Economic Sciences

## Representación de Oaxaca en la prensa. El antes y después de los hechos

## Representation of Oaxaca in the press. The before and after the facts

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### **Abstract**

The events of June 19 in Nochixtlán, Oaxaca, recorded 6 deaths and 20 injuries. The Oaxaca issue in the national press increases. The aforementioned facts make up the representation of the teachers' and Oaxaca movement: However, how is that representation? How is the Oaxacan reality built around the teacher's movement? It is assumed that the published material influences the reader's knowledge about the subject and about Oaxaca. To get closer to the image that is projected from Oaxaca, this study is a follow-up of 30 days of two newspapers of national circulation: La Jornada and El Universal. The objective is to find out what they say around Oaxaca before the news of Nochixtlán and after it, in order to reveal whether or not it changes the content of the messages that are broadcast from Oaxaca.

Representation, Mexican press, Image analysis, Messages analysis, Content analysis

# Representaciones Sociales de educación financiera en estudiantes de nivel superior Social representations of financial education in upper level students

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### Abstract

One of the main issues worldwide is the weak administration of people's personal financial resources, influenced by consumerism and the lack of financial education. The objective of this paper is to know the social representations regarding financial resources administration amongst accounting students. The research was made, validated and applies as an instrument to recollect social representations. The main findings were: The respondents recognize the benefit of saving money and budget planning; as for credit it's a financial tool used to acquire goods and utilizing it comes with an additional weight load, taxes. Those who finish their degree have technical knowledge consistent with the profile of an accounting degree, lacking skill regarding their personal financial administration.

Social Representations, Financial Education, Budget

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## Narrativas escolares de mujeres ingenieras

## School narratives of women engineers

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### **Abstract**

This article presents the results of a qualitative study carried out between the years 2017 and 2018 in San Luis Potosí, México. Its purpose was to get into the scholar experiences of fifteen women engineers. We used the biographical-narrative method to reveal the influence of family, social and cultural factors in two aspects: school decision-making and the development of professional skills. The Achievement Choice Model was the route to show how gender values are in their relationships, but they are capable to apply social strategies to solve conflictive situations to take advantage to develop cognitive, technological and social skills.

Scholar narratives, School decision-making, Professional skills, Women engineers

## De la demanda, procedimiento contencioso administrativo en Mexico

## Of the lawsuit, contentious administrative procedure in Mexico

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#### Abstract

The objective of this investigation is to identify the procedures of a lawsuit to request a favorable ruling on the claim, the contentious system is an administrative structure and complex by the number of processes under its belt, analyzes and resolves the conflicts that arise in this matter between the state and the individual, the diversity in the legal nature of administrative acts gives it that breadth in requirements. How to process a demand?, In a state of law the purpose of this entity is to ensure respect for the fundamental rights of people and the full realization of their aspirations, whether economic, political or social, for this you must ensure the good operation of the state organization through the fulfillment of the rights and obligations of both the officials who carry out the administrative acts of the function of said entity and those of the administration, persisting with the idea of balancing both.

## Demand, Judgment, Tort

## La Reforma Fiscal 2014 y sus efectos en los ingresos tributarios. Caso México

## The 2014 Tax Reform and its impact on tax revenues. Mexico's case

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### **Abstract**

In this regard, in order to comply with the recommendations of this organization, several reforms were carried out including the Fiscal Reform 2014. In this paper an analysis of the impact that this reform has been carried out in relation to the revenue collection of the main Federal taxes. The new tax incorporation regime and the electronic invoicing use, as a strategy for the tax authorities in order to increase the number of Taxpayers and tax revenues increase, are also analyzed. The results show that tax revenues and the taxpayer register have increased, however, it has not grown as expected due to various economic, social and political factors.

Tax reform 2014, Tax incorporation regime, Electronic envoice

# Desarrollo de la documentación con base a la norma mexicana NMX-EC-17025-IMNC-2006

# Development of documentation based on the Mexican standard NMX-EC-17025-IMNC-2006

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### **Abstract**

The manufacturer of safety valves established as an improvement strategy to obtain accreditation as a test laboratory based on the NMX-EC-17025-IMNC-2006 standard in order to expand its line of business and thus acquired more clients. In order to be accredited, it was identified that the documentation of the assembly and testing process is not fully available, that's why it is proposed to develop it. The general requirements of the standard were identified, as well as the documents requested, the applicable regulations for the company were determined, afterwards the documentation was established and proceeded to develop it. On the other hand, a visit was made to the accreditation body of the Mexican Accreditation Entity (EMA) in order to validate that the documented information fulfill the requirements of the regulation. Once the documentation required by the NMX-EC-17025-IMNC-2006 standard has been developed, the company is expected to become accredited as a testing laboratory, thus ensuring the reliability of the product for the customer.

Valves, Documentation, Accreditation, Test laboratory

## La perspectiva del Derecho Ambiental en México

## The perspective of Environmental Law in Mexico

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### **Abstract**

Environmental problems come together in three areas: legal, economic and ecological that operate simultaneously and dynamically. In the legal sphere is the legal and regulatory framework for the protection of the environment and natural resources, in the economic sphere the motivation and decisions for efficiency and benefit / cost with the ecological sphere. The purpose of this paper is to present environmental legal and institutional frameworks for the preservation and restoration of the ecological balance and protection of the environment in Mexico. The methodology applied in this study was documentary, finding that in Mexico it has already begun to build legal categories whose objective is precisely to protect the environment. The Secretariat responsible for environmental care SEMARNAT has raised the idea of the participation and interest of society in this problem in order to work together. The protection of the environment is the right of the future, and its evolution in Mexico will depend on the conscience of the jurists and their scholars, as well as on its effective application to guarantee a better future for humanity.

Environmental Law, Mexico, environmental awareness

# La ley jurídica, ley moral y ley psíquica, sus puntos de intersección, cruces y contrasentido

# Legal law, moral law and psychic law, their points of intersection, crossings and contradictions

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### **Abstract**

This paper is part of an investigation that is in process, his first breakthrough was presented in the "Journals Crisis intervention in emergencies and violence", in Queretaro city the past May, it's as a preamble the issue of crisis and emotional emergency, attempting to distance his sense of medical discourse, subsequently was studied the Law juridical, moral and psychic, to review the clinical problems that causes its points of intersection, crosses and countersense, being these problems, sometimes, blind spots in the clinical work, are proposed two plans for reflection and analysis; A macro plan where reviewed neoliberal economic theory and its implications for in the legal and moral law, and the second plan reduce gone in the psychopathological camp (Psychiatry, Psychology and psychoanalysis), where is argued why the speech military and psychopath or sociopathic not have to be there.

Neoliberal economy; legal, moral and psychic laws; psychopathological field; clinical work

Reflexiones y experiencias sobre Formación Docente y Desempeño Profesional en el tercer encuentro de egresados de la Licenciatura en Educación Secundaria de la ENSOG

## Reflections and experiences on Teacher Training and Professional Performance in the third meeting of graduates of the Secondary Education Degree of the ENSOG

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### **Abstract**

On June 30, 2017, the Third Encounter of Graduates of the Bachelor in Secondary Education formed in the 1999 curriculum was held in its different specialties at the Escuela Normal Superior Oficial de Guanajuato, derived from the professional Study Graduate Monitoring Project and in its Performance, training received and job placement. Objective: The Institutional Project for Monitoring Graduates encourages permanent links with their graduates, to promote collaborative actions that improve the formative processes of the students during their journey in the institution. Contribution: It is important the communication between both parties, which will be favored by feedback to the Program of BSE in their specialties, and strengthen the skills of the graduate to participate in relevant academic events such as: Research Colloquium, Educational Research Conference and Reflection of the Teaching Practice and Encounters of Graduates of the institution, that allow to identify lines of attention that the Normal School requires for its improvement and growth as an Institution of Higher Education, besides constituting itself as a sub-line of research of the Academic Body ENSOG-CA- 1 that analyzes the Teacher Training and Educational Practices in studies of the initial training, the work destination and the professional performance of the LES. (Patron, 2014).

Encounter, Follow-up, Graduates, Teacher Training, Professional Performance

## Factores que influyen en el rendimiento escolar de estudiantes de la UTM

## Factors that influence the school performance of UTM students

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#### Abstract

One of the great challenges of the universities is to ensure that their students take advantage of the knowledge and services they offer them, and can transform them into tools that enhance their abilities in the labor market. In this way Higher Education Institutions will be fulfilling their mission, and strengthening human capital, which will boost the economy of the country, for which it is key to know what factors influence the students' school performance, understood the latter, as the student's ability to accredit the subjects of the career programs he or she attends, attend classes on a regular basis, and comply with the learning activities entrusted to them. This research study seeks to identify factors that influence positively and negatively the academic performance of university students in the administration career family of the Administration Division of the Universidad Tecnológica Metropolitana located in the city of Mérida, State of Yucatán.

Factors, socioeconomic, performance, school

## Examen diagnóstico: Estadísticas, bajas e histórico

### Diagnostic test: Statistics, casualties and historical

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#### **Abstract**

In the present work, titled Diagnostic test: statistics, dismissal and historical evidence, an analysis is made about results gotten in the diagnostic test applied on the preparatory course at UTNA in the year 2017. Its objective is to establish this course utility, to detect academic vulnerability cases in order to decrease academic dismissal and to compare the results of this year results and last years diagnostic test results. This analysis is realized in a descriptive level, using descriptive statistics tools (average, median, standard deviation, variance, etc.), statistical hypothesis testing and ANOVA tables, this contributes on offering opportune and appropriate information in order to design support strategies for those students at academic dismissal risk and allows the university to increase its terminal efficiency rating, decreasing at the same time the reprobation levels, in benefit of TSU Students and the university.

### Preparatory, Diagnosis, Drop out, Gender, Historical results

## Detección de las necesidades educativas de la generación "Z"

## Detection of the educational needs of the "Z" generation

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### **Abstract**

We live in a vortex of changes. Technology is becoming indispensable for survival in all areas and especially in education, which has changed its paradigm to respond to the educational and training needs of generations of the digital age. The objective of this work is to detect the educational needs of students from 2 schools of the Universidad Autonoma of Coahuila, the Cetis No. 60 and the high school Profr. Gabino García, in order to propose learning strategies for teachers of "Generations Baby Boomers," "X", "And" who serve them. It is a descriptive investigation since it helps us to analyze how a phenomenon and its components are and is manifested (Hernández Sampieri 1996) [1]. The descriptive analysis is used; A questionnaire was used consisting of 25 questions, applied to 128 students. The results of this research will serve to make decisions in the teaching practice in order to focus on the learning needs of students in the digital age. The so-called digital natives handle technology and require teachers to make a greater effort to make classes more dynamic and, of course, using technology to make them more attractive.

Technology, Generations of the digital era, Educational needs

# Impacto de las Acreditaciones de los Programas Educativos en el Desarrollo Regional

# Impact of the Accreditations of the Educational Programs in the Regional Development

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### **Abstract**

The objective of this work is oriented on the importance of the accreditation of educational programs in higher education institutions in Mexico, since higher education institutions have the vocation to train professional and academic talent capable of contributing to the transformation from the country. Professionals are the engine of change in society and academics in universities have the challenge of creating, disseminating and linking knowledge, both aspects contribute in a convincing way in the development of society and underpin the economic development of the regions. The analysis aims to raise awareness among Higher Education Institutions of the importance of accreditations and their impact on the economic development of the regions and, in turn, to create a new ideology of educational quality that develops strategies to plan, organize, manage and achieve accreditations in order to face the new changes in the dynamics of labor markets that globalization currently generates.

Management model, Accreditation, Economic Development

# Estudio sobre el uso de laboratorio virtual de química en alumnos de Mecatrónica de nivel superior

# Study on the use of virtual chemistry laboratory in upper level Mechatronics students

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### **Abstract**

In the present study we seek to know the student's perception of a basic chemistry course on the advantages of learning the subject by using a virtual simulator of laboratory practices. A questionnaire with thirteen questions was applied to students of the educational program of Mechatronics of the superior level, the students surveyed were 30 students of a total of 50, which belong to two groups; We used the Google form tool for the application of the survey which facilitates the obtaining of results electronically: before the application of the questionnaire the students learned to practice with eight simulations with the ChemLab software; a Likert slave was used; for each question the results are presented in pie chart and its corresponding analysis; of the study shows the priority that students give to the real chemistry laboratory giving the simulator a support and complement function and not a substitute.

Virtual Laboratory, Chemestry, Research, ChemLab

## Estrategias de enseñanza y la toma de decisiones en una institución en Italia

### Teaching strategies and decision making in an institution in Italy

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### **Abstract**

**Objectives, methodology**: Know the way to make decisions to design teaching and learning strategies in an institution in Italy. Through qualitative methodology, descriptive research. **Contribution**: Knowledge of teaching-learning strategies applied in an educational institution in the country of Italy to learn a language. Some of them, such as collaborative work, exhibition, couple work, discovery teaching, etc.

Decision making, Teaching-learning strategies, Teacher, Student

## Responsabilidad Social Universitaria: Perspectiva de los actores del Programa Educativo en Ciencias de la Educación

# University Social Responsibility: Perspective of the actors of the Program in Educational Sciences

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#### **Abstract**

Given the importance of taking the issue of social responsibility in the university, it is necessary identify how the university integrates and assumes it through the development of appropriate and ethical practices that affect the integral formation of the student and the community, which It is one of the main challenges of higher education institutions. Different researches show that although universities are related to university social responsibility in their organizational philosophy, it is not necessarily assumed in their practice; which is why it is necessary to reflect on the processes that take place in the university. This quantitative descriptive study of a transectional type is based on the proposal of the University: Build a country composed of 11 behaviors that characterize a socially responsible university. The objective of this study is to know the perspective of the actors of an Educational Program about university social responsibility, in order to have relevant information for taking concrete actions. The results indicate the presence of more than 80% of the characteristic behaviors, emphasizing behaviors such as respect, support to the university community and communication. However, some actions aimed at defining policies, commitment to the truth, are identified in a lower percentage.

University Social Responsibility, Behaviors, Actors of the Educational Process

## Importancia del desarrollo humano en la movilidad universitaria internacional

### Importance of human development in international university mobility

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#### **Abstract**

In this research we analyze aspects that allow to establish the relationship between international mobility and the impact that this activity has on the human development of the participants of an institution of higher education and in a second Time to analyze the impact that this type of activities generates in the immediate environment. The human development paradigm according to Mul Haq is conceived through four pillars. In this sense, the fourth pillar refers to empowerment is the line through which the topic of research is addressed, relating with the internationalization of higher education through university mobility by sizing the positive impact or Negative that it generates in its immediate environment. According to reports on human development that have to do with the impulse of the capacities and opportunities for all the people, it is considered as fundamental aspect the access to universal knowledge from the public university, the possibility of to have a decent quality of life through the promotion of these programs which of course derive from an international, national, state and local policy.

International mobility, Human development, higher institution

Antecedentes escolares de los aspirantes que ingresan a la Facultad de Contaduría y Administración de una Universidad Pública Mexicana: Un estudio de caso

School background of applicants entering the School of Accounting and Administration of a Mexican Public University: A case study

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#### **Abstract**

This study is focused on researching school records of applicants admitted and not admitted to the Faculty of Accounting and Administration (FCA) in a Mexican Public University (UPM). The methodology used was a mixed design of triangulation; in the qualitative design method of collection and analysis of documents and materials used; design in quantitative descriptive statistics were used. 2173 applicants were investigated in the 2016-2017 scholar period, the simple random sample was integrated by 385 candidates, of which 246 were admitted and 139 were not admitted to the degrees offered by the FCA of the UPM. The results showed, that those who were enrolled in the University Higher Secondary Education (preparatory core), are those who mostly entered the academic programs offered by the UPM while the minority of the sample was integrated by those applicants who came from institutions of Medium Professional Education.

Higher Secondary Education, Higher Education enroll, Scholar Background

# Los roles de los directivos de nivel medio superior del sector público en el Estado de Guanajuato

# The roles of senior managers of the public sector in the State of Guanajuato

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### **Abstract**

The managers of upper secondary education to be able to achieve efficiency in their institution will have to introduce new structures and roles that transform the habits of doing things, should guide their directive action to generate commitment in the teachers and encourage their professional development, that's when the image of the director is reinterpreted, instead of being limited to merely bureaucratic management processes, it is considered an agent of change, which uses its competences and those of others around a common mission, the present investigation will provide which are the main roles that should develop the directors of high school level in order to provide a quality service for students in this increasingly competitive and global world through good teaching practices and good performance of administrative.

Decision making, Teaching-learning strategies, Teacher, Student

# Medición de la imagen organizacional universitaria en una institución de educación superior

## Measurement of the university organizational image in a higher education institution

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### **Abstract**

The study is part of a doctoral project carried out at the Universidad Juarez Autónoma de Tabasco; raises an application of relationship marketing in the field of higher education, specifically in the student-university relationship, the purpose was to evaluate the university organizational image in a higher education institution. To achieve this goal, several authors related to the topic were consulted to inform the study, and to determine the scales of analysis [cognitive and affective] that allowed to design the methodology, being this one of a quantitative type, with a deductive approach, the target population was formed by 1,095 postgraduate students [masters and doctoral students] representing all students enrolled in ten academic divisions of the Juarez Autonomous University of Tabasco during the school period January August 2018 (Piña, 2018). The sample was determined by 285 students, to whom he applied the questionnaire. The results are shown in the article and reflect the extent to which the scales influence the university image and student satisfaction; the conclusions provide actions aimed at improving the management of the image of the university

Image, University, Satisfaction

Implementación de un Sistema de Gestión de la Calidad mediante la norma ISO 9001:2015. Para el Laboratorio de Investigación en Electroquímica y Corrosión de Materiales (LIECM)

Implementation of a Quality Management System through the ISO 9001: 2015 standard. For the Research Laboratory in Electrochemistry and Corrosion of Materials (LIECM)

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#### **Abstract**

In the Research Laboratory in Electrochemistry and Corrosion of Materials (LIECM), continuous improvement has been implemented, developing a Quality Management System (QMS) according to ISO 9001: 2015. In which a strategic decision was made, which will help to improve its global performance and provide a solid base for sustainable development initiatives, through tools that will allow to regulate its operation. For this, several manuals (quality, cleaning (5's), safety standards) were made, as well as the procedure manual being one of the most important, since in this one it is seen more thoroughly how it should be carried out, the analysis to be carried out, being explained with quality tools, which in turn allows solutions to improve the work performed in the UAEM Valle de México University Center laboratory, reflecting greater organization, staff safety, but above all, greater quality in the expected results. To do all of the above, a gap analysis was established in which several points were emphasized, reflected in the problems that were encountered in the laboratory, from the disorder to the absence of visual signs for the continuation of a process or analysis of a material, taking Consider each corner of the laboratory to meet the needs of the applicant.

Competitiveness, Continuous Improvement, Change, Quality Management-ISO 9001: 2015, Implementation

# Implementación de la metodología de gestión de riesgos con base a ISO 9001:2015 en una Institución de Educación Superior

# Implementation of the risk management methodology based on ISO 9001: 2015 in a Higher Education Institution

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### **Abstract**

It is possible to understand Quality Management Systems (QMS) as tools for planning, execution and evaluation of projects. The SGC is important because it seeks the continuous improvement of its processes. ITSON has a QMS that has been with ISO 9001 for 15 years, and has a limit until September 2018 to update to ISO 9001: 2015, referring to section 6.1, which corresponds to actions to address risks and opportunities. The objective was to apply the risk management methodology, to know its current situation and establish mechanisms to reduce them; when complying with section 6.1. of the rule. The procedure consisted of determining the context of the organization, identifying, analyzing, evaluating the risk and defining the treatment thereof, establishing monitoring and measurement. The results in the Coordination of Academic. Development were: two levels of extreme risk and one of high risk; in sports two levels of high risk and one extreme level; in extension of the culture two levels of high risk and one moderate. The identified risks must be addressed in all cases. The objective is met, risks were identified and their current status was known.

Risk, Management, Methodology, Norm

Taller de matemáticas a alumnos de nuevo ingreso usando la plataforma moodle como herramienta didáctica. Caso UPALT-Ingeniería industrial

# Mathematics workshop for new students using the moodle platform as a teaching tool. UPALT case-Industrial Engineering

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#### **Abstract**

Math workshop for new students using the moodle platform as a teaching tool. UPALT case-Industrial Engineering. In order to support and correct the deficiencies observed in the results of the admission exam applied to the industrial engineering candidates of the eleventh generation, the mathematics workshop was designed, elaborated and implemented. This implementation required the redesign of the curricular map of industrial engineering by common agreement of the full-time professors embodied in the draft "redesign of the curricular map of industrial engineering" in 2017. At the beginning of the course, a diagnostic evaluation was applied as starting evidence. This same exercise was applied at the end of the scholar period to observe the students' development and compare their progress. The dynamics of the subject involved exercises on the moodle platform with the dynamics of unlimited attempts with short durations of time to force the mental dexterity to solve several basic mathematical problems and generate the habit of developing exercises for the following mathematics courses. Something interesting is to observe the amount of exercises that the students did.

### Moodle, Exercises, Unlimited attempts

Análisis de personalidad, comportamiento y valores de la generación 2018 - 2020 de nuevo ingreso a la Universidad Tecnológica de Calvillo en relación a las competencias del ser marcadas por la CGUTyP

Analysis of personality, behavior and values of the generation 2018 - 2020 of new entrance to the Technological University of Calvillo in relation to the competences of being marked by the CGUTyP

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### **Abstract**

In this work, it is presented the analysis of personality, attitudes and values of the new 2018-2020 generation of the Technological University of Calvillo, making a comparison with the soft-skills (savoir-être) proposed by the CGUTyP. This project aims to find out if the group of study has the optimal level of the previously mentioned three characteristics according to the competences of the most recurrent soft-skills of each of the subjects of the six careers offered by the institution at the TSU degree (Associate of Science Degrees), those are: analytic, collaborative work, responsibility, organization and proactivity. The methodology used to conduct this research focuses on the analysis of statistics data of the results obtained from the three psychometric tests studies in relation to the competencies mentioned above. This research contributes to get to know the new students better in order to be able to propose them activities that will promote a greater development in the soft-skills that are indicated by the General Coordination of Technological and Polytechnic Universities (CGUTyP), aiming to improve the educational quality offered by the Technological University of Calvillo.

Personality, Behavior, Values, Soft-skills

Factores influyentes en la decisión de exportar en las empresas ubicadas en los municipios de Valle de Santiago, Jaral del Progreso y Huanímaro, Gto.

Influential factors in the decision to export in the companies located in the municipalities of Valle de Santiago, Jaral del Progreso and Huanímaro, Gto.

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### **Abstract**

The present article contains the graphic results and interpretations of a documentary and field investigation, Which was Carried out to the exporting SMEs of the municipalities of Valle de Santiago, Jaral del Progreso and Huanímaro, Belonging to the state of Guanajuato. This research is derived from a study Conducted first, on the commercial situation at the national level, to deepen Then at the State level. In the field work was Identified SMEs of various Sectors, Which Among the automotive and agricultural Sectors stand out. At the Conclusion of the field research, a statistical analysis was Carried out to determine the factors influence the internationalization That Directly of a company. The results Were Obtained: the size of the company, the number of employees, the productive sector, to Which They Belong, the region Where They are located, The investment in research and development for the innovation of the Processes, the level of staff training, the level of knowledge and support the company That has in terms of advice and / or financing, and Having an adequate internationalization strategy. With the objective of This Knowing the Characteristics That determine the profile of exporting SMEs IV Within region located southwest of the state of Guanajuato.

International Trade, Investigation, SMEs, Profile, Export

# Impacto de los factores de un destino turístico en el fortalecimiento de la competitividad sistémica

## Impact of factors of a tourist destination in strengthening systemic competitiveness

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### **Abstract**

The present investigation Consists of analyzing the relationship of the competition of the impact factors of a tourist destination With the systemic Competitiveness, in the Municipality of Guaymas, Sonora. For This, the methodology includes aspects such as: the detailed investigation of the problem, the selection of the theoretical framework, determination of the random probabilistic sample, and the nonparametric inferential statistical analysis of the Chi-Square was performed to determine the correlation, the logit model in order to know the explanation of esta relationship and Probit model to determine the impact of influence of the independent Variable dependent on the. The research is of a quantitative, non-experimental explanatory section. Finally, it is Determined That there is a cause-effect significance and relationship of the variable-tourism destination of competition on the systemic Competitiveness of companies in the tourism industry of Guaymas, Sonora. The result Allows to define strategies for the Competitiveness of the tourist companies and to build a model to Strengthen the Competitiveness of the tourist destination.

Tourist destination, Systemic Competitiveness, Business sectors of the tourism sector

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## Mejora del sistema de trasporte, envase y embalaje en empresas panificadoras

## Improved transport system, packaging in bakery companies

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#### **Abstract**

To innovate and keep up to date in matters of marketing and product distribution has led to the constant development of supply chain management. In this sense, it is necessary to maintain a close relationship with suppliers of merchandise, raw materials and products. customers or distributors with the company itself, that is why nowadays ERP enterprise resource planning systems have become a fundamental part in small organizations and especially large companies; In this way, material requisitions (MRP) by their initials in English must satisfy the customer's demand at the same rate as the production level of the manufacturing lines. Therefore, the evaluation and proposal of improvement in the design and type of packaging and optimizing its physical and chemical characteristics based on Mexican standards and in the design of the transport, improving the delivery of the final product to the customer analyzing the box is carried out. teacher, the stacking, the management of the communication in the supply chain, the handling of the type of inventory and the processing of the orders for an ERP system and finally the redesign of the bakery plant in its production line. flour tortillas.

Industrial processes, integrated production by computer, inventories, purchase, packaging, means of transport

## El ciclo de vida turístico aplicado al municipio de Fortín

## The tourist life cycle applied to the municipality of Fortin

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#### **Abstract**

The research is entitled "The tourism life cycle applied to the municipality of Fortín" aims to define the stage in which the municipality of Fortin is located according to the Butler CVDT model, through the evaluation of tourism activity, at the hand of a methodology designed in two phases: the first consists of a diagnosis of the municipality using the tourism system, considering the supply and demand variables, the economic and social axis, infrastructure and superstructure. The second phase is to identify the Fortín stage within the CVDT, with the analysis of the information obtained and considering the characteristics of the stages of the model used. The results achieved locate the municipality of Fortín in the introduction stage, which provides guidelines to the continuation of the research and design of the appropriate strategies adequated to the characteristics of the municipality, making use of the diagnosis of natural and cultural tourist attractions, the catalog of service providers tourism is possible to diversify the offer in order to get to the stage of development and achive sustainable tourism as an economic activity that contributes to improve the quality of life of residents.

Tourism destinations life cycle, tourism system, tourist diagnosis

# La importancia de las tecnologías de información y comunicación (ICT's) para las Pymes en el Estado de Guanajuato

# The importance of information and communication technologies (ICTs) for SMEs in the State of Guanajuato

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#### **Abstract**

Objectives, methodology Learn the basic concepts and evolution of Information and Communication Technologies, as well as on the impact of These Organizations. Know the new methods to deliver information services to clients. Companies must Recognize That contribution it is difficult to work without help of the instruments and tools: such as Information and Communication Technologies (ICTs). These are a tool in Which companies are supported for sustained growth, as They Improve Their Processes in all areas of the company and optimize the information THEREFORE delivered to decision makers. However, access to ICT is limited by the human, technical and financial resources That the company Possesses. In Mexico, ITS impact as a trigger is greater in competitive companies are using ICT That, HENCE the Importance of studying at a state level the situation of companies in relation to the adoption of ICT. THEREFORE, the objective is to analyze the vision of SMEs in the state of Guanajuato on the adoption and use of ICT as a strategic tool for Competitiveness.

Technology, Information, Communication, System, SMEs

# Factores determinantes del crecimiento empresarial: una nueva escala basada en el contexto de las micro y pequeñas empresas

# Determining factors of business growth: a new scale based on the context of micro and small businesses

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### **Abstract**

The main objective of This work is to design an instrument to statistically measure the internal and external factors intervene in the business That growth of micro and small businesses. The variables of the questionnaire are theoretically based on the literature of Blazquez, Dorta and Verona (2006), and Amat and Lloret (2014) That there are state WHO internal and external factors determine growth strategies That in companies. The variables Considered For This publication are the financial dimension; Measured through income, costs, profitability and investment, the technological dimension; Measured by technology adoption and updating systems, the competitive environment dimension; With the relationship environment, growth planning and competition in the market, finally the human resource dimension will be Measured by the specialization of human resources, employee training and growth of key employees. The questionnaire will be Measured through a Likert-type scale with 5 response options. As part of the results of esta research, a structured questionnaire is presented in three sections, Which is Considered an input for future research in the field of business growth.

Business Growth, Competitive Environment, Strategy, Scale

# Metodología para elaborar una propuesta exitosa en programas de estimulos a la innovación en México

# Develop a successful methodology for proposal in stimulus programs innovation in Mexico

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#### **Abstract**

Derived from the phenomenon of globalization in Which companies are current Immersed, Where the market context is dynamic and highly competitive, a decisive factor for success and permanence in the market is the creation of a competitive advantage through innovation. The objective of esta paper was to Provide the reader with a methodology and guidelines to be able to compete Within the main program encourages innovation in Mexico That: PEI, with the expectation of being able to improve increase the probabilities of being beneficiaries. The structure of esta methodological guide was divided into three sections: 1. Application registration, Which details the dynamics to follow to register an application; 2. The filling of the application That Explains the way to do it, and 3. Process of evaluation of the Proposals submitted in the call.

Innovation, Stimuli, Competitive Advantage, Project, R & D, Methodologi

# Aceptación sensorial de una bebida fermentada probiótica no láctea con vaina de mezquite

## Sensory acceptance of a non-dairy probiotic fermented drink with mesquite pod

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#### **Abstarct**

The world market of functional and / or nutraceutical beverages is a growing health conscious food industry Because Consumers demand Foods That Improve well-being, reduces the risk of diseases and also, free of the animal proteins (vegans). Mesquite pod extract (legume) can be incorporated into non-dairy beverages as a source of antioxidants and add probiotic cultures for fermentation. The aim was Formulated to functional beverage With Lactobacillus acidophilus CDBB 1041 (20%) isolated from Tepache and Identified by PCR, aqueous extract of Prosopis glandulosa seed (500 mg/mL) (15%), agave honey (15%) and fermented at 42 oC / 72 hours in microaerobic. Bacterial growth (optical density 600 nm), pH, glucose, <sup>a</sup>Brix, antioxidant capacity and sensory acceptance Were determined. Were Obtained beverages plus nut, mint or coconut flavor (3%) With 8.

### Fermented Beverages, Antioxidants, Prosopis

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## Duelo de los padres por la muerte de un hijo al migrar

## Mourning parents for the death of a child when migrating

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#### **Abstract**

This research AIMS to describe the grieving process faced by parents in the face of the loss of a migrant child, due to different Situations presented During The journey to the American dream. In the municipality of Tempoal, Ver., An Increase in the migratory flow of young people Has Been Observed, due to These conditions there Have Been Constantly unfavorable events in Which young people lose Their Lives During the attempt to cross the border, leaving an empty in the family. The Importance of conducting qualitative research esta is to know different Situations of 5 Families That Have Suffered the death of a child During the migratory crossing and let us know the feelings and grief through Which parents cross. The contribution of esta research will be of great Importance Because there are few studies at a regional migratory level and it will be a great contribution for migratory grief research. The Social Work Bachelor WHO to intervene with parents have a migrant child, will know how to grieving parents of deceased migrant child, and manage Support with different associations.

### Grief, migration phenomenon, death, parents

## Análisis del clima organizacional en la UNACH

### Analysis of the organizational climate in the UNACH

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#### **Abstract**

The Autonomous University of Chiapas (UNACH), which is characterized by the quest to have graduates of high academic quality and considering particular situations of the Mayan School of Agricultural Studies in Catazajá, Chiapas; the concern arose, to carry out an investigation that would allow finding the main agents that generate the organizational climate in this school. In this regard, based on the González López Model, Senlle and Gutiérrez Model and Andrés Model, the measurement instrument (questionnaire) of Mendoza (2009) was adapted. The sample to support the study was 21 teachers, 9 administrative and 1 manager, 50 students, of which 100% representative evidence was taken, reliable, statistically reliable instruments were applied, with a reliability coefficient of the variables measured through Cronbach's Alpha Coefficient between 0.898 and 0.95. The analysis was Mixed type, where qualitative and quantitative variables were analyzed, as well as the use of a Likert scale to quantify by scale and measure the study variables.

### Organizational, Climate, Education Quality

# Sistema experto para elegir actividades extracurriculares

## **Expert System for choose extracurricular Activities**

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#### **Abstract**

The present work design and implement an expert system identify extracurricular activities for students the best for each one of Extracurricular Activities Department: Rondalla, introduction to music theory, dance, band of war, orchestra, soccer, basketball, volleyball, athletics and mixed martial arts. Using Java language programming using method waterfall model consist of stages through development project. The Expert System give guidance to new students agree with their skills, for take a correct decision agree with their profile and get an excellent performs in each activity. With a test answered by the students, the expert system identify in each question with score gived before to extracurricular activity choosed, the skills of each student and select the activities where the students give a good perform.

### Expert system, Extracurricular Activities, Students, Test

# Un teorema de verificación en juegos estocásticos diferenciales con cambio markoviano

## A verification theorem in stochastic differential games with markovian switchings

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#### **Abstract**

The main objective in this paper is to solve the maximin problem in infinite-horizon zero-sum stochastic differential games with Markovian switchings. To this end, we propose a verification theorem which is proved using standard dynamic programming techniques. This theorem is applied to solve the maximin problem: maximize the expected utility from terminal wealth with the risk minimum in a financial market with Markovian switching assuming the mean rate of return of the stocks, is not given a priory (because risk).

Black-Scholes market, Hamilton-Jacobi-Bellman equations, zero-sum games

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# Análisis de los costos de inversión de la producción in vitro de orquídeas de la Huasteca Potosina

## Analysis of the investment costs of the in vitro production of orchids of the Huasteca Potosina

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#### **Abstract**

The Huasteca Potosina is an area of great importance for biodiversity in Mexico, because it has a large number of plant species such as the Orchidaceae family. However, the distribution of some of the orchids has diminished notably due to the alteration and destruction of their habitat, extraction and illegal trade, as well as their difficult reproduction. An alternative to prevent the extinction of species and decrease the time of regeneration and loss of orchid biodiversity is in vitro micropropagation, which allows to increase the multiplication rate in a time and space reduced. Therefore, the objective of this work was to analyze the investment costs of two orchids produced in vitro (Encyclia parviflora and Encyclia marie), and market analysis. The unit cost of each seedling was determined and a high market potential for orchids produced in vitro was found.

Orchids, Micropropagation, Costs, Market Analysis

# ¿Infraestructura o intervención social? Asignación óptima de recursos FECHAC al Polígono Parral

# ¿Infrastructure or social intervention? FECHAC optimal allocation of resources to Polygon Parral

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### **Abstract**

The business community of the State of Chihuahua, through Chihuahua Business Foundation, AC (FECHAC) has addressed more than 2 million pesos to support human and social development of Their communities, building infrastructure and Implementing programs to address critical community needs in three areas: education, preventive health and development of social capital. To determine how FECHAC will Implement Existing Polygon economic resources in Parral, the Foundation has Parral Asked University Center of the Autonomous University of Chihuahua to Develop a research project Which will allow the Board of Directors to Identify the area with MOST critical need. Through a social service brigade FORMED by students of International Business and Economics Both career and guided by the research professors Has Been Stated in este documento.

Social Impact, Human Development, Wellness, Foundations, Social Responsibility

## Diseño de nuevos productos para el lavado de utensilios de cocina

## Design of new products for kitchenware washing

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### **Abstract**

This work shows the research of users' needs and motion-timing data to design and develop new series of products to help in kitchenware washing. The research was performed by students and professors of the industrial engineering program of the Universidad Tecnológica del Valle de Toluca (UTVT), Mexico and the results will be used by mechatronics students of this University to develop new products for home and office. At the beginning, an Ishikawa diagram is presented to identify the main causes related to the need of kitchenware washing like excessive time, manual handling and water waste. A benchmarking of dish washer machines for home and industry is included, attending cost, power consumption and speed. The method used to perform the research is the user's needs and includes a diagram process of washing, surveys, interpretation and hierarchy of needs. The motion timing data was obtained by the recording and study of videos of users of different profiles. The main kitchenware in the washing process was obtained too. Finally, the conclusions and the main characteristics for new products and their impact are presented. Currently, the mechatronics students are generating concepts and validating their functionality

## Los Estereotipos y las inequidades sociales y de género: Un tejido complejo

## Stereotypes and social and gender inequities: A complex tissue

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#### **Abstract**

Objective. This paper addresses a section on gender roles and life expectancy, which allows to observe the learning contexts of boys and girls, the representations about the roles and the social value granted to each gender, and its effect on the formation of the expectations and life projects in the students. Methodology. Qualitative study, case study, of a suburban secondary school in the City of Merida. 8 teachers were interviewed. This section is elaborated from the discourses to the teaching staff fundamentally. Conclusions. Ethnic and gender differences in teacher representations persist and are contrasting, obstacles to equality.

Gender stereotypes, Social inequalities, Students, Yucatán

# Características sociodemográficas y autocontrol de las enfermedades crónicas en adultos mayores

# Sociodemographic characteristics and self-management of chronic diseases in older adults

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### **Abstract**

The present is a study was performed by descriptive methodology, Having as objective the analysis and description of the Sociodemographic and self-management características in chronic diseases in older adults in Its different dimensions (knowledge of the disease, adherence to treatment, physical impact management, Mental and social disease) performed in 71 people in the old age stage diagnosed chronic disease or chronic With symptom. The results in the prevalence of hypertension, an average age of the participants of 69.04 years (SD = 6.72) Between ages 60 and oscillating 85 years. The investigation was Carried out in the health centers of the jurisdiction 8 of the Ministry of Health. Among the results, it was found That a greater percentage of users are women, Which confirms the gender perspective in the planning of care.

Self-Management, chronic diseases and older adult

Imperfecciones profesionales del mercado laboral. Un caso de egresados de la Nutrición. Las imperfecciones del mercado laboral profesional. Un caso de egresados de la Licenciatura en Nutrición

Imperfections professional labor market. A case of graduates of the Nutrition. The imperfections of the professional labor market. A case of graduates of the Bachelor's Degree Nutrition

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#### **Abstract**

In This paper I discuss three main topics of the education and of higher They are exemplified by the results of a qualitative follow-up study of graduates. The topics Discussed are the imperfections of the professional labor market originated by the requirements imposed by globalization; That the various Objectives Higher Education Institutions in Their effort to follow cover the labor needs of companies; and the formation of the universities Themselves as an Important professional labor market. Finally, the work and school Characteristics of a group of graduates of the University Center of Los Altos, a dependency of the University of Guadalajara, the second in terms of population in Importance in the Mexican Republic served, are explained.

Labor market, University education, Technological advances, Market imperfections

## Análisis de longevas de las cinco empresas en México hasta 2017

## Longevas analysis of the five companies in Mexico to 2017

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#### **Abstract**

The following research Arises from the constant need to keep updated the database on long-lived family businesses in Mexico by 2017. Which generate jobs for 100 million people, constitute 60% of the total number of companies in the world, in Latin America They Constitute almost 90% of all companies. HENCE, 11 of the 20 Most Important companies currently are in Mexico, are in the family category and Represent Between 70% and 90% of the total of Existing companies in Mexico (Millan cited in Lopez, González and Vargas 2015)., P.57). The objective is to analyze the five long-lived family businesses by 2017, the companies are; 1. House Veerkamp, 2. House Serra, 3. Casa Cuervo, 4. Grupo Salinas and 5. Coppel, in the methodological development to systematic review of the information was made, through the detection, and analysis of each Obtaining of the study companies, guided by the research question Why analyze the long-lived family businesses in Mexico? As results each company Were Determined That Has Its own strategies of permanence, it is Concluded That companies are the engine in the Mexico economy.

### Long-lived family business

## Historia del psicoanálisis en la Facultad de Psicología de la UAQ

## A history of psychoanalysis at the Faculty of Psychology at the UAQ

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#### **Abstract**

The Faculty of Psychology of the Autonomous University of Querétaro (UAQ) brilliant 50 years founded in 2017. Having Been Since its inception, psychological currents Have Several FORMED part of Its curriculum. Psychoanalysis has-been one of them. But we know That the training analyst does not pass by the University, but by a personal analysis. We Also Know That in the framework of the Educational Modernization College Knowledge is increasingly more technical, ie They are to be applied, run, put into practice; On the Contrary, the transmission of psychoanalysis requires discussion and criticism. If the formation of psychoanalyst does not go through the University and if current professional knowledge are more technical Where does psychoanalysis at the Faculty of Psychology of the UAO? To answer esta, We went to the past to ask what conditions gave rise to psychoanalysis at the School of Psychology of the UAQ in 1967? They continue in force? With this script we seek to make visible the trail Which has left the psychoanalysis in our Faculty in the 60's and 70's and Contribute to the historiography of psychoanalysis in the Faculty. We do so as members of the research line of the CIPE "Psychoanalytical theory" and the CAC "Psychoanalysis, clinical and society"; Both Heirs of That footprint. We do so as members of the research line of the CIPE "Psychoanalytical theory" and the CAC "Psychoanalysis, clinical and society"; Both Heirs of That footprint. We do so as members of the research line of the CIPE "Psychoanalytical theory" and the CAC "Psychoanalysis, clinical and society"; Both Heirs of That footprint.

Psychoanalysis, UAQ School of Psychology, History, Historiography

### Desarrollo de recursos humanos en turismo

## **Development of human resources in tourism**

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### **Abstract**

It is very common to hear that people are the engine of Organizations, That without them companies would not Have Successes or failures. The way in Which human talent is managed is the key to Achieving one or the other. The role of the human resources area've evolved over the years, beginning with changing the name, first to Human Capital and now to human talent, with Which it is Sought to give staff more, warmer sense, than Emphasize the needs of workers and Those not only of Employers. The overall objective is to Identify the Importance, the current conditions and functions of Human Resources in the companies of the tourist area of the capital city of Guanajuato, using a qualitative methodology, on the one hand documentary and on the other an interview to the sector.

**Human Resources, Hotels, Tourism, Evolution** 

## Impacto en la formación de recursos humanos en contingencias ambientales: SEMAR y UPALT

## Impact on human resource training in environmental contingencies: SEMAR and UPALT

GARCÍA-NAVARRO, Josefina, BAUTISTA-VARGAS-María, Esther, GUADARRAMA-MENDOZA, Teresa Alejandra and MURILLO-OSORIO, Luis Antonio

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#### **Abstract**

The Secretariat of the Navy-Navy of Mexico, through the First Naval Zone and coordination With the members of the Local Coordination Body has Carried out an action to Obtain a satisfactory response to Environmental Contingency due to oil spill. The conception of Human Resources for the attention of this type of emergencies is the generation of People with an integral formation. THEREFORE, the relevance of esta research, the impact of training actions in Situations of environmental contingency and the generation of human resources, the level of historical competence and the level of acceptance in upper level students. It is Important to mention That the generation of response capabilities in Environmental Contingencies requires conviction and being aware of the impacts That are made to the environment. The number of students has Increased to this dynamic, as well as the awareness of them Knowing That is a key factor it can be Sought That only on one side of esta magnitude. The perspective of the research is to continue generating the strategic lines to Improve the current ones in order to transfer students to the participation and Involvement of environmental problems.

SEMAR, UPALT, Human resource, Environmental Contingency, Oil spill

### Satisfacción laboral del empleado desde la perspectiva de marketing interno y género

### Employee job satisfaction from the perspective of internal marketing and gender

VALDEZ-PINEDA, Dina Ivonne, OCHOA-JAIME, Blanca Rosa and SANCHEZ-RODRIGUEZ, Jorge

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#### **Abstract**

In Ciudad Obregon Sonora, the restaurant industry is a Very Important sector Which in Addition to Promoting a space for family recreation, Generates Jobs for the municipality and at the same time Gives the opportunity for creative entrepreneurs and entrepreneurs to prosper. In This sector, the competition is very large and for esta reason internal marketing is a subject Which each company must adopt. This research AIMS to Identify the Factors That Affect the degree of satisfaction of the employees of the restaurants located in Cd. Obregon, Son. From the perspective of internal marketing and gender and then a recommend strategies to improve increase productivity, communication and employee loyalty. Where it was Obtained as a result of the survey staff of the restaurants, there is no Difference between men and women based on the conditions in Which These Organizations are found, launching a similar opinion in each of the variables of the applied instrument, and THEREFORE Job satisfaction for Both Genders, Obtaining a pleasant work place, Directly Favoring the companies.

Internal marketing. Gender and endomarketing

## Acciones de sostenibilidad emprendidas por instituciones de educación superior en la Sierra Norte de Puebla, México

## Sustainability actions undertaken by higher education institutions in the Sierra Norte of Puebla, Mexico

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#### **Abstract**

Undertaken actions sustainability by Higher Education Institutions in the Sierra North of Puebla, Mexico. Taking the perspective of sustainable development as a framework, we intend to know the actions That Have Been Undertaken to date by the Institutions of Higher Education in the Sierra North of Puebla. In order to Strengthen the Initiatives That Contribute to the different levels of government, the productive sector, the economy That drives, and society in General to Contribute to the sustainable conservation of the environment. For This purpose, a quantitative empirical study was Conducted through a field research instrument to Identify different topics: such as rules or rules That Please beneficial policies around sustainability, ways of Local addressing problems, Initiatives to Promote Sustainability, application concrete sustainable practices and benefits That Have Been generated inside and outside the Institutions of Higher Education in the Sierra North of Puebla.

Sustainability, Education, Development, Globalization

### Una herramienta para evaluar los Portales de Transparencia en Tabasco

### A tool to evaluate the Transparency Portals in Tabasco

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#### Abstract

Mexico has a long lasting tradition related to secrecy, considering authorities as the embodiment and sacralization of power itself, nevertheless, Transparency Policies have imposed changes in the context of full disclosure of public information, creating a political value, by the means of which, citizens are entitled to be informed of what the government does; and that is also based in principles and postulates that provide it with a public value, since it guarantees their participation in governance and democracy. A new era in matter of accountability emerged, denominated Transparency Culture, mainly due to the reforms to the articles 6 and 4Bis of the Federal Constitution and that of the State of Tabasco. They provide the basis for the government's obligation to make information available, even without any request through the websites, and for the population's right to be informed of its performance and the application of the resources trusted to it. This essay is part of a doctoral research project with the objective of evaluating Transparency in Tabasco, and as a fundamental part of it, a digital tool was developed and offered to the Instituto de Transparencia del Estado de Tabasco [ITAIP], in order to assess the publication of the basic information by the obliged subjects through their websites in accordance with the Ley de Transparencia y Acceso a la Información Pública de Tabasco [LTAIPT]. Here we present the basis and the design process of the methodology used in it. (Berttolini, 2012)

Transparency, information, websites, evaluation

# Implicaciones de la Responsabilidad Social del NAF, compromiso de la UASLP Implications of the Social Responsibility of the NAF, commitment of the UASLP

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#### **Abstract**

The Faculty of Accounting and Administration of the UASLP inaugurated in 2015 the first Fiscal Assistance Center (NAF) with exprofeso facilities, thanks to a collaboration agreement between the Tax Administration Services and the Educational Institution, signed in 2014, period from which has presented results regarding its fundamental objective of providing advisory services to individuals taxpayers and the Tax Incorporation Regime, through the SAT internet portal. Using social marketing tools, the finance authority offers in this module a figure of accompaniment immersed in the promotion of tax culture, exercised by students of the degree in Public Accounting, trained by the Unit and supervised by academic staff. The benefits of this activity affect in different ways: the University fulfills its purposes of social responsibility and connection, the SAT expands the coverage of its services and promotes the approach of taxpayers to the formal economy; citizens receive free attention at alternative points and students consolidate their training with comprehensive experience in one of the specific areas of their professional work: tax advice.

Fiscal Support Center, Social Responsibility, Taxpayers

Perspectivas y actitudes de estudiantes de licenciatura en la Gestión y Manejo Integral de Residuos Sólidos en el entorno universitario

## Perspectives and attitudes of undergraduate students in the Integral Management of Solid Waste in the university environment

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#### **Abstract**

At the global level, the social, economic and environmental crisis motivates the United Nations, as well as other international organizations get the Sustainable Development Goals (ODSs) such as the end poverty, fight against inequality and injustice, and dealing the climate change. The Higher Education Institutions (HEI) have an important commitment in contributing with the goals of the ODSs. The waste theme is included in objective 12, Production and Responsible Consumption. The University of Guadalajara, through its substantive functions, assumes these commitments. The main objective of this paper is to analyze the perspectives and attitudes of undergraduate students at the "Centro Universitario de Ciencias Biológicas y Agropecuarias" (CUCBA) in the integral solid waste management in the university environment. The study was carried out with 300 students of the bachelor's degrees of Biology, Agronomy and Veterinary Medicine and Zootechnics (MVZ) (100 students of each one), admitted during the years 2013 to 2017. In conclusion, the students' vision is that CUCBA should be an example of a sustainable center, through the implementation of an Integral Solid Waste Management Program, and their availability to participate in activities related with the 3R rule application.

Sustainable developent, 3R rule, separation of waste

### Análisis de la Evolución de los Cuerpos Académicos y su contribución en una DES

### Analysis of the Evolution of the Academic Bodies and their contribution in a DES

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#### **Abstract**

In this article, we will talk about how the evolution of the different academic bodies (CA) was carried out within a Higher Education Unit (DES) in a period of two years, in order to approve is that the Knowledge Generation and Application Lines (LGAC's) have been complied with and, at the same time, contribute to innovate knowledge in the various educational programs of the Faculty of Mechanical and Electrical Engineering (FIME) of the University Autónoma de Nuevo Léon (UANL). The main objective of the Academic Bodies is to contribute to the updating of the FIME academic programs and thus continue to generate a quality education for their students to respond to the needs that prevail in this changing and competent society. A descriptive investigation was carried out for the analysis of CA in the FIME, where the amount of CA in Formation, consolidation and consolidated during the period 2016-2017 all this with the purpose that the CA consolidate the lines of research that they cultivate and advance in their development or in their case they are maintained.

Academic Bodies, Educational Programs, Education

Análisis del desempeño de las Instituciones Gubernamentales en la prestación de servicios públicos en Ciudad Obregón, Sonora

## Analysis of the performance of Government Institutions in the provision of public services in Ciudad Obregón, Sonora

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#### **Abstract**

Article 1 of the Law that regulates the provision of municipal public services of the state of Sonora is mentioned as having the purpose of regulating the provision of said services and that the municipal councils of the municipalities will be in charge of the effective rendering of said services, which must be developed in an organized manner in order to satisfy, in a continuous and uniform manner, the needs of a collective nature in the matter of said services, for which reason the question arises: What is the perception of the inhabitants of Ciudad Obregón as regards to the solution that the levels of municipal, state and federal government give to the problems related to public services?, being its objective to make a diagnosis about the perception of inhabitants of Ciudad Obregón about the problems related to public services and the performance of the institutions at the federal, state and municipal levels for the solution of these problems so that They interviewed 428 people concluding that there are problems of insecurity, roads, public transport, lighting, sewage and water leaks and none of the three levels of governments are efficient in solving these problems.

Public Services, Security, Municipal Governmen

## Análisis del perfil del visitante a atractivos culturales. Museo de las Momias de Guanajuato

## Analysis of the profile of the visitor to cultural attractions. Museum of the Mummies of Guanajuato

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#### **Abstract**

In the present investigation a study of the profile of the visitor to the Museum of the Mummies of the State of Guanajuato is presented, which represents a tourist icon of the capital city and receives a great amount of visitors, being the main museum of the State and the third one in importance at the national level. The general objective was to analyze the profile of the visitor, whether residents or tourists, national or foreign. A quantitative methodology was used, applying a survey to 400 visitors. It was obtained as a result that the majority are in an age between 18 and 25 years, in terms of occupation, the highest percentage are students. Most of the visitors are state tourists, followed by national and international visitors. A promotion strategy that reinforces the image of the museum in other States and countries must be focused.

Museums, Visitors, Guanajuato

Perspectiva de los visitantes y turistas sobre el servicio y la calidad ofertada en Calvillo, Ags.

Perspective of visitors and tourists about the service and quality offered in Calvillo, Ags.

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#### **Abstract**

Calvillo has become an entity with the greastest development in tourist infrastructure in Aguascalientes in 2012, of department of Tourism named it Pueblo Magico which signifies a possibility to access resources for the consolidation of the sector, to improve their strategies and to offer quality services, this is the fundamental base for a sustainable development, for this reason it needs to evaluated, to identify strengsths and areas of permit adequate offering of touristic products. The study's objective is to demonstrate the extent in which quality services can be offered, this is an exploratory study conducted by the teachers or the career Turism of the University Technological of Calvillo, through a survey which consisted of 100 participants that visited the municipality of Calvillo which were asked 16 questions; we analyzed intangible services variables such as cordiality, courtesy, quick service and the attitude of service. The results state, that Calvillo is visited due to recommendations from individual people that have experienced this space and the good perception of the visitor due to cordial service and excellent attention. For areas of improvement we found (inadequate) training for the professionalization of the services and the lack of an appropriate signaling system for visitors to venture and discover the potencial to Calvillo despite the lack of internal transportation to get to the destinations which complicate the quality of good service consequently that is the reason why there is a need to improve the accessibility and lastly the conservation and renovation of the urban imagen.

Quality, tourist service, costumer satisfacion, Calvillo

## Análisis de un modelo de Madurez Organizacional de procesos en el área de investigación

## Analysis of a model of Organizational Maturity of processes in the research department

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#### **Abstract**

The companies that seek to develop projects, need to measure their level of competitiveness and stick to the fulfillment of their objectives, for which they have to identify which is the state they keep without leaving aside the traditional tools to mediate each area. Objective: This document contains the analysis of a maturity model organization of processes in the research area of an educational institution of the Higher University level. Methodology: Study the level of organizational maturity of the processes in the Research department of a University based on a CMM model of maturity process organization (PMMM). Contribution: The proposed contribution is to identify the model to be applied that measures the level of development of the processes carried out in the academic organizations, showing the areas of opportunity and being able to develop improvement strategies that allow to focus the resources with which they are counted or the management from them. Identify the maturity model appropriate process organization to measure the development of the activities carried out in academic research bodies to reach the levels required in the guidelines set by PRODEP and COANCYT.

Maturity, Model, Organization, Processes

### La estandarización de los procesos de la Industria Hotelera

### The standardization of the processes of the Hotel Industry

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#### **Abstract**

The hotel industry are a key element Organizations in the economy of the places That are called "tourist", since there is an Influx of people at different times of the year make use of WHO products and services. This work Arises from the need to Identify the different variables to Obtain some type of recognition or distinctive of the Existing ones for this type of Organizations. The study was Conducted With three hotels in the State of Guanajuato, Where the manuals of procedures and instructions, Strengths, Opportunities, Weaknesses and Threats Were Analyzed, information Necessary to know the current situation of the company. The results of research esta allow us to identify identity Both the positive Characteristics That Have These Organizations and Their shortcomings. Keywords: Hotels, Process Management, Distinctive / Certifications.

Hotels, Process Management, Distinctive / Certifications

## Revisión teórica del impacto del Lean Manufacturing en el Desempeño organizacional

## Theoretical review of the impact of Lean Manufacturing on Organizational Performance

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#### **Abstract**

One of the traditional measures of performance or performance in the financial dimension. However, these measures are not enough, since sometimes these measures do not support investment in new technologies and markets (Yacuzzi, 2006, Eccles, 2004, Lee, Kim and Lee, 2011); neither do they show the performance in processes and social responsibility (Molina, Martínez and Torlo, 2011); nowadays, the companies recognized to the successful companies not only because of their financial results, but also to how they act and the influence they have regarding the environment such as employees, society, laws and the environment. (Arévalo, Urgal, and Quintás 2013; Said, Hassab Elnaby and Wier, 2003). This work theoretically analyzes the concept of multidimensional performance in the company, as well as the impact that this has by applying the Lean Production System in companies.

Performance, Lean production system, Impact

### Deducibles proporcionalmente por el patrón los pagos que a su vez sean ingresos exentos en México

## Proportionally deductible by the employer payments which in turn are exempt income in Mexico

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#### **Abstract**

The present investigation was Conducted in the City of Monclova, Coahuila, in 2017, with the objective of analyzing the unconstitutionality of the proportional deductibility of the exempt income paid by the employer to workers based on Fraction XXX of Article 28 of the Law on Income Tax , the problem was born in 2014 With the reform, This expense is limited to the proportional deduction, but why? deduct proportionally, and as established by the procedure in rule 1.3.3.1.29. ACCORDING to section IV of Article 31 of the Constitution, the principle of legality is violated in Its modality of legal reserve by imposing a procedure on the basis of income tax, an essential element That must be provided by law in at a formal sense and material. A case study with a procedure ACCORDING TO FMR is presented. As a result, the unconstitutional is proven With tax,

#### Proportionality, Deductibility, Exempt

Diseño del método para la implementación del proceso administrativo: Adecuación de la etapa planeación, para contribuir al desarrollo económico administrativo de las mipymes de la región mixteca poblana

Design the method for the implementation of the administrative process: Adaptation of the planning stage for administrative contribute to economic development of msmes in Puebla Mixtec region

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#### **Abstract**

The project "Design of the method for the implementation of the administrative process: Adaptation of the planning stage, to contribute to the economic administrative development of the MiPyMes of the Mixteca region of Puebla" has the purpose that the entrepreneurs implement each of the elements of the stages of the administrative process, will contribute to the professionalization of the companies, because in the region there is no culture, knowledge, and / or academic training on their part. In a first stage only the elements of planning are considered: mission, vision, values, policies, rules, objectives, strategies, budgets and programs. Its main contribution will facilitate the development of these, even without having technical knowledge of the subject. The design of the proposed method was adapted according to the needs detected by the Academic Body of Administration of the Technological University of Izúcar de Matamoros (UTIM), in previous projects that have been developed with Companies of the Mixteca Poblana Region, taking as reference different authors of the research in the area of Administration. There will be a workshop and support to entrepreneurs for the drafting of each of the proposed elements.

### Design, Method, Planning, Development

### Diagnóstico de Clima Organizacional en MIPYME. Caso: Guanajuato capital

### Organizational Climate Diagnosis in MSMEs. Case: Guanajuato capital

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#### **Abstract**

Currently, the study of micro, small and medium enterprises (MSMEs) have Become Relevant around the world, Given the Importance of These Organizations for the economy and development of the country clubs. The factors That These allow companies to survive, strength, and grow, Have Been Investigated In This basis. The purpose of this study is to diagnose the organizational climate in a sample of 30 MSMEs located at Guanajuato, Mexico, in order to determine perception patterns from Collaborators Regarding improvement areas. This research is quantitative, non-experimental and descriptive. The main results show the simplification of the organizational climate dimensions 11 by a principal component analysis (PCA), in order to Obtain two components can be Visualized That two dimensions in a plane. The main components separate the MSMEs in four quadrants positive or negative impact With, According the variables selected.

Organizational climate, MSMEs, Guanajuato, Diagnosis

Desarrollo de un modelo asociativo y predictivo para identificar los principales factores que afectan la supervivencia de las PYME en el sector del comercio a nivel nacional

## Development of an associative and predictive model to identify the main factors that affect the survival of SMEs in the commerce sector at the national level

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#### **Abstract**

In Mexico, Small and Medium Enterprises (SMEs) are an important segment of the country's economy. Franco & Somohano (2010), describe them as the generators of employment and the role they play as generators of wealth. An analysis of the trade sector at a national level is considered as a delimitation, using the INEGI databases as a source and the following variables are contemplated: Total Employed Personnel, Total Paid Personnel, Total Gross Production, Total Investment, Total Assets Assets, Total of Expenses, Total Income; of the "Economic Censuses" (INEGI, 2004), (INEGI, 2009) and (INEGI, 2014). The methodology to be used is mixed; quantitative in the statistical analysis of data and qualitative in the description and interpretation of results so that the user of statistical and financial information can make decisions that help avoid the death of a SME, based on criteria, theories and appropriate recommendations to the commerce sector at the national level.

SMEs, Death, Analysis, Competitiveness, Strategy

Estudio comparativo entre empresas abiertas y cerradas sobre la importancia que se otorga a la calidad, el precio y el poder de negociación de los proveedores de MSES en San Pedro Cholula, Puebla

Comparative study between open and closed businesses on the importance attached to the quality, price and bargaining power of suppliers of mses in San Pedro Cholula, Puebla

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#### **Abstract**

A Comparative Study Between open and closed companies on the Importance Assigned to the quality, price and bargaining power of the suppliers of small business in San Pedro Cholula, Puebla. The objective of esta paper is to conduct a comparative study Between open and closed companies to determine the Importance Assigned to the quality, price and bargaining power of the suppliers of small business in the closing of These entities in the municipality of San Pedro Cholula, Puebla. This work presents a descriptive study with a quantitative approach, with the characteristic of being mixed; Which in a questionnaire designed by the Latin American Administration and Business Network (RELAyN) was used, Which is part of an annual investigation Consisting of four steps to collect the data. Subsequently, the basic statistics and an ANOVA Were Calculated analysis was performed to determine the Variable With the greatest impact on the SMEs. The main contribution of this paper is the determination of quality as the Variable With The most statistically significant Differences Between the open and closed companies of San Pedro, Cholula.

Small business, Supply, Quality, Price, Bargaining power

## Mezclar el mix de marketing como estrategia para aumentar la competitividad y posicionar el mercado en las empresas

## Mix marketing mix as a strategy to increase competitiveness and market positioning service companies

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#### **Abstract**

Through an exploratory study with a mixed approach, scope and descriptive cross-sectional design, This research was Carried out in the context of the service companies established in Salvatierra, Guanajuato. and Their Communities, Achieving the objective Stated That Consist of presenting sufficient evidence to appreciate the relationship Between the variables subject to study (Mix of Marketing Mix, Competitiveness and Market Positioning). To carry out this research, it was Necessary to carry out a thorough consultation on the subject and the evolution of the application of the 4Ps (Mix of Marketing Mix) in the Organizations Until arriving at the analysis of the 4Vs through the documentary analysis of the 4Cs. Field information was Collected Directly from the entrepreneurs, through the application of a research instrument Consisting of 34 items and structured Likert scale the ACCORDING TO. The study subject is made up of 66 companies dedicated to offering salvage services. The analysis of the results is presented numerically and to close up commercial, a series of Recommendations is added With the intention of contributing to more competitive companies Having With greater market positioning to reduce Their early disappearance.

Marketing mix, Competitiveness, Positioning, Market, Services

## Diagnóstico empresarial para identificar el uso de manuales administrativos en organizaciones

### Business diagnosis to identify the use of administrative manuals in organizations

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#### **Abstract**

Handbooks are considereted effective tools in taking decisions for enterprises management, specific information required They Contribute by employees, functions in each acerca operative work placement. The development and type of work depends on the function handbook needs of each company. The handbooks must be resilient to periodic reviews With documents, to adapt and adjust to organization's needs without limiting the creativity and initiative of human resources. However, the benefits of Implementing DESPITE manuals, many companies do not use them; For This reason, it was Necessary to make an enterprise diagnosis to know Why They don't, even though practicing professional students Make this task for free. At the time Recognizing Reasons for non-implementation,

Enterprise, Management handbooks, Tools, Objetives, Benefits

### Validación de la medición del desempeño individual de los consultores de microfinanzas

### Validation of measuring individual performance of microfinance consultants

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#### **Abstract**

This research main objective Determines ITS to: Validate Whether job satisfaction and the training of consultants influence the individual performance of the advisors of the Microfinance Institutions of Ciudad Obregon, Sonora, as well as Tuxtla Gutierrez, Chiapas. To Achieve esta objective, the research will be Carried out using the statistical software empirically SPSS version 21. The variables under study will be operationalized ACCORDING TO the Proposed hypothesis for the validation of the measurement instrument. In the review of the literature, no support was found for the instrument validity of the hypothesis, there is no information tAbout the hat exists behavior of the advisors' performance, Which Directly Attend the accredited in the micro-financial Institutions. The results show That the measurement instrument you measure the internal consistency and the items to be Measured Variable through the exploratory factor analysis test, Cronbach's alpha the, KMO, and Barlett's test confirming the internal validity of the instrument. With 62.58% Total measurement of variance explained.

Validation, Instrument, Individual performance, Advisors, Microfinance

## El comercio justo como una estrategia de valor, un estado integrador de exportaciones de Guanajuato

### Fair Trade as a value strategy, an export integrator state of Guanajuato

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#### **Abstract**

Fair trade has-been applied in the commercial Those Sectors Where development has-been complex, especially in the agricultural sector. This research will approach to the concept of corporate social responsibility, to later analyze the strategy of fair trade applied to a small company of the agro-industrial sector. This is a qualitative research With non-experimental and cross-design, applied to a case study. The criteria used to document That Were the qualitative research Were the following domains: 1. Welfare, 2. Household security, 3. and 4. Community Microenterprise; The tool was a structured interview of the general manager of the company. It is Concluded That case Analyzed for the Intebaj the Company fulfills the Characteristics of being a social responsible exporter Applying the principles Fairtrade, taking as a basis the cellular or networking model.

Corporate Social Responsibility, SMEs, Fair Trade, Exporter

Variations in the elements valuation that determine the Individual Performance according to the line of business of the SMEs in Mexico

## Variaciones en la valoración de los elementos que determinan el Desempeño Individual en función del giro de las pymes en México

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#### **Abstract**

Organizations need to identify the individual performance factors, which lead them to be competitive and confront the globalized world in which they find themselves. Therefore, the following approach is taken in the investigation: Are there differences in the valuation or perception of the people who occupy job positions at management level in relation to the elements that determine the individual performance (IP) depending on their line of the business? As a general objective, it is established that if there are variations in the perception of the people who occupy positions at management level in relation to the elements that determine the individual performance, depending on the line of the business of the companies. This research has a descriptive scope compared to a non-experimental design; it is considered a cross-sectional analysis between the industrial, commercial and service companies, and is included the variables that determine the individual performance. Among the most relevant results is that, depending on the line of the business, is the given weight to each element of individual performance. Consequently, it can be concluded that there are variations depending on the line of the business of the companies, as it is assigned a different value different from each one of the elements that determine the individual performance

Individual performance, SMEs, Lines of business

## Estudio comparativo de la calidad de vida laboral entre docentes de instituciones de educación superior de México y Colombia

## Comparative study of quality of working life among teachers of institutions of Higher Education of Mexico and Colombia

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#### **Abstract**

A descriptive, cross-sectional study, with intentional sample of university professors (n = 80) from three Institutions of Public Higher Education (Mexico) and one private (Colombia, n = 80); 55 Have an indefinite contract and 25 temporary contract. The CVT-GOHISALO instrument was used (González et al., 2010). The results show That there is a difference in the perception of the Quality of Work Life Between Both groups, where in the seven categories Colombians Scored better, better Evaluating the categories Institutional Support for Work and Safety at Work. Were the Mexican sample for Safety at Work and Institutional Support at Work; Both Agreed That the dimensions of Personal Development and Free Time Management are the ones With the lowest rating.

Quality of Working Life, Faculty, CVT-GOHISALO

### Empresas con responsabilidad social y cultura organizacional en México

### Companies with social responsibility and organizational culture in Mexico

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#### **Abstract**

The Mexican business sector for some years now, you've taken actions That allowed it to Have Become aware of Its status as a corporate citizen, Specifying the value of Corporate Social Responsibility, Which has allowed it to Have an international presence. The integration of Mexican companies into the overall economy, Makes them face the global challenges, where not only is the specific quality of the product or service and work Processes Important, But Also the reputation of the business, Which is part of Social Responsibility Business, Complying With ethical business strategies to ACCORDING requirements. The objective of esta research is to identify identity social responsibility as part of the organizational culture of ten international companies operating in Mexico: FEMSA, GRUPO BIMBO, CEMEX, TELMEX, TELEVISA, GRUPO MODELO, P & G, WALMART, NESTLÉ and Banamex. It used a qualitative methodology with a theoretical focus and a descriptive scope, Where the information That presents the dimensions of the phenomenon to be Studied is detailed (Hernández, Fernández and Baptista, 2010) Obtaining the data through secondary and theoretical sources. This research is added to the knowledge Existing social responsibility research of ratifying a border issue, Whose main result was corporate social responsibility That is part of the organizational culture in the ten companies Mentioned above, demonstrating it through to detailed analysis. Obtaining the data through secondary and theoretical sources. This research is added to the knowledge Existing social responsibility research of ratifying a border issue, Whose main result was corporate social responsibility That is part of the organizational culture in the ten companies Mentioned above, demonstrating it through to detailed analysis. Obtaining the data through secondary and theoretical sources. This research is added to the knowledge Existing social responsibility research of ratifying a border issue, Whose main result was corporate social responsibility That is part of the organizational culture in the ten companies Mentioned above, demonstrating it through to detailed analysis.

Organizational culture, Corporate Social Responsibility, Social Responsibility

### Indicadores de innovación entre México y España. Un estudio comparativo

### Innovation indicators between Mexico and Spain. A comparative study

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#### Abstract

The Economic Commission for Latin America and the Caribbean (2010) in ITS repository shows spaces to Implement policies on innovation as an action to Improve the Competitiveness of Their groups, HENCE The Importance of Knowing the innovation indicators That different Countries Have and especially Mexico and Spain. The objective of esta research is to carry out a comparative study of the innovation indicators Between Spain and Mexico That Allows the reflection of the development That each one has HAD in a series of time. The method used was of the descriptive and longitudinal type, acerca de esta Because quantitative information was Sought innovation indicators in different secondary sources. Regarding the findings found, there are some advantages in Mexico, Such as exports and the production of high-tech goods, as well as a similarity Between the number of publications per 100 Researchers, but in other cases Spain presented better results,: such as the case of the granting of patents, gross domestic product, number of publications in high-impact journals, greater support for research . Finally, on a similar participation of Researchers in the industries: such as the government, private companies and educational Institutions was Observed.

Economic indicators, Innovation, Mexico and Spain Between comparison

## Análisis del Cuestionario de Liderazgo Multifactor (MLQ) para la medición del liderazgo en empresas de México y Alemania

## Analysis of the Multifactor Leadership Questionnaire (MLQ) for the measurement of leadership in Mexico and Germany companies

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#### **Abstract**

For the development of Opportunities and economic success, the management of human talent in a multicultural environment plays a role Relevant, however, is not possible assertive management UNLESS there is adequate leadership is sensitive to culture That diversity. There are Numerous Methodologies for analyzing leadership. We Have Chosen the Multifactor Leadership Questionnaire (MLQ) as it is one of the Most Used instruments and it considers multiculturalism. The objective of This work is to analyze the methodology of the MLQ to Understand ITS categories and dimensions of analysis, Which Helps to determine if it is an instrument to analyze and Appropriate compare leadership in Mexico and Germany. This is an exploratory, non-experimental research based on documentary analysis of primary and secondary sources of information. That Conclusions show the MLQ questionnaire can be used to Identify leadership styles in Mexico and Germany; however, to interpersonal relationships in a multicultural Understand environment, an adjustment is Necessary by introducing items related to Both cultures.

Leadership, multicultural environment, Mexico, Germany

### La innovación empresarial propicia la continuidad de la Micro y pequeña empresa de México

### Business innovation fosters the continuity of Mexico's Micro and Small Business

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#### **Abstract**

The purpose of this research is to know, to identify and to analyze the factors that determine the closure of the micro and small business of Mexico Micro and Small Business (MSB) specifically in the application of business innovation, after reviewing the characteristics of the company, general information of the director, system's inputs, processes and system results. According to data from the National Institute of Statistics and Geography (NISG) in Mexico 99% of companies are micro, small and medium-sized, contribute to the country's growth with 52% of gross domestic product (GDP) and generate 74% of jobs . For Mexico these companies are an indispensable link for their growth, they are the basis of the Mexican economy. (INEGI, 2016) Despite its importance for the Mexican economy, these companies do not have the necessary means to develop themselves when facing problems that accelerate their closure causing the life expectancy of these companies to be 7.8 years in average trend that to this date has not been possible revert, so its consolidation in the national market is unlikely.

### Micro small business, Clousure, Innovation

## Las cinco variables que intervienen en la Administración de Empresas: Parte del éxito y competitividad

## The five variables that intervene in Business Administration: Part of success and competitiveness

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#### **Abstract**

Companies go through various situations that make them succeed or that ultimately fail, and what is to be done so that the worst scenario is not reached, its disappearance, some of the problems faced by companies, mainly Small and Medium Enterprises (SMEs) are the lack of financing, poor administration, lack of equipment, product quality, among others, but for the purposes of this work will be taken into account the administration and its elements, mainly the variables involved as they are: the tasks, the people, the technology, the environment and the structure. Because the company manages the various resources that are: material, technical and human there is a great relationship between the five variables described above, since having efficient management of each resource can achieve the success and competitiveness expected by the businessmen. For the elaboration of this work begins with a study towards the existing bibliography of some concepts referring to the main topic, being this documentary research, going through a second plane that is the collection of the data through the field study, finally it is elaborated through the qualitative approach due to the interest in discovering the phenomenon of study

### Administration, Competitiveness, SMEs

### Disciplinas STEM: detonantes para el desarrollo económico nacional y regional

### STEM disciplines: Detonating for national and regional economic development

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#### **Abstract**

The Importance of scientific, technological and innovation progress has-been a subject of interest for MOST of the country clubs; the leading economic powers Have Shown The Importance of Establishing the Public Policies That Encourage STEM disciplines (Science, Technology, Enginnering and Mathematics) as triggers for economic development. In This qualitative and descriptive documentary study, the state of the art of the STEM education policy in Mexico is Analyzed, with emphasis on the state of Tabasco, the federal Describing, Local and state actions in esta area. It describe the relationship Between science, technology and economic development, STEM education, and public policies developed in the field. It is Observed That the advances are Insufficient, to adequately compete in a knowledge-based economy, THEREFORE Governments, national and state,

STEM, Public Policies, Economic Development

### La depredación minera de los recursos naturales en el estado de Zacatecas, 2010-2018

### Mining predation of natural resources in the State of Zacatecas, 2010-2018

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#### **Abstract**

Four research faculty Academic Economics Unit have given us the task of investigating the ongoing problems that cause environmental large mining companies in Mexico and particularly in the state of Zacatecas. The aim of the study is to relate the cost-benefit disbursing both foreign and domestic mining companies get impressive numbers in terms of the income received and does not correspond to the economic impacts that get the people seated near mining companies. The central hypothesis revolves around the following: mining companies foreign and domestic capital have caused serious damage to the population living for years in specific places, without corrective measures are taken to do so. A methodology based on official information by contrasting it with reality provide us with valuable elements of analysis to propose alternative solutions to the mining issues raised long ago by various economic agents develops. The contribution may be alternative solutions to a problem living on a daily basis the inhabitants of mining areas in the state of Zacatecas for 18 years and require immediately be addressed.

Mining, Mexico, Zacatecas, Companies

Análisis de las fuentes de financiamiento gubernamentales para el impulso de la competitividad internacional de las PyMEx en México

## Analysis of sources of funding boost for government international competitiveness of SMEs in Mexico

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#### **Abstract**

The process of globalization in Which We are Immersed in the present, you Favored That the system of commerce is Carried out at an international level so it is essential That the public policies of the country are oriented to Develop the competitive advantages of small and medium enterprises exporters (Smex). However, the outlook for this type of business in Mexico is unfavorable, since the majority of life expectancy is 7.8 years; the lack of a feasible project and financing are the main causes of failure (Mendoza, 2017). In Mexico there are more SMEs than big companies, According to the National Institute of Statistics and Geography (INEGI), there are 4 million 15 thousand business units Of which 99.8% are SMEs That are responsible for generating 52% of the Gross Domestic Product (GDP) and 72% of jobs. The federal government has created foreign trade support programs, however, only through the National Bank of Foreign Trade are loans Granted to Increase the International Competitiveness of the country's Smex. The present investigation AIMS at the analysis of the sources of financing to support foreign trade That serves to Evaluate if the SMEs Have The Necessary capability to access them.

Entrepreneurship, Competitiveness, Innovation, Internationalization, Financing

### **Facturacion electronica**

### **Electronic billing**

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#### **Abstract**

Over the years the tax check in Mexico has had a great evolution. A DISTINCT Change that starts making digital documents and leave behind the Bills in a Notepad of sheets. For electronic invoices, is a requirement Until today is needed, electronic signatures and digital certificates stamps, and Having a system That Allows issue and post the invoice in XML language, (is a language used for the) (reading, without any interference from a person). In Addition to These New dissipation, is today present a new form, ITS Fulfill Obligations Regardless of the regime That is taxed. All Taxpayers know the term invoice or proof of income, Had to go to a print shop authorized by the Secretary of the Treasury and request the printing of invoices in a block, it is writing data of the customer and the concept for Which was delivering the Bill to be able to deduct taxes. The information Which Should Have the invoice is: Folio (provided by SAT), data of the printer, authorization number, date the recipient information, Evolved Until bills for official disposal Including validity. Taking into account the annex 20 issued by the SAT and later Became the search of the key to the product or service in the catalog of accounts issued by it, in order to carry out a system configuration That Allows you to generate invoices 3.3 ACCORDING to the new guidelines. By 2014, in effect electronic invoicing, document it mandatory for all Taxpayers Became, turning to second term to printers and performing an Important development for our country. A change in the accounting department, for all companies and Individuals, the Treasury has very firm and clear Where want, With This digital process of electronic billing, electronic accounting, suppliers That process and verify declarations by electronic means. Part of the Objectives is to Identify the benefits of electronic invoicing are more specific. Provide security to the exchange of information, with the electronic signature and digital label and avoid the falsification of information in specific will be a descriptive, quantitative analysis of invoices, Where you analyze the basis and part of the administrative simplification That with leads, to apply new billing system. What is a Digital invoice?, Who is Obliged to issue a digital invoice?

Invoices electronic, systems, administration and accounting information

## Los indicadores de Responsabilidad Social de la Norma ISO 26 000 y su incidencia en el Rendimiento en las Organizaciones

## Indicators of Social Responsibility of ISO 26000 and its impact on organizational performance

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#### **Abstract**

In the present investigation, the correlation that exists between the use of social responsibility as a strategy to contribute to performance in companies established in the Laja - Bajio Region of the State of Gto is analyzed. In this way, through a quantitative study with a correlational scope, the results obtained after the application of a structured research instrument according to the Likert scale with 40 items that mention the 7 vertical axes of the Standard are presented. ISO 26000, which refers to the indicators corresponding to the Social Responsibility variables (items from 1 to 30) and 9 performance indicators (items from 31 to 40). As results are presented the correlation analysis of the aforementioned variables and the conclusion of the quantitative analysis, a strategic proposal is presented highlighting the importance of the application of responsibility as an internal organizational strategy oriented to the external context where the subject organizations are established to study, in such a way that it is possible to contribute to the performance and competitiveness of the same.

Social Responsibility, Incidence, Performance, Organization

### El costo de capital promedio ponderado en condiciones de incertidumbre

### The weighted average cost of capital in conditions of uncertainty

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#### **Abastract**

Goals: Develop models that allow incorporating the high the level of uncertainty that presents the financial and economic variables for the calculation of the weighted average cost of capital. Methodology: a documentary and empirical methodology was used. Initially the theoretical foundations that sustain this research were addressed, highlighting the cost of weighted average capital, with each of its components and its importance within the company in making strategic decisions, also addressed models that incorporate uncertainty highlighting the sets blurry And the Monte Carlo model. Information is presented about the volatility of the economic and financial indicators that influence the calculation of the weighted average cost of capital, for example, interest rates, inflation and stock indexes. From an example of a financial information, we calculate the calculation of the weighted average cost of capital by applying the fuzzy sets and the Monte Carlo model, which in this case gives a fuzzy triangular number representing the maximum, average and minimum values obtained.

Weighted average capital cost, Uncertainty, Fuzzy sets Monte Carlo

### El desempeño Individual y organizacional en la pequeña y mediana empresa Mexicana

## The individual and organizational performance in small and medium Mexican company

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#### **Abstract**

For some decades, the representative studies about performance have evoked a great interest in the individual and in the collective field, being this of great importance in the organizational environment by the performance, which is presented by the Individuals when operating in the company. This research aims to sight the relationship between individual and organizational performance, as well as the intervention of the considered criteria for the study. The foregoing is based on a quantitative methodology with a descriptive scope because it seeks to identify the characteristics that lead to an adequate work performance, with a correlational scope when presenting the relationship between the associated cross section variables. The study was conducted using the survey as a data collection instrument with Likert scale type, presenting a non-probabilistic sample for convenience, obtaining a sample of 284. It was verified that the intellectual capacities of the individuals are the main source of performance of the company, so it was concluded that a special focus on the company's human resources has to be given, and it is advised in future research to expand the area of application of the sample.

Performance, Individual performance, Organizational performance, SMEs

Medición del desempeño logístico en las microempresas, sector servicio del municipio de Salvatierra, Gto.

Measuring performance logistics microenterprises, service sector in the municipality of Salvatierra, Gto.

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### **Abstract**

The present investigation Focuses on the measurement of the logistic performance of the Microenterprises of the service area of the city of Salvatierra, Gto. The objective of esta research is to measure and analyze the logistics performance in the Microenterprises of the municipality. In order to Efficiently Develop the logistics process Within Organizations, it is Necessary to execute a sequence of activities that start with the so-called logistics planning. It seeks to Identify the different factors and elements That the establishment of influence strategies and the achievement of the Objectives That Arise in a company for a specific period of time (García, 2018). It Begins with the selection of the evaluation instrument, as well as in service Microenterprises ITS application. The collection and analysis of data is Carried out to analyze the results later Obtained conclusions and present micro-enterprises That allow to make strategic decisions to Improve Their efficiency. Companies That Effectively collaborate in the supply chain can count on significant reductions in inventories and costs, greater speed, flexibility and a better level of customer service.

Logistic Performance, Microenterprise, Logistics

# Análisis de la percepción y aptitud de los consumidores hacia el uso de productos financieros: Caso tarjetas de crédito

## Analysis of perception and attitudes toward consumer use of financial products: Case credit cards

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#### **Abstract**

This article analyzes the perception and attitude of Consumers towards the use of financial products based on the case of credit cards, the main objective of esta research is to find the correlation That exists Between the perception of Mexican Consumers With respect to Whether the lowering of interest rates and promotions to months without the interest is positive, trying to verify if it impacts on an Increase in consumption and use of the credit card. The Paradigm for This research was selected with a correlational quantitative explanatory scope and the technique used will be based on a probabilistic sampling method called a simple random sampling.

Consumer perception, Attitude of the consumer, Financial products

## Medición y control de riesgos financiero en el sector educativo

### Measurement and control financial risk in education sector

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#### **Abstract**

The Measurement and Control of Financial Risks That starts from the principle in every activity there is a risk, but can be controlled Such Risks, diversified, covered and transferred. The financial analysis is not only limited to Evaluating the financial parts but it is a predictive tool for the economic facts in the future. Through the analysis of financial Risks, it is possible to Identify, measure and manage in overall terms the possible losses due to the Arise That volatility of the risk factors. It is a process to Implement a risk measurement and control model requires the integration of Which elements: such as Human Capital, experience, knowledge Within the education sector.

Measurement of Risks, Control of Risks, Financial Statements

Impacto en los contribuyentes, personas físicas del régimen de incorporación fiscal de las nuevas disposiciones fiscales para el pago de la nómina

# Impact on the taxpayers, physical persons of the fiscal incorporation regime for the new fiscal provisions for payroll payment

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#### **Abstract**

The fulfillment of Tax Obligations in Mexico, and the search for greater guarantee Mechanisms That Increase collection and public revenues, has generated the Mexican Tax Authorities to Implement new procedures for esta, Implementing Electronic Means to Expedite and Facilitate compliance Said. However, the low economic, technological and basic computer skills of MOST of the Micro, Small and Medium Enterprises (MSMEs) constituted as Physical Persons of the Tax Incorporation Regime (RIF), you Caused This New method of issuing receipts (CFDI) of Payroll for the payment of wages and salaries to employees ITS, you have a negative impact on them, generating uncertainty and non-compliance, since it Represents an additional and excessive expense to acquire computerized equipment and pay WHO personnel or external subordinate Help with this activity, since the procedure is complicated and can not do it They Themselves, and if They Do it badly, They are exposed to the imposition of an economic sanction. That is why, in the present research work, the main drawbacks of new tax obligation esta Were Identified and some suggestions are presented to be applied to Comply; With the intention of creating a tax culture and awareness of Taxpayers and Authorities, with the aim of Achieving Fiscal harmony That benefits both.

Payroll, Digital Fiscal Vouchers (CFDI), Fulfillment of Tax Obligations

El desarrollo tecnológico y su impacto en el costo - beneficio de la producción de aguacate en la región sur del estado de Jalisco, México

# Technological development and its impact on the cost - benefit of avocado production in the Southern Region of the State of Jalisco, Mexico

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### **Abstract**

The objective of this study is to evaluate the technological development through the cost - benefit of the main producers of avocado in Jalisco. Currently, Jalisco has ten municipalities that produced 72.33% of avocado in the period 2014 - 2016. The method was mixed. First, we analyzed the statistical information of the avocado crop; second, application of an open interview to identify the technology used in an orchard that invests in technological development. Subsequently, the costs and sale prices of the avocado were taken in the most efficient region of the state of Michoacán and contrasted with the South, South - East of Jalisco region. The results show that orchards with high technology obtain a higher yield per hectare. Meaning a competitive advantage in costs and a differentiated product. Farmers with production costs of \$ 91,500 generate losses. However, there are producers who can maneuver with costs between \$ 91,500 to 117,000 per hectare and still earn profits. As long as they have a yield of 10 ton / ha; with a sale price of \$ 17,000 per ton. If the price is \$ 14,000; will have profits with a yield of 12 tons.

Technological Development, Cost - Benefit, High Technology

## Déficit, deuda pública y crecimiento económico en México

### Deficit, public debt and economic growth in Mexico

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### **Abstract**

Tax in response to the pro-cyclical policy followed in Mexico, the objective of the document is to analyze the debt-GDP relationship by addressing the relevance of a counter-cyclical fiscal policy. That same thing is tried to show as alternative of economic policy before the low economic growth. The econometric study is Carried out using the time series as a dynamic analysis technique. The selected period is from the second quarter of 1993 to the fourth of 2017. The results are consistent Obtained With what economic theory postulates. It is verified That the real interest rate has a positive effect greater in the face of the negative effect of the low growth rate of the product. What makes the quotient Between the debt and the real product is at the end of increase increasing each year. In another Important result, Argued That it is the debt accumulated since at the beginning of each year is always positive, the government is unable to finance it with a primary surplus to stabilize the indebtedness rate. In contrast, the budget balance always Tends towards a reduction in the primary deficit That Makes the debt rate decrease less and less.

Public debt, primary deficit, economic growth rate and actual interest rate

## La deducción de la previsión social en ISR desde la reforma de 2014

### The deduction of social welfare in income tax since the reform of 2014

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### **Abstract**

Tax reform applicable from 2014, as part of the package of "structural reforms", axis of the outgoing Government, brought about various changes in the laws and a resurgence in the implementation thereof, resulting in control measures which constitute a whole plan of espionage to the taxpayer, through the issuance of more and more complete and sophisticated digital receipts. This material is about amendments that have represented an economic harm to workers and employers, which relate to social welfare. The purpose of this paper is to expose the effect caused the partial removal (or "death foretold") of social security in Mexico; contributing with reflections on the impact to employees, patterns and even the accounting profession. To this end, follows the deductive method, starting with concepts and history, to locate in the context, the above involvement To this end, the deductive method Follows, starting with concepts and history, to locate in the context, the above Involvement.

Social welfare, wages, deduction, exemption

## Cumplimientos Fiscales de las Microempresas

## **Tax Compliance of Microenterprises**

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### **Abstract**

Currently many Microenterprises of the municipality of Valle de Santiago Guanajuato and nearby region, no account with an internal organization to carry out an adequate accounting and to meet Their tax payments in a timely manner, even and Having the support of the Technology of the Information and Communication, Which help entrepreneurs to carry out diverse activities, from billing, payments, to declarations. The lack of knowledge and information About the Obligations and records of the owners of the Microenterprises are the reason why the Usually candidates for the purchase of funds appropriated unavailable, delays With the Corresponding parties, generating conflicts With the Tax Authorities. The Fiscal Compliance of the Microenterprises, is part of the achievement of the Objectives to be Reached, since They are part of Their financial growth and the behavior of a stable Tax Culture. The objective of the work is to analyze the Obligations of the micro-enterprises in question, for a compilation of information, Which Can Contribute in a way, to training and advice in accounting and tax matters of Microenterprises.

Microenterprises, Culture Tax, Tax, Taxes, Accounting

## Análisis de las políticas físcales en los paises de la zona Euro

## Analysis of tax policies in the countries of the Euro area

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#### **Abstract**

When in the summer of 2007 the current crisis began, very few analysts thought about the relevance of fiscal policy to its solution. The European Union which had fixed rules for Public Budget and Debt after Maastricht Treaty – following the spirit of Washington Consensus – decided to reform them in 2005, just a couple of years before the crisis unleashed, adopting a more flexible philosophy. In this framework, with both the economic crisis and the rules settled for the public finances, the European Union adopted some measures to fight against the recession. This paper tries to analyze the fiscal policy side of the EU response to the economic downturn.

**Economic Crises, Fiscal Policy, European Union** 

## Corrupcion, Impunidad y el Efecto Economico y Social que le causan al estado Mexicano

## Corruption, Impunity and the Economic and Social effect that caused the Mexican state

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### **Abstract**

Corruption and impunity are a problem That Affects the moral and human rights of people, social welfare, This has Caused an immeasurable decomposition to the government apparatus and has Become a social concern, since it is the MOST financial damage Important That the nation has today, the amount That Represents corruption is \$ 340,000,000,000.00 (three hundred and forty thousand million pesos) Annually, so it must decrease putrefaction up to 70 percent and impunity in 90 percent short and medium term, punishing corrupt Officials and employees, Applying the administrative procedure of execution With the purpose of Recovering the amount of damages and losses to the That Caused These public treasury and society in generalIncreasing the budget of social expenditures and using alternate through an external Control Means figure created by the same ma society With the support of all its members and Independently With autonomy and own resources, outside The entire bureaucratic apparatus of the state.

Corruption, Impunity, Effects, Mexican State

Normatividad fitosanitaria para la exportación de mango fresco de la región costa grande de Guerrero a estados Unidos de América

## Plant for export regulations of fresh mango costa grande region of Guerrero to United States

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#### Abstract

Objective: Inform handle exporters in the Costa Grande region of Guerrero of the Phytosanitary Regulations of the Fresh Mango Export Program to the United States of America. Methodology: Approach: Qualiltative, Inductive Method, Research Type: Documentary (Argumentative), Contribution: The deterioration of prices of coconut cultivation During the period of 1969-1989 (Support and Services to Agricultural Marketing [ASERCA], 2001), in fl uenced That some producers of the Costa Grande of the state of Guerrero, look for alternatives in the planting of other crops more profitable That They Considered. This is the case of the handle crop, fl ected re Which has a commercial dynamism in the regional, national and international spheres, for more than a decade (1989-1994) (ASERCA, 1996), it is commercialized in natural way and processed in: juices, nectars, Concentrates, jams, syrup, dehydrated and frozen (Network for Sustainable Development of Mexico, AC [RDS AC], 2003). In order to Ensure That Mango producers in the state of Guerrero, in the producers Specifically Costa Grande region of Guerrero, enter the international trade in fresh and Natural Mangoes, They require a hydrothermal treatment With Packing Company, Which combats the fly. the fruit, phytosanitary requirement, Among other requirements to be met for the export of fresh mango, for Which They must be constituted ACCORDING TO the regimes established in the Law of Agricultural Societies, be competitive giving esta product an added value through the application of quality assurance systems in the Processes of production, collection and post-harvest of orchards, technical knowledge and marketing Strengthening through training and serious responsibility for the application of concepts in each of the Processes of the handle system product (SAGARPA, 2005; SAGARPA Delegation Gue Rrero, 2004 and RDS, AC, 2003). Every day international markets are being more demanding in terms of safety and quality of export products, as well as being properly trained in the process of exporting fresh Mexican mango, to Asian countries (Japan), Europe (France, Italy) and Americans (United States and Canada), (SAGARPA, 2007, 2010, RDS, AC, 2003 and PROSERCO Campeche S / A).

### Mango, Phytosanitary, Exportation

## Investigación en la industria: Modelo de gestión para la producción

## Research in the industry: Management model for production

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### **Abstract**

This article called Research in the industry: management model for production shows the results on the application of a Knowledge Management Model focused on the development of scientific and technological research in companies through an adequate link Between the academy and the government . Within a taxonomy, the Knowledge Management Model used is classified in the "Technicians and Scientists" Because ITS design and is structured in eight phases, schematic results are presented for each one of them. The method used in the research was "applied research" from Which to qualitative-quantitative analysis of results emerges. Eight companies located in Jalisco state That Belong to high technology Sectors Considered as strategic in the areas of information and communication systems, electronics and aerospace Were selected.

Research, industry, application of a management model

## Control interno y el proceso logístico de la industria manufacturera

## Internal control and process logistics of manufacturing

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### **Abstract**

The relationship of the logistics processes in marketing is that it is through the logistics processes of the supply chain that we can achieve customer satisfaction. If something goes wrong with the management of the chain, there will be short- and long-term repercussions. The company's internal control consists of evaluating the company's processes and analyzing logistics in order to influence cost reduction and promote operational efficiency. As for the specific objectives, it is intended to cover two main areas:

- 1. Reduce downtime in the export load and,
- 2. Increase the loading capacity in additional operations, translated into at least 2 containers per day.

The contribution consists of presenting the improvement plan applied to the manufacturing company's logistics process, based on an analysis derived from the audits carried out on the company, based on its weaknesses and strengths.

**Internal audit, Internal Control, Logistic Process** 

## Responsabilidad social corporativa aplicada en empresa vitivinícola en el estado de Ouerétaro

## Corporate social responsibility company applied in the state of wine Querétaro

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### Abstract

This paper shows the results of one research made in an enterprise wine producers from the industry in the State of Queretaro Mexico, Which is very well Recognized in the area and it is thought That it is socially responsible. So, to do it, to know the rules of social responsible practice under Which They work and to know These rules established in the international context Among different papers guide. So, due to the previous information, in the Content of this paper, it is Settled, an approach to the Variable theory of the Corporate Social Responsibility (CSR) and A Brief History About the wine industry in the State of Queretaro, and the enterprise Under the research. It is exposed the situation in the company related to CSR, information Obtained through a process Considered quantitative and deductive, using research tools Such observation and an auto poll, Asked to main executive officers, Which Explains CSR, showing at last the Obtained results and the conclusions.

## Corporate Social Responsibility, wine enterprise, Queretaro

La cultura organizacional y la calidad de las decisiones gerenciales en la industria maquiladora de exportación en Ciudad Juárez, Chihuahua

# Organizational culture and managerial decision making quality in the maquiladora industry in Ciudad Juarez, Chihuahua

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### **Abstract**

The objective of esta research was to Identify the relationship Between the organizational culture and the managerial decision making quality in the export maquiladora industry in Ciudad Juarez, Chihuahua, Mexico. In order to Achieve esta objective, it was used a quantitative methodology With no experimental design, transectional and correlational descriptive. The unit of analysis used for export maquiladora esta study Were companies of the automotive, electric and electronic Sectors, established at Ciudad Juarez, Chihuahua. There Were Identified 105 companies With this profile. The field study was performed it With 50 companies using a questionnaire applied to a manager and direct report of That one manager in the company Studied for a Total of 94 questionnaires Collected. The results show a positive correlation Between the organizational culture and the managerial decision making quality in the export maquiladora industry. THEREFORE, in order to Improve the managerial decision making quality, the companies foster a culture Should with a participative leadership approach, an openness to Promote new ideas, environment and defined values to guide the actions of Their team members.

Organizational culture, decision making quality, maquiladora industry

Determinación de las características de los talleres metalúrgicos como exportador indirecto de la industria maquiladora en Ciudad Juárez

## Determining metalworking shop's characteristics as indirect exporter of maquiladora industry in Ciudad Juarez

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#### **Abstract**

Maquiladoras and metalworking shops maintain a business relationship between large companies and small businesses. Workshops are distinguished by producing low volume and wide variety of products. This study analyzes the characteristics of metalworking shops and indirect exporters in the maquiladora industry. It was conducted by applying a questionnaire to five companies, where the characteristics of the company were searched, their strategies, technological capabilities, learning and innovation, quality, linkages with other organizations, environmental assessment and public policy. Sampling was used for convenience. Among the results they were: the workshops are in room houses the operating time between two and 23 years, manifest not belong to any association or chamber to operate the difficulties expressed are hiring qualified employees, quality control, most of the staff is operating; measuring equipment are the most used digital vernier, digital calipers and machines with coordinates; expressed ignorance about the actions or specific programs for this sector promoted by the federal, state or municipal government. It is recommended to extend the sample in future research.

Metalworking shop's characteristics, technological capabilities, learning and innovation, quality

Aplicación del método de valoración contingente para estimar el valor económico de los impactos ambientales de una dam hidroeléctrica

# Application of the contingent valuation method in order to determinate economic value of environmental impact of a hydroelectric dam

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#### **Abstract**

This study had as a goal to estimate the economic value of possible environmental impact derivate from construction and operation of hydroelectric dam at Los Pescados River, from La Antigua Basin, trough application of Contingent Valuation Method (CVM) at the municipalities of Jalcomulco and Tuzamapan, in the Mexican State of Veracruz. This study found a Willing to Being Repaid by a monthly amount of 42 thousand and 854.17 Mexican Pesos, being the level of education and the readiness of engage in a temporal labor its main determinant factor. Moreover, inhabitants revealed being ready to engage in order to contribute to restore the environmental impact trough hours of communitarian labor, as an approximated measure of the Maximum Willing to Paid.

**Economic value, Contingent Valuation Method, Logistic Regression** 

## Pautas para la fabricación de andamios utilizados en la regeneración de tejidos

### Guidelines for the manufacture of scaffolds used in tissue regeneration

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### **Abstract**

Thanks to the need to discover alternative therapies to improve the functioning and function of body tissues, a multidisciplinary research area called Tissue Engineering (TE, Tissue Engineering) has emerged, which involves the use of supports or scaffolds manufactured with different materials that must be approved by the Food and Drugs Administration (FDA) and must be characterized, physically-chemically-biologically first, in vitro and if favorable results are obtained, they are used in biomodels in in vivo tests. This study shows the guidelines that should be considered for the manufacture of scaffolds or tissue scaffolds so that they can be the supports that allow the regeneration of tissues. Results of different scaffolds manufactured for Tissue Engineering are also shown.

Tissue scaffolds, Tissue regeneration, Scaffolds manufacturing

Elaboración e implementación de un manual de Buenas Prácticas Avícolas en una planta incubadora de aves de la zona centro del estado de Veracruz

# Preparation and implementation of a manual of Good Poultry Practices in a bird incubator plant in the central area of the state of Veracruz

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#### **Abstract**

The objective of this research is to demonstrate that the preparation and implementation of a manual of Good Poultry Practices in a bird incubator plant in the central area of the State of Veracruz, reduces the risks of physical, chemical and bacteriological contamination during the entire process productive, to obtain safe and quality products. It began with an evaluation of the facilities and processes that are carried out in the plant. The Good Poultry Practices Manual is a tool that consists of twelve chapters with their documented procedures to record the activities that take place in the plant to have a correct control in the operations of the plant. It also describes the recommendations regarding infrastructure, management, safety measures and animal welfare that must be met according to SENASICA (National Service of Health, Safety and Agri-food Quality), SAGARPA (Secretary of Agriculture, Livestock, Rural Development, Fisheries and Food.) and the Official Mexican Standards which support this investigation.

Standardize, Quality, Process, Safety

Estudio exploratorio de la participación de estudiantes de Ingeniería Industrial en los principales sectores productivos de Puebla. Caso UP Pue.

## Exploratory study of the participation of Industrial Engineering students in the main productive sectors of Puebla. Case UP Pue.

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#### Abstract

The Industrial Engineering career is one of the most studied professions, having presence in each state of the country, in addition of being one of the most demanded careers in the labor area. Puebla occupies the second place at the national level in the production of auto parts and has 18 industrial parks. Within the system of Polytechnic Universities, in the State of Puebla, the Polytechnic University of Puebla offers this option, integrating in its curriculum map at the end of each training cycle, professional practices within the labor sector, with the objective of applying the knowledge acquired in a real work environment, adding a total of 930 hours. As of 2014 and to date, 287 students have completed projects within the professional practices. Based on an analysis carried out on the companies most demanded by students for this purpose, 80% of the projects carried out have been developed in the manufacturing, services and textiles sector.

Industrial Engineering, Professional practices, Main industrial sectors

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# Diseño instruccional con aprendizaje adaptativo de un curso en línea Redacción de protocolos de investigación

# Instructional design with adaptive learning of an online course Writing of research protocols

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### **Abstract**

Distance education has implicitly brought many important advances, however there are unfavorable aspects that have not been resolved, one of them is the standardization of education, a practice that has also been exercised in the face to face model where it is assumed that all the students have to learn with the same elements, this work aims through the instructional design to diminish some of the problems that exist due to that process of standardization in an online course that will be implemented in four higher education institutions in the Mexican Republic. The objective that was pursued was to carry out the instructional design of the course Writing of research protocols through a model that allows to implement adaptive learning to facilitate the learning process. The post-industrial model proposed by Reigeluth (2012) was used and the Merrill (2007) design principles were followed. As future work it is suggested that the course Writing of research protocols be implemented following the model for learning and adaptability analytical projects proposed by Tenorio, Soberanes-Martín and Cruz (2017).

Instructional design, Adaptive learning, Personalization of learning, Research protocol, Online education

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## Análisis del contenido axiológico en los planes de estudio de la carrera de comunicación

## Analysis of the axiological content in the curricula of the communication career

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### **Abstract**

This research presents an analysis of the subjects with axiological optics offered by some communication schools at the local level (in Monterrey Nuevo León, Mexico), national (in Mexico) and international (Latin American and European countries), with the purpose of prospecting the general panorama of the educational offer in ethical-moral terms, for the axiological training of the communicators. 19 communication schools were selected as professional careers, mainly taking into account their academic recognition, and their study plans were analyzed with the aim of detecting those subjects with an axiological approach. The analysis was made taking in count the number of incidences of the axiological topics in the content of the academic plans, and to facilitate the analysis, key concepts that functioned as selective codes were used, which at the time of standardizing the researcher's criteria provided quantitative data, in numerical frequencies to make the analysis more efficient. Among the most relevant findings it can be said that, analyzed separately the subjects of the academic plans of the different institutions, it was found that, at the local level (Monterrey, NL Mexico), the predominance of Ethics was manifested with respect to the other axiological codes. On the other hand, it was observed that, at a national level (Mexico), Ethics is accompanied mainly by Philosophy and Values, while at the international level (Latin America and Europe), it is more related to Humanism. This allows us to see that Ethics has more weight in the contents of academic plans, and is more contextualized than other subjects with an axiological focus.

Communication, Axiology, Ethics, Professional Training

## Perspectivas de la calidad educativa en el modelo educativo mexicano

## Perspectives of educational quality in the Mexican educational model

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### **Abstract**

El objetivo de esta investigación es conocer las repercusiones que tiene en la calidad educativa la aplicación del nuevo modelo educativo en las instituciones de educación secundaria de la ciudad de Saltillo, Coahuila. Teniendo como muestra observada 50 docentes de diversas instituciones de educación secundaria de la ciudad, que oscilan entre los 23 y 45 años de edad. Se trabajó con un instrumento conformado por 4 variables signalíticas y 36 variables del fenómeno de estudio, consideradas con una escala de razón decimal, las cuales se procesaron en los programas estadísticos SPSS y Statistic. Contribución: A partir de los resultados de esta investigación se plantean alternativas de acción derivadas del estudio teórico y de campo realizados.

## Educational model, Teachers, Educational quality

Análisis para diagnosticar la tendencia de los estilos de aprendizaje de los estudiantes a nivel TSU, en la Carrera de Procesos Industriales de la Universidad Tecnológica de Tecamachalco (UTTECAM)

Analysis to diagnose the trend of learning styles of students at the TSU Level, in the Industrial Processes Race of the Universidad Tecnológica de Tecamachalco (UTTECAM)

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#### **Abstract**

The present research project is focused on determining what are the learning styles of students at the Higher Technical University (TSU) level of the Industrial Processes career of the Technological University of Tecamachalco (UTTECAM), in this study it is possible to recognize which are the styles of learning that predominate, in order to know what are the educational training needs of students, to be able to subsequently raise a plan for improvement in teaching-learning processes. To carry out the research, the analysis tools of a Course-Workshop on Learning and Competency Styles, entitled "A Constructivist Methodology for Competency-Based Education", taught by Ph.D. Alberto Isaac Gastelú M. and endorsed by the Secretary of Public Education of the State of Puebla. This methodology is based on Instructional Design, which is why this research contributes to the development of later stages in the orientation of educational work (teaching strategies and evaluation methods), even that benefit future students of other careers and that Institutional level a program can be created in conjunction with the psychopedagogical area to implement strategies at TSU level and Bachelor's degree at UTTECAM

Analysis, Learning Style, Learning Needs

La movilidad académica como factor determinante en la formación integral de los estudiantes de posgrado PNPC de una universidad del sureste mexicano

Academic mobility as a determining factor in the comprehensive training of postgraduate students PNPC of a university in the Mexican southeast

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### **Abstract**

Nowadays the activities of a society are immersed in the phenomenon of globalization, public and private institutions must set objectives that allow developing a competitive advantage not only for the promotion of the community in which they develop, but also for the development of society in general. Given that higher education institutions (HEI) are strongly related to the professional development of people, should be the first to promote the integral development of the community, as this will allow the transformation of a qualified society to face new challenges of a global economies. In this sense, the internationalization of HEIs allows linking and collaboration mechanisms to be established between educational institutions both nationally and internationally, a primary factor in favoring academic mobility, whose objective is to positively influence the training of students and , with this, to be able to develop highly competitive professionals that respond to the constant changes of the global society for the benefit of our country.

Academic mobility, Postgraduate students, Comprehensive education, Educational internationalization

## La visión emprendadora en los estudiantes de la Universidad Tecnologica de Tehuacán

## The entrepreneurial vision in the students of the Universidad Tecnologica de Tehuacán

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### **Abstract**

At present the young university students do not undertake, in spite of being in an academic preparation for it, either by lack of interest or lack of vision among other causes, that is why the concern arises to carry out an investigation that throws us the causes of this problematic In this study, information will be investigated in diverse bibliographic sources that will allow us to have a frame of reference from different points of view and results of other similar investigations. In addition a field research will be developed, which consists of applying surveys inside and outside the Technological University of Tehuacán, to have more accurate information of the opinions of the university students in Tehuacán, and from that, analyze the results obtained to be able to propose a strategy of how to improve or eradicate the problem. Course objective: Analyze the variables that prevent the young university student from starting a business to propose solutions and reduce the problem. Specific objectives: Apply surveys that allow young entrepreneurs to know about entrepreneurship; To know if in university careers entrepreneurship is encouraged; Determine the reasons why young people do not undertake; Establish strategies to eradicate or reduce the problem. Contribution: The contribution of this work will help future generations to determine what are the main causes why young university students do not undertake. Several factors that can help in future studies were determined and some of the causes determined.

Entrepreneurship, University Students, Entrepreneurial Culture, Comfort Zone

# Perfil motivacional de los alumnos de la Universidad Tecnológica del Suroeste de Guanajuato. Estudio de caso

# Motivational profile of the students of the Technological University of the Southwest of Guanajuato. Case study

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### **Abstract**

Considering that the university institution can play a relevant role in fostering the entrepreneurial spirit of its students, a research work was carried out aimed at deepening knowledge of the motivational profile of university students. As a result of this work, a research was developed to identify the motivational profile, taking into account for this purpose the scale of Amabile, Hill, Hennessey and Tighe (1994). The motivational profile of the students was investigated through the aforementioned scale, with which the social environment in which the young people find themselves was known, and consequently the percentage of individuals who are motivated in an intrinsic or extrinsic way was known. Same that promotes its capacity for growth. It was not necessary to draw a sample for this research, because the number of students in the career of business development marketing area of the Technological University of Southwest Guanajuato, where the research was developed, amounts to 77 individuals. With the results of this investigation it was determined that the students of the utsoe, present an intrinsic motivational profile.

### University, Entrepreneurship, Motivation

## Estudio de la influencia del territorio universitario en el estrés estudiantil en Universidades Públicas del Valle de Toluca

## Study of the influence of university territory on student stress in Public Universities of Valle de Toluca

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### **Abstract**

The present study was developed with the objective of identifying the level of influence that university territory (physical facilities and services) has on the stress of the students of public universities in the Valley of Toluca, in this way an instrument was developed that allowed to identify this factor and its contribution to the Student stress of university students was statistically validated and a descriptive analysis of the results of the survey was carried out, reaching the conclusions that are provided at the end of the article.

Stress, University territory, University, Students

## Vinculación de los valores en los procesos cognitivos de futuros maestros

## Linking values in the cognitive processes of future teachers

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### Abstract

The values constitute an important axis within the societies, they give direction to the acceptance or not in the collectives. The guideline to the justification of this investigation is the study through other aspects; in this case the possible link among them and the cognitive processes in future teachers, which may show the need not to focus teacher training in a strict way on disciplinary knowledge and rather to turn the focus towards the development of the person in principle and then in his professionalization. Whereupon the future teacher not only supports the acquisition and storage of information, but the construction of full people in diversified contexts. It is hypothesized that there is a relation between the expression of values and the cognitive processes of future teachers, so the incentivation of some will bring as a consequence the development of others. A quantitative research methodology was developed, elaborating an ex profeso instrument, with analysis of correlational scope.

### Values, Cognition

# Integración de los dispositivos móviles en la enseñanza universitaria a través de la plataforma Moodle

## Integration of mobile devices in university teaching through the Moodle platform

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### **Abstract**

The digital revolution initiated a new time for communication, economics, culture politics, social complains, and more than anything else for education. The mobile devices nowadays form part of everybody's life. They are an essential part of our activities. Nevertheless, in the academic context it is important to reflect about the possibilities and the context to include technology as an alternative to reinforce our teaching. The paper presented here is related to the thematic line Teaching-Learning Strategies in the digital era, the latter based on the necessity that university education needs be flexible and include the newest technology. The former is done through a case study including the platform Moodle as a modern tool to reinforce traditional teaching in a university course. In this paper we present the experiences obtained in the course "Methodology for and Elaboration of Reports" taught in the BA program "Administration of Quality and Productivity" in the University of Guanajuato. This is done using an experimental research applied to two groups (experimental and control group) both belonging to the sixth semester. The methodology used consisted of the following phases: a) Presentation of the problem. b) Formulating of the hypothesis. c) Presenting each group with their work assignment that was carrying out a research project: In the experimental group gadgets were integrated as evidential tool in the planning stage of the students' research project as well as the development of the project, in this case study during the semester August to December 2016. In this group also, the platform Moodle was used in contrast to the control group that was taught with a traditional approach. d) Data collection and analysis: both teams developed their research project and its proposal through the design of two different methodologies. e) Presenting conclusions based on comparing findings, skills and competencies developed by students throughout the semester. The contribution of this research is oriented in the field of teaching-learning strategies in the digital age. It allows to get to know the reactions from the university students confronted with new technological resources favoring dynamic, flexible and creative education. The obtained results by exposing students to the use of gadgets in education, demonstrates its importance for communication, and the development of cognitive skills in a virtual environment

Entrepreneurship, University Students, Entrepreneurial Culture, Comfort Zone

Uso del "repaso espaciado" para mejorar la eficiencia del aprendizaje del Francés como Lengua Extranjera (FLE) en el marco del programa de movilidad MEXPROTEC en la Universidad Tecnológica de Calvillo, una mirada hacia una técnica innovadora

Use of the "spaced review" to improve the learning efficiency of French as a Foreign Language (FLE) within the framework of the MEXPROTEC mobility program at the Universidad Tecnológica de Calvillo, a look towards an innovative technique

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### **Abstract**

In the article we explore the relevance and the possible impact that the explicit "high frequency vocabulary" learning might have in the French as a Foreign Language learning process and how the "spaced repetition" could facilitate it. In the study, the statistics analyse methodology has been used, based upon the results of the French version of the X-Lex test. This project looks forward to offer an innovative and efficient technique to improve the learning process of foreign languages learning, particularly by using a simple and multimedia enabled tool, which has also shown great potential to facilitate memorization in various fields, including the vocabulary of foreign languages.

Vocabulary, Learning, Memorization, French, Repetition

# La relatividad del discurso como instrumento para comprender la realidad del trabajo social

## Speech's relativity as an instrument for reality comprehension of social work

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### **Abstract**

Through all history there has been a query around the normal of phenomenons and social events, here is where philosophical uncertainty arises, like What is true? What is a value? Who defines or emits a judgement of the value of tangible or intangible? How do I comprehend the context accord to the speech relativity? At any rate, there are a lot of questions and few answers for these analysis, which are not new, philosophers such as Sócrates, Platón and Aristóteles, and others, have question the same; the objective of the study is to question until what point, the students understand education's relality from their worldview, through a methodological theoretical analysis of values from theur everyday and applying the semiotic method of Desiderio Blanco, ensuing the finding of semas which transforms in the principal mechanism of fisical and intelectual activities for comprehensions of the reality they face each day in their comunities.

Speech, Relativity, Value, Awareness and Energy

## Desarrollo de una secuencia didáctica del tema funciones cuadráticas en alumnos universitarios

## Development of a didactic sequence of the topic quadratic functions in university students

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### **Abstract**

The goal of this research was to develop a didactic sequence of the quadratic function in university students based on theoretical constructs of Duval, problems in context, and technology support, in order to identify areas of opportunity in the teaching-learning process of a topic. For this, the didactic sequence was first designed using the records of algebraic, graphic and tabular representation and the use of the GeoGebra software; rescuing contextual engineering situations where the quadratic function can be applied. Consistently, given the qualitative nature of the research, a small sample of engineering students was selected at random, who then participated as test subjects of the sequence. The findings indicate that the students developed the ability to handle different semiotic representations of the mathematical object under study, which evidenced a better comprehension of it. It is concluded that this type of didactic sequence favors the understanding of some mathematical concepts, so it is proposed to be implemented in formal mathematics courses with the purpose of making improvements in the teaching-learning process and contribute positively in the increase of academic indicators.

Semiotics, Didactic Sequence, Quadratic Function

Implementación de un manual de prácticas basado en competencias para el aprendizaje de la asignatura de Software de Aplicaciones Ejecutivo

# Implementation of a competency-based practice manual for learning the subject of Application Software Executive

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### **Abstract**

This research shows an implicit pedagogical study in the field of "Practices developed for the learning of several Software applications"; It contains practical elements aimed at digital application programs with the purpose of knowing and managing the tools that each application has to lead the student to acquire skills in the management of said programs to identify the skills, knowledge acquired by the students who study the subject. Application Software Executive of the career in Engineering in Business Management of the Technological Institute of Saltillo (ITS), for the management of Microsoft Office Internet, Human capital software, management of Information Technologies (TIC's) in order to use the tools to develop a project of his discipline, contributing to his professional training as an Engineer. Quantitative research is applied through an instrument that consists in the application of a survey directed at the students. The results and conclusions derived from the research are made known.

### **Practices Manual, Competences, Learning**

# Comparativo de la actitud emprendedora de los estudiantes de la división económico-administrativas de la Universidad Tecnológica de Cancún

## Comparative of the entrepreneurial attitude of the students of the economicadministrative division of the Universidad Tecnológica de Cancún

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### Abstract

The present research paper discloses an analysis on the entrepreneurial interest and the attitudes of college students at Universidad Tecnológica de Cancún in the Business Area, as Superior Undergraduate Technician of the majors: Business Development in Marketing Area, Human Resources Administration and Accounting. The research was developed with students that are in the third and sixth terms, the former ones are in the internship term, before finishing their major. This analysis is made based on the family-business influence that students already have, as another option for their professional development. The analysis of results obtained from applied surveys is considered to include new strategies in the Entrepreneurship Program of the Business Area which contribute to the real and immediate application of methods, techniques and tools in the students' family business with the purpose of enhancing the structure and increasing the sales thereof, in order to contribute to their growth.

### **Entrepreneurship, Entrepreneur Culture, Family Business**

## Los proveedores como stakeholders en Mipymes de Cd. Obregón, Sonora

## Suppliers and stakeholders in MSMEs Cd. Obregon, Sonora

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### **Abstract**

Talking about social enterprises, Involves an amount of organizational reflection, where in most cases, the reconversion of forms and work plans is required, the social enterprise seeks not only economic gain, but seeks the benefit of society to through Their products and / or services With social conscience. That commitment will be the organization able to Fulfill successfully if it works together With its stakeholders. The present investigation was Carried out in 21 family companies of Cd. Obregon, Sonora, for Which a diagnostic instrument was applied to managers and / or owners, Where the social activities Carried Out with responsibility to respect Were Their groups identified. Suppliers of specific interest.

Social responsibility, Interest groups, Stakeholders

Estudio de recursos y capacidades de los prestadores de servicios turísticos de Salvatierra Pueblo Mágico para la generación de ventajas competitivas

Study of resources and capabilities of tourist services providers Salvatierra Magical Village to generate competitive advantage

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#### **Abstract**

The present investigation is a sample of the panorama That Lives Between the providers of tourist services of the city of Salvatierra Magic Town basis from taking the resources and Capacities That Have developed or can Develop Through These and THUS suppose a sustainable competitive advantage. The research subjects Were the owners of establishments dedicated to food and beverages, such as: bars, restaurants and cafeterias. Such research was generated under a qualitative approach since it seeks to know, categorize and characterize the competitive assets of the company, under a research-action design, where to Obtain the information it was Necessary to apply to interviews under semi-structured questionnaire. Esta contributing to developing solid and sustainable future strategies to contend strongly competitive in the tourism industry.

Resources and Capabilities, Competitive Advantage, Tourist Services and Magical Town

Gestión estratégica de equipos de trabajo alto desempeño (G.E.H.P.W.T.) en las empresas del sector educativo

# Strategic management of high performance work equipment (G.E.H.P.W.T.) in the educational sector companies

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#### **Abstract**

En muchas ocasiones se conforman equipos de trabajo pero no alcanzan un alto desempeño. Por lo regular estos equipos se crean sin ninguna planeación, no se dirigen, ni organizan de manera adecuada y únicamente son evaluados por sus resultados cuantitativos. Este artículo tiene como fin proponer un modelo de gestión estratégica para que los equipos de trabajo que se desenvuelven dentro del sector educativo alcancen un alto desempeño. Esta propuesta se sustenta en la revisión documental y en la información que emergió de la investigación cualitativa, al entrevistar a coordinadores y miembros de equipos de trabajo. El estudio es de tipo no experimental y se realiza bajo un enfoque cualitativo, mediante un diseño de teoría fundamentada y tiene un alcance descriptivo.

Modelo, gestión, equipos de trabajo, alto desempeño

### Guía estratégica del éxito en las organizaciones: hacia la mejora continua

### Strategic guide to success in organizations: towards continuous improvement

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#### **Abstract**

Enterprises currently need to have an appropriate organization that allows to offer a desirable quality at the lowest cost and not only in the finished products or any service but also in the daily activities of each department, so it is necessary to improve a quality strategic management system to achieve adjustment of administrative processes, optimizing times and resources, as well as the achievement of continuous improvement. The proper functioning of the enterprises derived from the correct decision making, the use of the technological tools, the practical experience and the implementation of an appropriate organizational model in conjunction with the established strategies in the continuous improvement, as they dictate the criteria necessary to maintain the success of the organizations. Therefore, in the present research article, it proposes a strategic system of quality management, focused on strengthening the productivity and achieving continuous improvement with clear goals in the administrative processes of the Organization, with less effort and satisfying the demands in time of the customers. Finally, the plando-check-act (quality circle of Deming) which is a logical sequence considered as a tool that is to achieve continuous improvement through the procedures to investigate, Design and develop strategic plans to achieve optimal results and sustainable that promotes the organizational change. This can be seen from the point of view Kaizen Japanese model strategy which allows the continuous improvement and high level of competitiveness.

Company, Organization, Success, Continuous Improvement, Quality

Impacto de los costos de calidad aplicados en pymes manufactureras automotrices y metal-mecánicas en el norte de Aguascalientes Municipio de Aguascalientes

# Impact of quality costs applied in manufacturing SMEs and Metal-Mechanical Automotive in North Aguascalientes: Municipality of Aguascalientes

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#### **Abstract**

This research is the result of 4 investigations Carried out in the northern region of Aguascalientes. The municipalities on Which esta research is based are Aguascalientes, San Francisco de los Romo, Rincon de Romos, and Jesus Maria. The objective of esta study is to investigate the costs Incurred by companies in carrying out operations in the municipality Their of Aguascalientes. Likewise, it analyzes the aspects of the companies as They are: Leadership, Strategic Approach, Market Focus, Personnel Management, Process Management and the main area Costs of Quality. The realization of research esta Allows us to know the costs Incurred by companies in order Surveyed These to know in what percentage the highest quality costs applied, Whether in prevention costs, evaluation costs, internal failure costs and external failure costs.

Quality Costs, Internal Failure Costs, External Failure Costs, Costs Prevention, Evaluation Costs

# El impacto de la investigación de mercados en la innovación para el desarrollo de las PyMES turísticas en el Municipio de Caborca, Sonora

# The impact of market research on innovation for the development of tourism SMEs in the Municipality of Caborca, Sonora

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#### **Abstract**

This article reports the impact of the factor of market research in innovation for the development of small tourism businesses (SMEs) in the municipality of Caborca, Sonora. The study was performed Considering the exploratory analysis of the variables of the model, then a Analyzed the association of variables by Means of the model of the Chi-square and testing of predictive and explanatory power of the same through the analysis Probit and Logit. A structured questionnaire was applied to managers or entrepreneurs of tourism SMEs established in the municipality of Caborca, Sonora, Mexico. Applied as measuring instrument for the collection of the information. Resulting in the reliability of the measurement instrument, the R-Squared, and significance of the model. In the statistical analysis, the square Chi was used to identify the relationship and association between the variables of the proposed model. In addition, the Gamma coefficient was obtained, which indicates a strong correlation of the variables, as well as the Gamma, Probit and Logit values, where it was obtained a greater percentage and robustness of prediction of the variables with an acceptable level of significance and the acceptable values of the relationship between the dependent variable and the independent variable

Development, Innovation, Marketing research, tourism Small Businesses and Tourism

Las TIC como medio de apoyo para la competitividad y permanencia de las Mipyme. Caso comercialización de calzado en San Martín Texmelucan.

# ICT as a means of support for the competitiveness and permanence of MSMEs. Case of footwear commercialization in San Martín Texmelucan

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#### **Abstract**

The shoe sales market in the San Martin Region Texmelucan needs to adapt and update itself to the current technologies and Means of communication and information, in order to streamline ITS Processes and generate information in real time, Which will help them face the Increase in competition and new ways of doing business: such as e-commerce. With This purpose, an innovative tool tailored to These MSMEs will be developed, based on a web system That covers the specific needs of These businesses, with the incorporation of fast access interfaces That Facilitate the generation of information related to the existence of Their products and development of sales in counter and online mode That Allows the customer to offer Their range of products Immediately; In the same way, through the system, you will be able to advertise the business through the web;

MSMEs, footwear marketers, ICT, Software

Modelo administrativo y financiero para las misceláneas clasificadas como microempresas de Izúcar de Matamoros, Puebla

# Administrative and financial model for classified as sundries microenterprises Izúcar de Matamoros, Puebla

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#### **Abstract**

In the last decades, the miscellaneous stores, also known as "the little store on the corner", have become an essential economic sector in the Mexican economy, generating a great contribution to the national GDP, due to its high potential for introduction in the market and for being a traditional channel, favoring the work environment by being highly competitive. The miscellaneous stores are viable spaces for the family economy, because they are a great support and backing for the increase of their income, contributing to improve the quality of life of their owners. This research is an opportunity to promote business development in commercial microenterprises, implementing an administrative and financial control of the economic entity to prolong its life in the market and to create employment stability in its environment. Objectives:

- Identify the current and real state of the miscellaneous stores.
- Prepare a diagnosis and identification of weaknesses, focused on the administration of cash
- Design the Administrative and Financial Model for the miscellaneous stores.

Methodology: Stratified simple random sampling. Contribute to the solution of the problem that causes the high mortality of miscellaneous stores, due to the lack of planning and the inexistence of an administrative financial model that allows microentrepreneurs, the correct and timely business decision-making guided by timely and veracious information.

Msmes, Miscellaneous, Economic, Financial and Administrative

### Diagnóstico del área de recursos humanos en SMEs de Ciudad Obregón, Sonora

### Diagnosis of the area of human resources in SMEs of Ciudad Obregón, Sonora

NAVARRO-ARVIZU, Elba Myriam, LEYVA-OSUNA, Beatriz Alicia, LÓPEZ-PARRA, María Elvira, and GONZÁLEZ-NAVARRO, Nora Edith

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#### Abstract

This research is a study of the functions performed in the human resources area of two organizations located in Ciudad Obregón, Sonora, both SMEs, belonging to the service sector and founded in 2009, with the purpose of give improvement proposals for this area based on to the diagnosis of these functions to achieve an improvement in organizational performance. This research is descriptive, not experimental and qualitative. As a result, it was obtained that SMEs do not have an exclusive area to meet the needs and requirements of the staff, the processes of this department are carried out informally and by the business owner. Based on these results, improvement proposals were prepared for each SME and a manual of policies and procedures was designed for the functions of the human resources department as well as an induction manual to support this activity.

Diagnosis, Human Resource, Administration of Personal, SMEs

### Metodología para la gestión logística en la micro, pequeña y mediana empresa

# Methodology for Logistics Management at the Micro, Small and Medium Enterprises

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#### **Abstract**

With the development of a methodology for Logistics Management in the MSMEs, it is possible to shorten the gap in operational efficiency with respect to large companies. In Mexico, the importance of the MSMEs in the creation of jobs is evident. "In the 2015 National Survey on Productivity and Competitiveness of Micro, Small and Medium-sized Enterprises, 97.6% are micro-enterprises and concentrate 75.4% of the employed personnel. Small companies are 2% and have 13.5% of the staff employed. The medians represent 0.4% of the economic units and have just over 11% of the employed. In the 2013-2014 period, 2.2% of small companies and 5.6% of medium-sized companies participated in productive value chains. Of the remaining, it declares not to participate in said production scheme, it highlights as a reason the lack of information for 73.5% of small companies and 72.4% of medium-sized companies ". Press Release no. 285/16 of July 13, 2016 Aguascalientes, AGS Page 1/3. Extracted on 13, 2018 http://www.inegi.org.mx/saladeprensa/boletines/2016/especiales/especiales2016 07 02.pdf. The objective is to make known the development of a methodology for logistics management, feasible to apply in the MSMEs. The research methodology used includes deductive and analytical methods. The contribution is related to the importance of logistics in companies, which is a strategic aspect, with a key role to streamline the administration of the supply chain.

MSMEs, strategy, logistics, methodology, administration, Supply chain

### **Estrategia Comercial**

### **Commercial strategy**

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#### **Abstract**

The new era of technology and digital marketing contributes to companies joining new markets and therefore helps to achieve inclusion. Unfortunately not all companies have the possibility to develop appropriate strategies or implement them. Small and medium-sized enterprises (SMEs) are the most affected by this problem, but how important is this? All of these companies are the main source of income. In Mexico alone, 99% of businesses are small businesses. In addition, they generate 80% of current jobs and produce more than 36% of gross domestic product (GDP). That 65% of SMEs in Mexico are of a family nature. The creation of a platform for advertising aimed at SMEs will influence the strengthening of them, including them in this era of online advertising encouraging the economic development of companies.

#### Platform, PIB, PYMES

Razonamiento del proceso de información bajo el enfoque cognitivo en la disposición de compra de productos y servicios vitivinícolas de jóvenes Guanajuatenses

# Reasoning process information at the cognitive approach in the provision of purchasing goods and services young wine Guanajuatense's

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#### **Abstract**

The object of this article is understanding the mind process and structure of the emerging market About a youth group between 18 and 35 years old of Guanajuato state With an Undertaken qualitative research made in August 2016 by a focus group technique, That allow us to infer through About the cognitive theory of mind the Processes and the perception That They have of vineyards and Their availability for wine buying products of Guanajuato state. Previously to this additional exploratory research to cross descriptive conclusive study Between March and April of the same year, Were take place the factor analysis of seven variables That the vineyard offers and on Which two components are ascertained, the experiences component, was the study object at this article. The contribution of esta qualitative investigation Concerns About showing the verbalized perceptions of esta market through schemes That later will allow to the wine companies of Guanajuato state offer experiences of Their products and services the will have a direct impact in the mind structure of the market, and Within Increase Their Knowledge About the products and services are bid and pass That from the buying disposition to the act of buying.

Consumer Behavior, Cognitive Approach, Process Information

## 4 Ciencias Físico Matemáticas y Ciencias de la Tierra

Estudio numérico del clima interior del invernadero en la Universidad Tecnológica del Suroeste de Guanajuato

Numerical study of the indoor climate of the greenhouse at the Universidad Tecnológica del Suroeste de Guanajuato

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#### **Abstract**

The objective of this work was to perform a numerical study of the indoor climate of the greenhouse with the parameters of humidity, temperature and radiation. A database was made taking the most important climatic variables (humidity and temperature) in different points of the greenhouse area during the January-April period dividing them into hot and cold days, which served to predict and interpret the conditions in which find the greenhouse. A mesh of 50 nodes was carried out in the entire cultivable area of the greenhouse, which were taken as measuring sticks for the temperature and humidity parameters to which the Newton's Law of Cooling and the methods of natural convection were applied (when no heat transfer mechanism was involved) and forced to obtain the given heat transfer in the greenhouse. Results were obtained with the aid of the dimensionless numbers, it was observed that there is a heat transfer between node and node, taking into account that the warmest area of the greenhouse is the ground.

#### Greenhouse, heat, plates, meshing

## Estudio de la adsorción de plata con sílice mesoporosa modificada con magnetita Study of the adsorption of silver with mesoporous silica modified with magnetite

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#### **Abstract**

The search for low cost adsorbent materials is a challenge in the science of materials, the present work shows the evaluation of the adsorption capacity of Ag (I) with mesoporous silica modified with magnetite (MS-triamin-Fe) obtained from of low-cost precursors such as sodium silicate. The silver adsorption kinetics was evaluated by the adsorption models of Langmuir and Freundlich, observing in both models a favorable adsorption, the  $\Box G$  of the adsorption was observed in -1.8 KJmol-1, showing a thermodynamically favorable adsorption. The maximum load capacity of the material according to the Langmuir model was 86 mgg<sup>-1</sup> and the kinetics of adsorption is carried out by means of a second pseudo-order model.

Modified silica, magnetite, silver remove

Análisis del sistema de transformación de datos Johnson para variables aleatorias no normales de distribución beta

# Analysis of the Johnson data transformation system for non-normal random variables of beta distribution

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#### **Abstract**

The statistical tools that are used in the industry and in scientific research require that the analyzed data behave according to a normal distribution. However, not all data generating processes satisfy this condition. In order to achieve that the data have a normal distribution, the application of a transformation method is necessary. The present work focuses on the cases of non-normal data with Beta distribution that are processed by transformations to specify the parameters in which efficient transformation can be obtained using the Johnson transformation method. The importance of this research then lies in the economy of sampling and in which it has been observed that in modern manufacturing processes, data with non-normal distributions are increasingly presented, all of which was done through the R program: A language and environment for statistical computing.

Beta Distribution, Johnson Transformation, R Program, Nonnormality, Sampling economy

Matriz Tows y los fractales: Hacia la firma organizacional fractal, en la administración y en la planeación estratégica

# Matrix Tows and the fractals: Towards the fractal organizational signature, in the administration and strategic planning

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#### **Abstract**

The paper's objective is to locate the TOWS matrix in the context of the view modern administration's schools and his today contribution in the social science, and starting from the fractal firm that the archeology and anthropology have introduced to study the several cultures and civilizations, postulate the fractal organizational signature that —supported in the variables of the TOWS matrix—, permit to become an effective and continuous instrument of the strategic planning and the organizational culture.

SWOT, TOWS matrix, organizational fractal signature , FODA, administration, strategic planning

Análisis comparativo en el cambio de dispositivos luminiscentes para la reducción energética de un edificio en la Universidad Politécnica de Altamira

Comparative analysis in the change of luminescent devices for the energy reduction of a building in the Universidad Politécnica de Altamira

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#### **Abstract**

The purpose of the following study is to propose the change of lamps in the Laboratorios y Talleres 2 (LT2) building to seek energy and economic savings in the facilities of the Polytechnic University of Altamira. This building has the equipment used by professors to carry out laboratory practices and research and development proyects, so it is important to reduce energy and economic costs by using specialized equipment that uses a lot of energy in its use. Looking for alternatives that are compatible with the electrical installations of the building so as not to make costly modifications, and with the right equations, it is thought that, by changing the lamps for LED-type savers with lower energy consumption and the same efficiency, the saving is more than 50% This proposal can be beneficial to be able to seek to be part of a sustainable and ecological teaching and student community.

Energy saving, Lamps, Energy efficiency, Comparative analysis

### Procedimiento para solución de ensambles de elementos finitos en 1D

### Procedure for solving finite element assemblies in 1D

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#### **Abstract**

A procedure is described to achieve significant learning in the engineering students who apply the Finite Element Matrix Method for the first time. The aim of this is that students can generate quickly and easily a global matrix of stiffness in an assembly of elements of a degree of freedom in each of its nodes. The elements spring and bar 1D are the first that are analyzed in courses where the numerical method of finite element (FEM) is used. The proposed solution procedure consists of 6 steps and in the elements bar 3 additional steps, that is, in total 9 steps. This procedure facilitates the solution of complex static problems that can't be solved by traditional methods used in subjects such as static and material resistance. Currently this procedure is applied to students of the course of Computer-Assisted Engineering of the eighth semester reducing the percentage of failure in the unit 1.

### FEM, Learning, Procedure, Spring and rod

# Comparación del % grasa corporal obtenido con Bod Pod y DEXA en jugadores de fútbol americano mexicanos

# Comparison of% body fat obtained with Bod Pod and DEXA in Mexican football players

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#### **Abstract**

The evaluation of body fat percentage (%BF) is important because of the risks it represents for health. However, the methods for their evaluation have been questioned for their applicability in different contexts. In football players (FP) a single study is known that made comparisons between the method of air-displacement plethysmography through Bod Pod and Dual-energy X-ray absorptiometry (DXA). However, this study was conducted on soccer players in the United States and the study sample only represented 69 players. Therefore, the purpose of the study was to compare the %BF measured through the Bod Pod and the DXA in Mexican JFA. The study participants were 90 JFA (22.4  $\pm$  1.7 years). The percentage of fat was estimated at 21.9  $\pm$  6.8 and 19.5  $\pm$  7.71 for DEXA and Bod Pod, respectively. Although the two methods were highly correlated (r = 0.95 p  $\leq$  0.001), the difference of the mean was 2.5%, it was significant (<0.001). And the limits of agreement were -2.0% to 7.0% of body fat. The result that the %BF obtained through Bod Pod was lower than that obtained with the DXA. The evaluation of the %BF using the Bod Pod is reliable; however, in this study the football players obtained underestimated %BF values in comparison with DXA. Therefore, the results of the analysis should be taken with caution.

Body composition, Bod Pod, DEXA, % body fat, American football players

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# Análisis de los resultados en las Elecciones Federales Mexicanas 2018 mediante técnicas de minería de datos

# Analysis of the results in the 2018 Mexican Federal Elections through data mining techniques

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#### **Abstract**

In this paper, the 2018 mexican presidential election results are characterized in a generic way and it is carried out an analysis of the knowledge generated from these results with the help of data mining techniques and specialized tools, particularly with the help of the well-known Weka tool. Thus, the raw material for this work was the database that the National Electoral Institute of Mexico published in its Web site, created from the voting results in each polling station that operated in the election day. In a first stage, some errors in such a database were eliminated and some variables were recoded in order to operate with reliable data. In this way, binary-tree type models of rules were generated through the classification technique; one of these rule models presented a high index of statistical reliability so that some rules were extracted from it to originate interesting knowledge.

### 2018 Mexican federal elections, Data mining

# Aplicación de modelos estructurales (SEM) para el análisis de la calidad en el servicio del sector hotelero de Izamal, Yucatán

# Structural equation modeling (SEM) for analysing quality in the hotel service sector of Izamal, Yucatan

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#### **Abstract**

The structural equation models are based on statistical technical elements such as factorial analysis and multiple regression which help establish an analysis of the quality of service of organizations that reveal the variables that drive the focus towards the satisfaction of the client. This article proposes the use of structural equation models to determine the quality offered by the hotel sector in the city of Izamal, a destination recognized by SECTUR when it was named a Magical Town. The proposal consists of a combination of the ServQual model considering the incorporation of latent variables and the interaction between them that creates a tool to measure the satisfaction of the client. The result is a general diagnostic of the evaluation and significant correlation between the perceptions and the perceived quality of service, identifying the main areas on which to focus, increasing the intention of repurchase, and, with the use of the studies such as this one, generating reports that could make process management easier, helping to better the identified aspects, in which there might be weaknesses, with the aim of increasing loyalty and attracting new clients.

Structural Equation Modeling, Quality, Variables

## Implementación del análisis del sistema de medición en una empresa aeroespacial

### **Measurement System Analysis into an Aerospace Industry**

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#### **Abstract**

The objective of this study was to reduce process variability through Measurement System Analysis (MSA) implementation. It was applied to all part numbers with critical characteristics to determine repeatability and reproducibility indexes to implement proper actions. The results show reduction in process variation and measurement times; measurement instruments capabilities were used in smarted way and customer confidence was regained. Cross R&R study was used; variables were: measurement equipment, quality auditor, and parts to be measured variability. Measurement equipment was found between 10 and 30%, considered acceptable, with improvement opportunities; measurement instruments missing calibration were found. Improvement was reached through instruments calibration, poka yoke implementation and measurement time reduction. Recommendations: to install poka yokes into leak testing equipment, to give statistical tools training to personnel involved and to repeat this study to validate corrective actions.

Measurement System Analysis, Process variables, Repeatability, Reproducibility

Análisis de fallas en el área de planchado para el aumento de la disponibilidad y disminución de incidentes y/o accidentes

Failure analysis in the ironing area to increase the availability and decrease of incidents and / or accidents

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#### **Abstract**

With the appearance of faults and breakdowns in the components of an industrial installation brings with it the reduction of the benefits that could derive from the productive process. Those breakdowns that lead to the non-availability of the process cause a loss of revenue and, also, cause an increase in production costs, since, at least, the damaged equipment will have to be repaired or replaced. In current times, characterized by an increasing degree of competition in all the markets that causes the erosion of commercial margins, the assurance of productive capacity is configured as a fundamental factor for the maintenance or improvement of the profitability associated with an installation or industrial process. The integrated vision of the concepts of reliability (ability to operate continuously during a certain period of time), maintainability (ability to be maintained preventively and corrective), availability (ability to operate at a certain time) and security (ability to operate without producing damage), constitutes the basic index of measurement of the assurance of its productive capacity.

Availability, Maintainability, Incident, Accident, Productivity

### Modelación dinámica de la producción en una empresa textil del estado de Veracruz

### Dynamic modeling of production in a textile company in the state of Veracruz

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#### **Abstract**

A dynamic modelling of Apparel production was carried out in a textile company of the Veracruz state. The present research has as main objectives, the creation of a dynamic simulation model that allows to identify, the main basic production variables, to analyse the operation patterns presented in the process of the textile company. The methodology used consisted in the establishment of the main basic variables, for the conformation of a causal diagram to identify the relationships between production operation variables of the process and to be able to elaborate the corresponding Forrester diagram that simulates the operation interactions in the Apparel company. The main contribution of this research is the use of dynamic simulation for the analysis of process operations in the textile company under study, which will provide a basis to structure decision making and expand the vision of operational planning and even the company's strategic planning for the future.

Dynamic Simulation, Textile Process, Causal Diagram, Forrester Diagram

### Variación de la biomasa fitoplanctónica en la costa de Jalisco, México (2010-2011)

### Variation of the phytoplankton biomass in the coast of Jalisco, Mexico (2010-2011)

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#### **Abstract**

Six samplings were carried out in the bays of Chamela and Tenacatita, Jalisco (2010-2011), to estimate the biomass (Cl-a) of marine phytoplankton. Samples were obtained every 5 m in 4 stations. Temperature, salinity and dissolved oxygen were recorded with a YSI 85 multimeter. The temperature varied between 19.5 to 30.3 °C and salinity from 34 to 36.8 ppm. Oxygen (10.6- 2.5 mgO<sub>2</sub>.L<sup>-1</sup>) was high in March (Mora Beach and Pulpit) and minimum in January (Pajarera). Nitrate-nitrites (0.22-20.35  $\mu$ M), phosphates (0.13-4.23  $\mu$ M) and silicates (1.73-80.66  $\mu$ M) increased with depth. The average chlorophyll-a (1.06 mg.m<sup>-3</sup>) showed subsurface maxima between 10 and 15m. The average integrated chlorophyll-a was 340.5 mg.m<sup>-2</sup>, with a maximum value of 1192.38 in Pajarera. In general, Cl-a values are associated with an important coupling by grazing activity in the bays. According to the ANOVA used, no significant differences were found (p> 0.05)

Phytoplankton, chlorophyll-a, Chamela, Tenacatita, Jalisco

### Diseño de un modelo matemático de Sustentabilidad Académica

### Design of a mathematical model of Academic Sustainability

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#### **Abstract**

It considered the school dropout, as the abandonment of school activities before finishing the educational degree. In contrast, the terminal efficiency is the result of the efforts of the academic authorities to achieve the training of new professionals. In both problems, there are several variables that affect his analysis is necessary in order to have a predictive scenario, and in this way help the student to finish his professional development. The present research focuses on the design of a mathematical model of Academic Sustainability, identifying six factors that categorize the variables that they infer in the student's education. To do this, a mathematical model designed and data crossed using free software tools, related to data mining. The obtained results, was the obtaining of the mathematical model under 6 factors and 383 variables. Of which it obtained that the Economic, Social and UPALT factors are above the average, and in turn the factors Environmental, Knowledge and Politics are below the average; that is, the resulting contribution is not equitable to the achievement of the objective.

Mathematical Model, Academic Sustainability, NAIVE BAYES, RapidMiner, Ceneval

Factores de variabilidad del agua residual de aires acondicionados para su reutilización por medio de energía alternativa

# Variable factors of wastewater from air conditioners for reuse through alternative energy

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#### **Abstract**

In the present investigation the factors in the variability of the generation of residual water from air conditioners will be studied, by means of indicators of use and functionality, in order to reuse them in a sanitary system that uses solar energy. An analysis of indicators and feasibility was developed, which was based on the current designs of air conditioning equipment, the determination of factors of the condensation of wastewater and the indicators of feasibility of energy efficiency and use of alternative energy. Under the results obtained, it was possible to identify the factors that intervene in the variability of wastewater generation, which depends on the specifications of the equipment and the use that is provided; according to the dimensioning and positioning directly influences the operation, as well as the time and temperature that are programmed. The generation of 20 liters of wastewater was determined when there is not a good sizing, at normal temperature. According to the generation of wastewater from the air conditioners, a type of PV pump can be placed for reuse in a home using the aforementioned characteristics to properly select the type of PV system.

Waste water, Air conditioners, Solar energy, Photovoltaic (PV)

# Desarrollo de las capacidades motrices del infante haciendo uso de inteligencia artificial y la tecnología Kinect como medio de interacción

# Development of infant motor skills using artificial intelligence and Kinect technology as a means of interaction

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#### **Abstract**

Motor skills in infants have been obstructed in recent times by the short time allocated to the subject of Physical Education, factors such as sedentary lifestyle, lack of physical activity, technological resources that currently have some families and the lack of attention of the parents, have been propitious not to fully develop these conditional and coordinative physical capacities. For this reason, attending to this problem and making use of the basic concepts of Artificial Intelligence, POO and the use of Technology with Motion Recognition Sensors, was given the task of developing an application making use of of Kinect technology, where infants can interact directly recognizing their movements and announcing the parts of the body that they have displaced. The developed application helps directly to identify the natural movement patterns of the human being, emphasizing the classification of the conditional physical capacities and the physical coordinative capacities, which fosters in the infant the recognition of each movement that it carries out.

Motricity, Artificial Intelligence, Kinect Sensor, Physical Capacities

Caracterización de la industria del plástico para definir la competencia en manufactura del ingeniero industrial, en una región del estado de Sonora México

Characterization of the plastics industry to define the manufacturing competence of the industrial engineer, in a region of the state of Sonora Mexico

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#### **Abstract**

The objective was to characterize the plastics industry in the municipalities of Empalme and Guaymas Sonora and the specific skills required of the professional who works in plastics production processes, to design a course of the career of Industrial Engineering of the Technological Institute of Sonora. The type of research is quantitative, not experimental, exploratory, and for the collection of information a questionnaire was applied to the industrial sector, composed of four categories and 24 items. The research methodology is based on Fernández (2014) and Hernández, Fernández, Baptista (2014). 22 companies with plastic manufacturing processes were identified, the industry was characterized and the required competences were identified, a 45-hour course was designed for the manufacturing block that integrates the knowledge, skills, attitudes and values required and allows the graduated successfully inserted in these organizations and the educational program the relevance in this region of the country.

Plastic industry, Competitions, Curlicular design

### Módulo de Análisis de los Indicadores del Observatorio Turístico de Yucatán

### Module of Analysis of the Indicators of the Tourist Observatory of Yucatán

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#### Abstract

This document is intended to communicate the work done by the research team of the Metropolitan Technological University within the call FOMIX-CONACYT YUC-2016-04-01 called "Design of the Yucatan Tourist Observatory and implementation of the Tourist Information System de Yucatán ", for this project the following objectives were defined: Generate a standard design for the processing of information that allows to reuse it for publication and analysis purposes. Develop the Web Portal of the Tourist Observatory so that it serves as the main source of all the information generated by the studies that make up the project. To achieve the objectives set, the project was structured in three stages of six tables each. In this paper we present the results of the third stage in particular with the Analysis of indicators module that covers the first objective. In order that the deliverables are adjusted as best as possible to the expectations of the end user, the Agile Scrum development methodology was used. From the implementation of this module, the Tourist Observatory will benefit from having a standard data model that streamlines the processing of information from future studies.

Observatory, FOMIX, Tourism, Scrum

### Remoción de arsénico en agua mediante zeolita natural proveniente del Estado de Chihuahua, México

Removal of arsenic in water using natural zeolite from the State of Chihuahua, Mexico

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#### **Abstract**

Arsenic negatively impacts the health of several populations in the world. There are about 14 technologies to remove it from water, however, most of them have disadvantages such as low efficiency, sludge production among others. Recent research has reported the use of zeolite for the removal of arsenic due to its ion exchange capacity, its abundance and its low extraction cost. In this work we used the natural zeolite from the Ejido "La Haciendita" of the state of Chihuahua for the removal of arsenic in water (0.025 ppm), which was characterized by Elemental Microanalysis (SEM) and X-ray diffraction. Determine its removal capacity by using columns packed with zeolite. The concentration after the filtration process was 0.01 ppm, percentage of removal of 60%, concentration below the maximum permissible limit indicated by the Official Mexican Water Standard for human use and consumption. So the natural zeolite of the state of Chihuahua is considered an important natural adsorbent, easy to use and economical that allows to reduce the contamination of arsenic in water

Aquatic lily, Catalyst, Absorption

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# Obtención de nano partículas de plata mediante síntesis verde, usando extracto de hoja de Mangifera indica L. como agente reductor

# Obtaining nano silver particles by green synthesis, using leaf extract of Mangifera indica L. as a reducing agent

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#### **Abstract**

The article describes the method of obtaining silver nanoparticles synthesized by green methods using *Mangifera indica L* obtained from the extract of the mango leaf as a reducing agent. The synthesis used a solution of 1 mM silver nitrate (AgNO<sub>3</sub>) and the aqueous extract of the mango leaf obtained by Soxhlet. The final product was characterized by UV-Vis spectrophotometry to determine the interaction of bonds between silver and oxygen, similarly, RAMAN spectroscopy shows evidence of silver nanoparticle formation.

Mangifera indica, Silver nanoparticles, green synthesis

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Extracción, caracterización y cuantificación de cafeína en bebidas energéticas más populares de México, y su consumo por estudiantes del CUCEI de la Universidad de Guadalajara

Extraction, characterization and quantification of caffeine in the most popular energy drinks in Mexico, and its consumption by CUCEI students of the University of Guadalajara

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#### **Abstract**

In this research, the liquid-liquid extraction process was used to obtain pure caffeine in the most consumed commercial energy drinks in Mexico (Red Bull® and Monster®), using dichloromethane as an extractive solvent and optimizing extraction from pH control. The characterization of the caffeine was performed by means of spectroscopy techniques: Infrared Radiation with Fourier transform and attenuated total reflectance (FTIR-ATR) and Nuclear Magnetic Resonance of proton (RMN-1H). The quantitative analysis was carried out using the UV-visible spectrophotometry method, whose results were compared with the official Mexican standard NOM-218-SSA1-2011, which specifies that the maximum limit of caffeine is 20 mg / 100 mL. The caffeine content in all the beverage samples analyzed in this research was below the maximum permissible limits established by the standard. The purpose was to conduct a statistical study of the consumption of energy drinks by students of the University Center of Exact Sciences and Engineering, which was applied to 300 students.

Energy drinks, Caffeine, Extraction, UV spectrophotometry

# Filtrado digital de señales mioeléctricas del antebrazo de una persona y comparación con un filtro electrónico físico

# Digital filtering of mioelectrical signals from a person's forearm to probe accuracy of a physical electronic filter

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#### **Abstract**

Nowadays electromyogram (EMG) signals have a big huge motion of robotic applications Such, prosthesis, study activity of muscles, etc. The study of These signals is Important So They Can Be Extracted and be applied on Several use. But on This process there are some limitations. Some of them, the low amplitude (order of millivolts) and common noise on EMG signals. It make us to do an effort to Improve and / or Eliminate some trivial signals possible. So the present work it is focus on the filtering of EMG signals and then a subsequent activities in Those results Could be used in some applications of interest like Those marked above. In This paper it is Stated the filtering stage in Matlab With some generic filters (low and high pass) filters and wavelet family. Syms wavelet filters are used in signal processing Widely. Data (signals) Were Collected from the forearm muscles, it is the first stage That Involves acquisition and filtering phase of the study. The contribution is the comparison Between to filter and electronic physical Those results from software. That information will help us to choose the correct one in order to Obtain clear and useful information and probe the accuracy of the physical filter implementation in order to continue back some applications.

### Filters, EMG signals, Wavelet

# Análisis de flujo de potencia óptimo para el voltaje activo dependiente de la carga de despacho considerando los modelos

# Optimal Power Flow analysis for active power dispatch load dependent voltage Considering models

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#### **Abstract**

This work is presented in the Optimal Power Flow (OPF) analysis to determine the active power dispatch of power systems When the voltage dependent load models are Considered in Such analysis. The load models Considered In This work are the exponential and composed models, are integrated into OPF Which formulation using an existent program developed in Matlab programming language. Two study cases With the IEEE power system of five nodes and New England power system are Carried out to determine the optimal active power dispatch and points of steady-state operation of These systems Considering load models. The case studies show That the load models have a significant effect on the FPO results, since the losses and the demand for power, Both active and reactive, decrease the generation cost Causing Also to decrease.

OPF, load model, active power dispatch, generation cost

Análisis del rendimiento de los algoritmos de planificación de IA y la metodología híbrida en un problema de generación de rutas de aprendizaje

# Analysis of performance of AI planning algorithms and hybrid methodology in a problem of generation of learning paths

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#### **Abstract**

In this paper we present an analysis of the performance of two Artificial Intelligence pplanning algorithms, SGPLAN and LPG, in a problem of generation of learning paths (GLP). Likewise, two models were developed to represent this problem: a) as a model of Artificial Intelligence Planning, with the planning domain definition language (PDDL), which uses the planning algorithms SGPLAN and LPG for its solution; and b) as a mathematical model. It also presents a hybrid methodology of solution in which both planning and mathematical models are combined. In the experimentation the performance of the planning algorithms is evaluated to obtain solutions (plans) comparing the results obtained by both models. And finally, the performance of the planning algorithms is observed when modifying the planning models with information of solutions obtained with the mathematical model (hybrid method). We hope that the results obtained in this research serve to highlight the benefits of using AI planning and the planning algorithms SGPLAN and LPG for their solution. As well as showing the opportunity areas of such algorithms.

Artificial intelligence planning, Planning algorithm, Mathematical modeling, Hybrid methodology, Learning paths

### Adquisición de señales mioeléctricas del brazo de la persona

### Acquisition of myoelectric signals from the arm of person

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### Abstract

Digital filtering of mioelectrical signals from a person's forearm and electronic comparison with a physical filter. Nowadays electromyogram (EMG) signals have a big huge motion of robotic applications Such, prosthesis, study activity of muscles, etc. The study of These signals is Important So They Can Be Extracted and be applied on Several use. But on This process there are some limitations. Some of them, the low amplitude (order of millivolts) and common noise on EMG signals. It make us to do an effort to Improve and / or Eliminate some trivial signals possible. So the present work it is focus on the filtering of EMG signals and then a subsequent activities in Those results Could be used in some applications of interest like Those marked above.

### Filters, EMG signals

## Infinito a la inagotabilidad

### Infinity to the inexhaustibility

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#### **Abstract**

The notion of infinity is one of the concepts That definitely requires greater cognitive work in mathematics, ITS conception escapes the common logic of the concept of quantity and Its numerical representation, but the transcendence of the concept lies in the key is to Understand the concept of limit. This requirement Makes it essential for the teaching of differential calculus. However, the infinite in daily life is as distant as inert, with no other use as the philosophical and the academic, so it Throughout ITS historical appearance has always Been a controversial and neglected topic. In this article we present an indirect method to infer the basic limits of differential calculus That tend towards infinity, by Means of the logical deduction in a concentration experiment of potassium dichromate Dissolved in water and in an intrinsic way making use of Its property of the inexhaustibility That are able to elucidate the essence Also of the infinite. Dichotomous by nature does not cease to be a pristine concept of humble origins, Which for some HAD to be developed from the need to Exceed the limits of the measurable, while for others it Represents the World That encompasses mathematical knowledge or maybe generated as an answer Disturbing to the insignificance of the human being in the universe

Infinite, inexhaustibility, exhaustive number, immeasurable numbers, differential calculus and infinite

Análisis numérico de los efectos geométricos en el rendimiento óptimo de un disipador de calor utilizando nanofluidos

# Numerical analysis of the geometric effects in the optimal performance of a heat sink using nanofluids

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#### **Abstract**

In the present work, a thermal numerical analysis of the heat sink is done. The heat sink is used in a cooling process of electronic chips. A geometric configuration for the heat sink is proposed, the fluid is forced to go throw the concentric channels, covering the major area as possible, connections between the channels are added to get different configurations of the heat sink to analyze, and the number of connections analyzed are: 2, 4, 6, 8 and 10. First, water as a working fluid is used, after, Al<sub>2</sub>O<sub>3</sub>-water nanofluid is analyzed too; the volume concentrations of nanofluid used are: 0.05%, 1% and 3%. In the results, the temperature and pressure contours are reported, as well as the thermal resistance and the pressure drop for the different cases and conditions. The cases analyzed are compared, and the best configuration for the heat sink is obtained. Finally, using the best configuration, a comparison between the water and the nanofluid as a working fluid is done, obtaining that the nanofluid presents an enhance of the heat transfer up to 7 %. Which is an important contribution in the fight against the overheating of electronic chips.

Heat sink, CFD, Nanofluids

### Análisis de las operaciones de un carnicero, utilizando un modelo de líneas de espera

## Analysis of the operations of a butcher, using a model of waiting lines

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#### **Abstract**

A PID control structure was modified proposed by K. The consumer or customer, seeks that the service provided, one of the concerns that a person has to go to request whatever the type, is to know if it will be addressed promptly. It will be an unpleasant experience, that when arriving at the place thought, there is a queue and having to wait to be attended. Therefore, the staff that works in the butcher shop is to respond to the demand that is had within it and the resources to supply all customers efficiently through the theory of queues, as it is somewhat uncomfortable to be waiting for a certain time until the turn is reached so that they can attend to it. As for example when going to pay the electricity service, they have to stand for a certain period of time, instead you go to a bank and they offer you a comfortable place. However, the wait has a limit, and the client values the situation of waiting and waiting to be attended, or to leave the line and opt for another establishment.

#### Analysis, Butcher, Model

## Mathematical modeling in STEM programs: The vibrating string

### Modelado matemático en programas STEM: La cuerda vibrante

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#### **Abstract**

In Mexico, the 21st century During STEM programs Have received a strong boost from the government and the labor sector. This requires a commitment from Educational Institutions and Represents an academic challenge for teachers in the design of learning environments. Particularly, in the teaching and learning of mathematics one of the educational practices orients the student That better in a meaningful way towards learning is mathematical modeling and is more solid if the modeling is of actual systems found in His professional practice or in daily life. This document shows, on the one hand, The Importance of Systematically Including experimental research Both theoretical and actual of systems in STEM programs, as part of the academic training of future professionals; on the other hand, the result of a mathematical modeling of real physical system,

Mathematical modeling. Meaningful learning. Vibrating string. STEM

## 5 Humanidades y Ciencias de la Conducta

Líderes: Todo gira en torno a la Ética

**Leaders: Everything turning to Ethics** 

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#### **Abstract**

Through history, society has looked for an ideal model as a character to have it as an example and take it as a guide so that this is the "Leader" that marks the course of it. But what is the stereotype of the perfect leader? Does it really exist? What defines a good or bad leader? And, from an ethical and moral point of view, who could be an excellent leader in a society as changing as today? herein is intended to show the features it has a leader, the rules governing this, through the different types of leaders that has emerged through history up and reaching a consensus on which delimits the leader from an ethical and moral point of view, without neglecting that organizations are living entities formed and directed by people, with unique and unrepeatable characteristics and personalities; what has been of this, an object of study throughout the history of mankind.

Leader, Stereotype, Ethical, Moral, Norms, History, Humanity

### Percepción de los estudiantes sobre el trabajo del docente en el aula

### Perception of the students about the teacher's work in the classroom

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#### **Abstract**

From the implementation of the competency-based approach, in which the student is the center of the teaching-learning process and in which the teacher becomes a facilitator, we have seen that the figure of the teacher as the center of the educational process persists, what in the present investigation is studied the performance of the teacher in the classroom, from the perspective of the student, in terms of his style of teaching. The objective of this study is to identify the student's perception of the performance of their teachers in the classroom. It is a quantitative research of exploratory type which is based on the hypothesis that the teaching model used in the classroom influences student learning, so an instrument with 33 variables grouped into 7 categories was designed. The sample, selected by chance, is made up of 100 subjects, the instrument was applied in two Baccalaureate programs and a bachelor's degree from the U.A. of C. The data analysis reveals that there is a median tendency of the surveyed students to perceive in the relationship with their teachers, behaviors characteristic of a power bond.

Teacher performance, Student-teacher relationship, School climate

Los docentes en formación y las preguntas que utilizan para el aprendizaje en la asignatura de Español

## The teachers in training and the questions they use for learning in the subject of Spanish

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#### **Abstract**

What kind of questions do teachers-in-training to generate knowledge for adolescents? when and how do they use them? How do the questions used by teachers-in-training relate to the aproach of the Spanish subject? Why is it important to ask in middle high school? These were some of the questions we were find out, from the in situ observation of the fourth grade students, who perform their professional social service (Teaching Work - TD) for 22 weeks in secondary school. During this grade. They also carry out the analysis of their TD and their reflections will be writing down on the receptional document with which they will obtain the degree as a Spanish teacher. This paper identifies, through the analysis of class records, the types of questions and the level of knowledge they generate. For which the questions were categorized, and related to cognitive processes.

Types of questions, Cognitivo-linguistc skills, Learning

### Inclusión Educativa desde la Formación del Licenciado en Educación Especial

### **Educational Inclusion from the Training of the Special Education Bachelor**

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#### **Abstract**

Special education over time has been an element of concern, not only because of the impact of respect for diversity, but rather because of the way in which a society recognizes it and considers it part of it. The most viable way to achieve an inclusive society and transform cultures and exclusionary practices, can be achieved through normal schools, forming Bachelor of Special Education with excellence and an inclusive approach. In this sense, talking about the training of the future teacher must take into account various knowledge, skills, attitudes and values that allow him to exercise the teaching profession with quality and a high level of commitment, in order to eliminate the barriers that limit the learning and participation, therefore the line of research that addresses this issue in question since inclusion aims to prepare professionals to intervene in the care of vulnerable populations in the family, school, work and community, through adaptation, design and implementation of programs and projects, with a committed, innovative attitude and recognition and acceptance of diversity for social transformation and the development of an inclusive education

**Educational Inclusion, Barriers to Learning and Participation, Special Educational Needs** 

## La competencia didáctica en la formación docente

### The didactic competence in teacher training

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#### **Abstract**

The didactic competence, permeates the formation of the students of the degree in preschool education, even when it is implicit and recognized by the professional competencies that integrate it, It is necessary to emphasize it, because although we talk about a comprehensive training for teaching, it is necessary to support teaching in the specific theory of each of the formative fields of preschool education, but, above all, the knowledge of the didactics of each one of them. This is why this article aims to: Analyze the curriculum of preschool education 2012 to identify how the didactic competence is integrated, to reflect on its development in the students and to highlight their importance in teacher training. The methodology is qualitative, it recovered the research-action, specifically the phase of reflection as a reflection-on-the-action, because it favors the "understanding acquired when dealing with the specific case". This article contributes to the comprehension of the didactic competence and its importance in the teacher training.

Curriculum, Professional competencies, Didactic competence, teacher training

### Una mirada a las planificaciones didácticas de estudiantes normalistas

### A look at the didactic plans of student teachers

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#### **Abstract**

This paper shows the results of a study of fourth grade students of the Bachelor's Degree in Secondary Education (Licenciatura en Educación Secundaria), with a specialization in Telesecundaria. The study reveals how they made their lesson plan during their training as teachers. We reviewed the documents of twenty-one students when they were in their eighth semester (the last of their career). In the analysis of documents, we use a double-entry matrix to identify their characteristics. We found that the documents focus on the development of competencies and the achievement of learning objectives, the didactic approach to the subjects and the telesecondary model as key aspects. The documents also show how students promote active work and collaboration among high school students. Work is required on the student's recovery of knowledge, the presentation of what they will study in this lesson at the beginning of the class, the goal and usefulness of the topics, and the didactic sequence of the session as well as how they will be evaluated to involve the group in the class. The main aspect to be improved is the form of evaluation, since it is required to be formative, meaningful and to consider the participation of the people who will be evaluated, since this would also be a way of learning to learn.

Students who will be teacher, Initial teacher training, Class didactic plan

## El Profesor es: El medio, el camino, el proceso enseñanza-aprendizaje y el Fin es: Enamorar al alumno

# The Teacher is: The medium, the path, the teaching-learning process and the End is: Falling in love with the student

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#### **Abstract**

The teacher's work has been changing with the passage of time, it has become a means to achieve the goal, the way of teaching has also changed, with the Teaching-Learning Process EA, but the end has always been the same, the to interest or to fall in love with the student, this means that the student has always been important for educational institutions, since these become the promising future for the economy. In the present investigation an analysis is made of the relationship between the three factors, the teacher, the learning processes and the student. The main objective is to analyze the relationship between teacher, E-A process and student, and what the teacher has to do to make the student fall in love. All through the knowledge of specific concepts for understanding the phenomenon of study, finally you need to describe what can be done to meet the goal of interest to the student in learning. The method used for the preparation of this paper is to have a qualitative approach, since it is intended to analyze the characteristics of the problem to ensure that the teacher is indeed a means and the process EA is the way to achieve the sole purpose of to fall in love with the student. Regarding the type of research, it begins with the collection of the necessary bibliography of the relevant concepts for the understanding of the topic, on the other hand, a Likert questionnaire is elaborated to obtain the desired results

#### Teacher, Teaching-learning process, Education, motivationt

## Métodos de enseñanza propuestos para que el alumno universitario se interese en las clases

## Teaching methods proposed for the university student to take an interest in the classes

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#### **Abstract**

There are many teaching strategies to be applied among them: 1.-The Creative Analog Dialogue (DAC) as a strategy of the concepts studied. Widely documented strategy (Torre, S. de la, 2000). 2.- "The day of the word" as a strategy-ephemeride of the subject of creativity, in which experiences, processes, experiences and emotions are shared, through personal writings, generating a highly creative climate. 3.- The story as a creative strategy to work the senses in special education, complemented by a didactic guide, illustrations and group staging. 4.- The group staging as an integrating learning strategy. It is very important to take into account the strategies for the time of being in class, one thing to prepare the class and another for the strategies to be understood, or that the students acquire the expected skills, finally that is what important that by means of different strategies can be relaxed in learning, and that is beyond a simple way of teaching, or in a traditional way that is only done by fulfilling the work in the case of some teachers. Within the universities you can find many disadvantages and problems when teaching classes for which there is no teacher training, most teachers do not have that competence, of course it is acquired with experience, but at the same time happens who is affected in a certain sense is the student.

AV = Virtual classroom, Strategies = Teaching methods, Staging = Way of expressing

# Mejoramiento de desempeño profesional docente apoyado en la indagación apreciativa

## Improvement of teacher professional performance supported by appreciative inquiry

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#### **Abstract**

The present paper of development of a proposal of improvement of professional teacher performance supported in the appreciative inquiry, seeks to offer the university professor of a proposal of development of activities to obtain first a significant learning in the students and at the same time to improve his educational evaluation of perception of good practices in front of the group, evaluated by the students, for this the current situation, the teaching activities and the learning activities were analyzed, through a training process the way of teaching chairs is standardized, on the other hand, through the inquiry appreciative information was gathered to propose the best way to prepare classes and impart them, through a pilot test the effectiveness of the proposed model was evaluated. In the final part the graph of comparison of results of teaching evaluation of two consecutive periods before applying the strategy and after it is observed, showing very beneficial results for the teacher and the student.

Appreciative inquiry, Teaching performance, Lean management

## Cuestionario de diversidad en educación para mejorar las acciones futuras y logro (DEMAFL), versión docentes

# Education diversity questionnaire to improve future actions and achievement (DEMAFL), teachers version

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#### **Abstract**

When we talking about inclusion in education, this term is almost always associated with people who for various reasons show some disability, making inclusive policies of this population both to education and to the labor insertion. In order to be able to make inclusion, it is important to be able to identify what is the perception of teachers before it and the various categories and elements that make up this complex construct. Therefore, the objective of this paper is to create a questionnaire for the perception of educational inclusion in higher education for teachers applicable to the trends of the 21st century. The questionnaire proposed in this research has an exploratory part of questions related to the closeness of the inclusive needs in the family environment or close to the teachers, followed by the knowledge of inclusion program in their university and faculty, continuing with the identification of the barriers to inclusion and the perception of inclusion in the face of diversity not only of people with special educational needs, as well as what concerns curricular adaptations and the perception of labor inclusion.

Inclusion, Perception, Teachers, University, Questionnaire

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Aplicación Didáctica del ABP en Computación Básica, Física y Álgebra en la enseñanza de la Ingeniería en la Universidad Veracruzana Campus Coatzacoalcos

Didactic Application of the ABP in Basic Computing, Physics and Algebra in the teaching of Engineering at the Universidad Veracruzana Campus Coatzacoalcos

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#### **Abstract**

This work presents the results of the Didactic Application of the ABP in the Educational Experiences of Digital Literacy, Physics and Algebra in the teaching of Engineering at the Veracruz University campus Coatzacoalcos. The Formative Intentions were first to demonstrate how the transversality of Educational Experiences can be carried out with an adequate selection of Didactic Problems based on the ABP (Problem Based Learning) and Second to design didactic units based on problem solving as a teaching strategy. mathematics, in order to develop the logical thinking that allows new engineering students, as a first phase Graph functions with the help of different software's and thus become familiar with the use of ICT tools available online, free software or with license. The second phase will correspond to the application of the previous tools in order to solve a real life case using integral calculation. The contribution of this work to the universities is that they take as a reference the methodology of the PBL and the use of information and communication technologies for the transversality of knowledge between educational experiences and contribute to the construction of meaningful learning of engineering students for the graphing of different functions and the use of integral calculus for the solution of real cases.

Significant Learning, PBL, Didactic Problems, Function Graphics, TIC

## Test de personalidad, recurso diagnóstico para la enseñanza de la investigación

### Personality test, diagnostic resource for teaching researcht

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#### **Abstract**

The research aims to know the relationship between personality types and research processes of students of the Faculties of Social Work, Psychology, Science, Education and Humanities, Marketing and Chemical Sciences of the Universidad Autónoma de Coahuila. The application of instruments was carried out in the month of April 2017. The research is of a quantitative approach, and is designed under the transversal, descriptive and correlational type. Concluding that the type of personality is oriented to the effective realization of certain sections of the research process. Being the introverts, qualifiers, sensory and rational, in this combination those that have the greatest tendency to be effective when conducting research because they are realistic subjects, entrepreneurs, with great capacity for concentration, are guided by logic towards objective decision making, it appears to be warm, friendly, organized, determined, punctual and puts the work before anything else. This information will allow teachers who teach research subjects to have a diagnostic resource for teaching this subject.

### Personality, research process, university students

## Implementación de Objetos de Aprendizaje como Apoyo a la Educación

### **Implementation of Learning Objects as Support for Education**

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#### **Abstract**

Innovation and the advanced development of information and communication technologies in the different aspects of daily life, but especially in education, means a great challenge that allows great changes in teaching-learning methods allowing us to use technological tools outside the classroom so this document describes the importance of learning objects and the methodology that can be implemented to develop them, as well as the analysis of the phases and corresponding development in each of them, creating objects of quality and that meet the necessary requirements to transmit knowledge to the student, specifying the partial result that they have at the moment and explaining that it is intended to develop as a second phase of implementation of said learning objects to reach an integral implementation in some management system. learning allowing a obtaining of re more complete results considering the progress and evaluation in the competency system.

#### Learning objects, methodology, multimedia

## Una visión de liderazgo en Los Sin Tierra (Miguel Barros, 2004)

### A vision of leadership in Los Sin Tierra (Miguel Barros, 2004)

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#### **Abstract**

This document highlights the importance of leadership in social movements, taking as a case study the movement Los sin Tierra, a Brazilian organization that seeks to achieve a change in the agrarian structure of that country based on social mobilization. This group supports their struggle in values such as solidarity and teamwork; The importance of leadership based on decision-making based on a committee and never individually is highlighted at all times. It is precisely this form of internal organization that offers the basis on which to present an analysis of the leadership style practiced in this movement based on the study of Latin American cinema and the documentary Los sin Tierra. On the roads of America, (Miguel Barros, 2004).

Leadership, Social movement, Teamwork, Organization

## Capacitación a Organizaciones no Gubernamentales (ONG's) para promover el respeto de la equidad de género en las comunidades indígenas

## Training for non-governmental organizations (NGOs) to promote respect for gender equity in indigenous communities

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#### Abstract

The work of non-governmental organizations (NGOs) should serve to safeguard and inform the population about their fundamental rights and guarantees, especially to women, given that they are in a situation of permanent aggravated risk if they are women indigenous They are a support to report irregularities and seek to resolve these complaints in the corresponding public instances. Knowing in the first instance the situation, the working conditions and the difficulties that social actors have to overcome; it allows us, on the one hand, to detect the weaknesses of these and on the other hand, to map the real situation of gender inequality in the Indigenous peoples and communities that prevails in the entities. The information obtained will allow us to make proposals and activities aimed at strengthening the capacities of NGOs and propose strategies for a better approach to the problem of gender inequality in indigenous peoples and communities. For this research, 15 NGOs were interviewed in the country that address the issue of gender equity in indigenous peoples and communities.

NGOs, Indigenous people, Training, Women, Rights

### Presencia del CUNorte, UdeG, en una región de desigualdades y oportunidades

### Presence of CUNorte, UdeG, in a region of inequalities and opportunities

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#### **Abstract**

This research shows an overview of how the presence of the University of Guadalajara (UdeG), has contributed to the reduction of inequalities in access to education in the most marginalized areas of the state of Jalisco, through the strategic location of the University Center North (CUNorte). This paper presents a description of the context in the CUNorte, as well as some socioeconomic and sociodemographic indicators that allow to know the main problems that afflict the population that lives in this part of the state. The way in which the institution identifies and responds to the educational needs of a large part of the most unprotected population in this state of the Republic is disclosed. It also explains how the University through CUNorte has a presence in the different and remote areas of the region, using Information and Communication Technologies (ICT). In the same way, the main strategies that have been implemented in this area of influence are shared to improve the educational level of their applicants.

Inequality, Educational needs, Strategies, ICT, Digital divide

Diseño de un plan de acción para prevenir el acoso escolar (bullying) en las relaciones interpersonales entre los estudiantes de una Institución de Educación Superior

# Design of an action plan to prevent bullying in interpersonal relationships among students of a Higher Education Institution

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#### **Abstract**

In recent decades the wave of violence that has arisen within school systems has gone upwards. Although violence in schools is not a new issue, the recent suicides and murders in different public and private schools around the world have led to analyze such a big problem. The concern to curb school violence, is one of the most relevant issues of today leading to reflection in a relevant way about bullying that occurs in interpersonal relationships among students of Higher Education Institutions (IES). Acts of aggressiveness in interpersonal relationships between peers have unleashed high levels of violence, obstructing healthy coexistence and learning among students of all levels. The term of violence has referred to several meanings, which is mainly in which it manifests itself. School violence (bullying) worries in most of the world institutions, international and national organizations desperately seek an effective and affective solution for this problem.

Bullying, Interpersonal relationships, Institution of Higher Education

Realidad, Ciencia, Tecnología y Sociedad: Seguimiento de egresados de la Maestría en Educación Básica de la Unidad 095 de la Universidad Pedagógica Nacional en la CDMX, México

Reality, Science, Technology and Society: Monitoring of graduates of the Master's Degree in Basic Education from Unit 095 of the Universidad Pedagógica Nacional at CDMX, Mexico

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#### **Abstract**

The purpose of this paper is to expose the results of the follow-up of the graduates of the Master's Degree in Basic Education (MEB), the terminal area of the specialty "Reality, Science, Technology and Society (RCTS)" offered in the Unit 095 of the National Pedagogical University in Mexico City (CDMX), Mexico. This study is divided into three sections: in the first, the foundation and the methodology are briefly presented (case study); in the second, the results of the follow-up of graduates (assessment of the graduates' skills regarding the training they received on the teaching of science and transformation of the docent's practice); and in the third one, the competences they developed for the teaching of science are presented as a way of conclusions.

Teaching of Science, Reflective practice, Competencies for teaching

## Análisis sobre los niveles de estrés académico y su relación con el semestre que cursan los alumnos de bachillerato

## Analysis about the levels of academic stress and its relationship with the semester which the bachelor's students are current

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<sup>1</sup>Colegio Primitivo y Nacional de San Nicolás de Hidalgo

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#### **Abstract**

This paper aims to present a reflective analysis of "Multiple Intelligences", presented by the psychologist and neurologist Howard Gardner. This proposal raises that there is not only an intelligence, and indicates its condition of plurality. This new vision of intelligence allows new pedagogical and institutional practices to be employed and proposed in the educational field. In addition, it shows the relationship of these, depending on the interests of young people in their career choice. That is, how important it is to know the dominant intelligence when choosing both the baccalaureate and cursarm, Such as career. For this reason, the theme is relevant, since it allows creating new proposals for vocational guidance, depending on the needs and the current context of the Higher Education Juniors. Therefore, it is necessary to support to avoid that the young people lose school cycles, to avoid the parents an unnecessary expense and above all that the young person performs of ideal way in the labor scope, favoring the stability and economy.

Multiple intelligences, Interests, Vocational guidance

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## Análisis exploratorio acerca del Acoso Escolar (Bulling) entre alumnos de la Facultad de Contaduría y Administración de la UAEMéx

## **Exploratory analysis about School Bullying (Bulling) among students of the Faculty of Accounting and Administration of the UAEMéx**

CAMACHO-FERNÁNDEZ, Margarita, CORTÉS-LÓPEZ, Leticia Carolina y GARCÍA-PALMAS, Mayela Anita

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Universidad Autónoma del Estado de México, Plantel Dr. Ángel Ma. Garibay Kintana de la Escuela Preparatoria. Heriberto Enríquez Núm. 904, Col azteca, Toluca, Estado de México C.P. 50100.

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#### **Abstract**

This research is an exploratory study on bullying among university students according to the opinion provided by a sample of undergraduate students from the Faculty of Accounting and Administration (FCA) at the Autonomous University of the State of Mexico (UAEMéx). Harassment among peers, undoubtedly constitutes one of the most significant problems that students face when entering the school system of education; in order to determine the impact, this work makes use of a measurement tool specifically created for this purpose in 2013 by the authors Madai Elizabeth Murillo Solís, Yesenia Cisneros Carpio, Anette Danitza Burruel Cisneros and Ana Lucia Ruiz Villalobos, at Instituto Tecnológico de Sonora. (2013). Among the most important results we found the following: men report a higher rate of bullying index than women do. Also, the further along the course, the more bullying suffered by students from their peers.

School bullying, University, Violence, Intimidation, Harassment

Afectación en la autoestima de las adolescentes a causa de los estereotipos de belleza como falsa respuesta a una imagen estructurada colectiva

## Affection in the self-esteem of the adolescents because of the beauty stereotypes as a false response to a structured collective image

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#### **Abstract**

There are several reasons that can affect the level of academic achievement of young people, currently technology, society and the multiple activities they perform are part of these reasons, however, the stereotypes of beauty with which they are bombarded day by day in advertising, indirectly affect the time that young women spend studying. To corroborate the hypothesis that the stereotype is important for adolescents, a survey was applied to 61 women at the baccalaureate level, and the analysis of the results show that 98% of them give too much importance to appearance and dedicate a large part of their attention to it, which, indirectly, can affect their performance in school.

Stereotype, Beauty, Self-esteem

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## Educación profesional, emprendedor, ocio y tiempo libre: Implicaciones en la inserción laboral

## Professional education, entrepreneurship, leisure and free time: Implications for labor insertion

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#### **Abstract**

The research Professional education, entrepreneur, leisure and free time: how they impact employability has as objective: analyzing the relation presented between the professional education and the job market; its specific objectives are: to identify the factors of both professional education and job market that have an impact on the employability; modeling in order to identify which variables in education and job market help predict employability. Its methodology is exploratory; it analyzes the underlying relation between variables and, using multi- varied regression, seeks a productive model that explains how the students can start in the job market. The variables are structured in the educational axis, complex variables: professional education and leisure and, the job-market axis where its complex variables are: free time and employability. 80 students currently studying in the school of Ciencias de la Educacion (educational science) belonging to the UAdeC. The sample is the incidental kind and has a transversal cut. Its contribution is part of the predictive model that integrates the variables that allow to identify and explain the way in which students can start in the job market successfully.

Professional education, Entrepreneur, Leisure, Free time, Employability

## Análisis del modelo de gestión de calidad en planteles del Colegio de Bachilleres de Chiapas

## Analysis of the quality management model in schools of the Colegio de Bachilleres de Chiapas

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#### **Abstract**

This article analyzes the opinion of teachers regarding the school management model and the dimensions implemented in the Colegio de Bachilleres de Chiapas (COBACH), the products generated through institutional management constitute important evidence that contributes or hinders the accreditation process of educational quality through the Sistema Nacional de Bachillerato (SNB). The research approach is structuralist, based on a quantitative technique, the information collection process was carried out through the application of questionnaires, the results were systematized with the support of the statistical software SPSS. In the process, the opinion of 69 teachers assigned to five schools in the Zona Itsmo Costa of the Colegio de Bachilleres de Chiapas (COBACH), which are part of the scope of the study, was analyzed. The main variables studied are related to three dimensions of the school management model used: organizational-operative, administrative-financial and pedagogical-curricular.

School Management, Higher Secondary Education, National Baccalaureate System

### La dinámica en el aula, la violencia y su impacto

### The dynamics in the classroom, violence and its impact

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#### **Abstract**

The main objectives of this research are to identify what conditions of violence are generated in the classroom and how they impact on the relationships of the subjects involved in the teaching - learning process. In this study the phenomenon of violence was addressed, "as causing annoyance to someone" from three aspects: be, do and say. Galtung (2008) mentions that violence "is the psychic precision or abuse of force exerted against a person for the purpose of obtaining ends against the will of the victim". We worked with 61 variables of which six are nominal and 55 ordinal, with a centesimal scale, data were processed in the four levels of statistics. The instrument was applied to a student population between 15 and 23 years of age. Results 53% are women and 46% are men and 97% are single and have heterosexual preferences. In the type of violence by gender in the classroom, when it is presented, there are three types of violence; The instrument was applied to a student population between 15 and 23 years of age. Results 53% are women and 46% are men and 97% are single and have heterosexual preferences. In the type of violence by gender in the classroom, when it is presented, there are three types of specific self-evaluations on the part of the students, which are: as aggressors, recipients and spectators of violence.

### Dynamics, Violence, Expressions, Scenarios

## Chicos/as: Una dimensión degradante, o protectora de los estudiantes universitarios

### Boys / girls: A degrading, or protective dimension of university students

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#### **Abstract**

This paper analyzes the relevance of the name guys to refer to university students, and its possible effect on the development of their professional leadership. Questionnaires were designed with open and closed questions for teachers and students regarding their meanings, signifiers, stereotypes or preconceptions, positive or negative referents, intentions of teachers and students' perceptions of the use of the term; finally, to reveal if there is a consensus that differentiates a guy from a student in collective subjectivity. It was found that the use of guys is pejorative and psycholinguistically denigrating for a third of the student population - despite the teachers' intentions of closeness or kindness – therefore it affects the development of leadership of the future Associtae Professionals. Within the academic context, it is not pertinent to use the term guys whose referent is age, being coherent with the primary rol of students in the university. It is recommended to name the students individually by their own name; and collectively, as students, or learners.

Piscolonguistics, Connotation, Guys, Hidden Curriculum, University

## Factores que influyen en el decremento de aspirantes en la carrera de Ingeniería Informática en el ITCG

## Factors that influence the decrease of applicants in the Computer Engineering career at the ITCG

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#### **Abstract**

This educational research project is focused on a study of the factors that currently affect the decrease in new enrollment in the Computer Engineering career at the Technological Institute of Ciudad Guzmán (ITCG) belonging to the National Technological Institute of Mexico (TecNM). The methodology consisted basically of applying surveys to students of the upper secondary level, students of the last semester of the specialty and deserters. Also, a study was carried out in the environment to find out the opinion of the computer science egresed. This research also includes information related to failure rates and terminal efficiency. Results were obtained that allowed to detect the factors and establish the guidelines to address the problems encountered.

Income, Desertion, Reprobation, Egresed

## El abandono escolar en nivel superior

### School dropout in higher education

SÁNCHEZ-LUJAN, Bertha Ivonne, AMADO-MORENO, María Guadalupe, MONTOYA-PONCE, Javier y GARCÍA-VELÁSQUEZ, Ángel

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#### **Abstract**

The analysis of the results obtained in a descriptive analytical study whose objective is to identify the main factors that affect the school drop-out higher education students is shown. A questionnaire was applied consisting of five sections. The results show that the subjects with greater difficulty are those of the area of basic sciences during the first semesters, the lack of study habits and a deficient vocational orientation, cause that the students abandon their university studies prematurely. The family environment and the student trajectory are also analyzed as key factors in this problem. Some alternatives are presented to improve terminal efficiency and propose institutional policies that support students in their educational journey.

School performance, School leaving, Terminal efficiency, Higher education

# Experiencia de trabajo colegiado en ciencias básicas en la Universidad Politécnica de Querétaro

## Experience of collegiate work in basic sciences at the Universidad Politécnica de Ouerétaro

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#### **Abstract**

This work shows the results of the collegiality work that is carried out at the Polytechnic University of Queretaro. The objective of the research is to show how the academic staff works and to identify the best teaching-learning strategies carried out and which are those that contribute to the development of student's competences, according to the current Institutional Plans and Programs and those that are relevant to the needs of industries. This research is an ethnographic study based on a case study involving teachers of the Basic Sciences Department from 2012 to 2017. The information shown was directly generated from the educational environment and the techniques used were portfolios of each collegiate team. These portfolios provided evidence to describe, explain and interpret the collegiality work at the university. Specifically in basic science area. The results show that the collegiality work has been formalized for the Mathematics subjects offered each term and how teachers have been involved on this work and it also shows the impact on students' education.

### Collegiate Work, Planning, Collaboration

## Factores asociados al rendimiento académico en estudiantes del nivel superior pertenecientes a la etnia Yaqui

## Factors associated with academic performance in upper level students belonging to the Yaqui ethnic group

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#### **Abstract**

A study was made about the incidental factors in the academic performance of upper level students belonging to the Yaqui ethnic group. For this, a non-probabilistic sample of 123 students assigned to the Vícam extension of the Higher Technological Institute of Cajeme was taken. Two groups were formed with students of both sexes, one of which showed higher academic performance (M = 9.2) versus another group with lower performance (M = 8.5), an analysis of average K conglomerates was made, finding the average of graduation of the high school, the daily time dedicated to the study and the academic level of their mothers, discriminated adequately to the students of both subgroups; Likewise, it was determined that the accomplishment of school tasks, the reasons to study the career and the access to Internet in their homes, turned out to be variable associated to the academic performance in both groups.

Academic performance, Yaqui ethnicity, Psycho-social-academic factors

Diferencias en la comprensión del lenguaje entre alumnos de medicina con alto y bajo promedio escolar de la FAMEN-UJED, Campus Durango

## Differences in language comprehension among medical students with high and low school average of the FAMEN-UJED, Campus Durango

RIOS-VALLES, Jose Alejandro<sup>1,2</sup>, SOSA-HERNÁNDEZ, Valeria Andrea<sup>2</sup>, PEREZ-GONZALEZ, Ivonne<sup>2</sup> y BARRAGAN-LEDESMA, Laura Ernestina<sup>3</sup>

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ID 3er Coautor: Laura Ernestina, Barragan-Ledesma

#### **Abstract**

Objective: To identify the statistically significant differences in the efficiency of comprehension among medical students with high and low school average in students of FAMEN-UJED-Durango. Methodology: Exploratory, non-experimental, observational, transversal and retrolective, with descriptive and comparative statistical analysis. The selection of the sample was not probabilistic for convenience. 288 records were studied. Contribution: The difference in the mean of the comprehension among students with high and low school average did not show to be statistically significant.

Comprehension, School average, University students

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Contribución del perfil de desempeño por competencias en los estudiantes de la maestría en rehabilitación oral de la Universidad Veracruzana

Contribution of the performance profile by competencies in the students of the Master's degree in Oral Rehabilitation at the Universidad Veracruzana

ROESCH-RAMOS, Laura, MORENO-MARÍN, Flora, MORA-SÁNCHEZ, Aura Leonora y ROESCH-DIETLEN, Federico Bernhardo

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#### **Abstract**

Objectives, Methodology The concept of competition, as understood in education, results from the new theories of cognition and basically means knowledge of execution. (Irigoin, 2020). The aim of this study is to identify if the performance profile by competencies in students admitted to the Master's degree in Oral Rehabilitation of the Faculty of Dentistry of the Universidad Veracruzana, Veracruz Region is right. This study seeks to assess if the students selection is properly done to ensure their academic performance throughout their school career. A questionnaire was carried out with items by experts prior calibration using digital platforms, then proceeded to apply the instrument to a generational cohort of students of the Master's degree in Oral Rehabilitation, the data were recorded; however, it will start from knowledge, attitudes, values and basic skills which dentists must demonstrate focused to Oral Rehabilitation in terms of competencies to redesign and enhance the professional profile. Contribution This study allows the Basic Academic Core of the Master in Oral Rehabilitation to know whether its admission process is suitable since the students who enter have the required performance profile by competencies.

Competencies, Performance profile, Oral rehabilitation

### Factores de riesgo en alumnos de la UT del Norte de Aguascalientes

### Risk factors in students of the UT del Norte de Aguascalientes

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#### **Abstract**

In this article we expose the results obtained from the Risk Factors Questionnaire for Adolescent Health (POSIT) applied by the Psychopedagogical Counseling Department of the Technological University of North Aguascalientes to the students of said institution and whose objective was the identify risk factors that are associated with the experimental use of substances. The areas explored were: a) Substance use, b) Mental health, c) Family relations, d) Relations with friends, e) Educational level, f) Labor interest and g) Aggressive behavior. The application was made online to 733 students of the second semester of the period January - April 2018 of the fourteen educational programs of the Higher Technical University level, their results will serve to implement strategies of prevention, detection and channeling to the corresponding instances where they can be give the necessary support to avoid the use of substances and increase your chances of successfully completing your higher education.

Vulnerability, Risk factors, POSIT, Detection, Prevention

### Museos y Patrimonio. Análisis del Museo de las Momias de Guanajuato

### Museums and Heritage. Analysis of the Museum of the Mummies of Guanajuato

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#### **Abstract**

The present investigation has generally like objective to study the Museum of the Mummies of Guanajuato, in a wide context and related to the patrimony of a tourist attraction like destiny. A qualitative methodology is used, and it is documentary, analyzing the environment, the theory and the Importance of Museums Within tourism activity, in order to place the Museum of the Mummies as a heritage tourist resource worthy of being Studied, in Regarding ITS history and ITS current moment, since it Represents the most visited museum in the State of Guanajuato and the third in the country. Similarly, an interview was Conducted With the director of the museum to know current figures, as well as operational and administrative issues.

Museums, Mummies, Heritage, Guanajuato

# Satisfacción de expectativas de los visitantes al Museo de las Momias de Guanajuato

### Satisfaction expectations of visitors to the Museum of the Mummies of Guanajuato

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### **Abstract**

When offering a product or a service, the satisfaction of customer expectations is always Sought. For This research, the main objective is to analyze what are the expectations of visitors to the Museum of the Mummies of Guanajuato and know if They are not met or are by it. For This, a quantitative methodology was used, through the application of a survey to the visitors, Having sample as 400 people, Both national and international residents and tourists. The survey Contemplated the satisfaction of expectations Regarding the service and the exhibition itself. Among the main results That was the expectations of the visitors Have Been covered, That the aspect They like MOST is the display of the mummies and what is less liked is the location of the museum.

Museums, Visitors, Satisfaction of expectations, Guanajuato

# Las representaciones sociales de los futuros psicólogos sobre su profesión

# Social representations of future psychologists about their profession

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### **Abstract**

With the aim of analyzing the evolution of social representations, a theory Proposed by Moscovici in 1979, Is that a study was made About a group of students of the Degree in Psychology of a campus of the University of Guadalajara. These students, Belonging to different semesters, answered the same questionnaire answers and gave That, in some cases, Although Were similar in many others They Were separated from Those Given by Their colleagues from previous or subsequent semesters. The questionnaire was applied and 190 of the participating subjects That Were Considered Given the inclusion criteria They Met. THUS, it was possible to determine That social representations evolve and change the contact from the Individual That Can Have With Cultural Certain events or the exposure That I've With Certain themes. In This case, all focused on Psychology as the profession They chose to practice in the future.

Psychology, Students, Social representations

# Actitud hacia la Estadística en estudiantes de posgrado y pregrado del área de la Salud en la ciudad de Durango

# Statistical attitude towards graduate students and undergraduate Health area in the city of Durango

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#### **Abstract**

The Attitude towards Statistics is essential for the achievement of learning in the classroom, Attitude Becomes a problem When the desirable learning are not Achieved Objectives. Knowing the different factors That Strengthen and weaken the Attitude towards Statistics, is a challenge for the specialist in educational sciences and the teacher specialized in statistical Methodologies. Through a descriptive and correlational study, the reliability and validity of the instrument of Attitudes towards Statistics Auzmendi was designed by Determined, applied in a convenience sample of 131 undergraduate and postgraduate students in the area of Health in the city of Durango. The objective was to validate and determine the factors That differentiate the Attitudes Toward Statistics in undergraduate and postgraduate students in the Health area. The instrument presented good properties Both in Its reliability and validity in ITS and Its use in this type of population is adequate. The results Indicated anxiety, agrarity factors and usefulness of the statistical methods, differentiable in the levels of study and type of sex in the Population Studied.

Attitudes, Statistics, Undergraduate, Postgraduate, Health

# Perspective of visitors to the museum of mums. From social networks

### Perspectiva de los visitantes del museo de las momias. De las redes sociales

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### Abstract

En tiempos actuales, en la era digital donde las redes sociales toman un papel relevante la percepción de un usuario siempre es un elemento importante para gestión de la industria o empresa que se trate. Los museos son considerados como empresas culturales, que aun cuando la mayoría no son consideradas con fines de lucro, se forma, se ocnstituyen y comportan como organizaciones. El museo debe de considerar como vital importancia para su permanencia el reconocimiento y analisis de las percepciones de sus visitantes. El presente trabajo tiene como finalidad mostrar las valoraciones que el visitante realiza desde las redes sociales. El caso de estudio para el presente es el Museo de las Momias en Guanajuato.

Museo, visitante, percepción, redes sociales

International Forums / Festival of Academic Research in the Arts: cultural mediation initiative of a collaborative network

Foros internacionales / Festival de investigación académica en las artes: iniciativa de mediación cultural de una red de colaboración

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#### **Abstract**

The Collaboration Networks Have Demonstrated Their effectiveness in the investigative field of IES, Constituting an essential mechanism to That Guarantees Their training and integrators to greater productivity. The Network "Art, Music and Culture" created in 2012 an ambitious project called "Interdisciplinary Circuit of North-Central Mexico and the Caribbean Art", from Which, as a result of the interactions of the different components of the Network Were organized in the Forums / International Arts Festivals. Initially Proposed on experimental an character, They Have Been consolidated in Their organization and Their contents, at the same time That They Have Become one of The most solid and stable programs of the cultural landscape, not only of the UAZ, but of the State of Zacatecas. From the current perspective, Which Allows.

Academic Groups, Research Networks, Arts and Academy, Forums and Festivals

# Equilibrio social, reflejando la responsabilidad social corporativa

# Social Balance, reflecting the Corporate Social Responsibility

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#### **Abstract**

This document is part of a doctoral research, Whose end objective is to propose a new paradigm of Social balance sheet (SBS) for Mexican enterprises. It is an introductory overview for the overall understanding of what Social balance sheet (SBS) and Corporate Social Responsibility (CSR) are as a frame of reference. It Starts With an introduction Describing international agreements That frame the CSR; It Continues with a review expressing the Historical Importance of Social Responsibilities; Then presents the constraints That Have Widespread hindered the effect of the social balance in all areas Nearly; and it ends With an exposition of current models and the conceptual basis for the proposal of a new paradigm of an Ecological Balance (EB) That Exceeds the scope and Commitments of SBS.

Sustainability, Social responsibility, Ecology, Models of Social Balance Sheet

# Apreciación cultural de la tradición de Judas en el municipio de Cuitlahuac, Veracruz

# Cultural appreciation of the tradition of Judas in the municipality of Cuitlahuac, Veracruz

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#### **Abstract**

The present paper Studied Cultural the valuation before to tradition That is shared from the dramatization or ritualization of the Christian story That Arises from an interesting stress Between the ancestral culture and the Catholic hegemony, Represented in a battle of good and evil, Which culture communicates values , and Which is Considered culturally expression of the municipality of Cuitlahuac, Veracruz called The Judas. In order to know the cultural the value of esta tradition in tourists visiting the municipality During Holy Week, a type of quantitative study was Carried out, the research design was descriptive and cross, an applicable instrument was created through a survey staff, Where the theoretical framework provided support for the design of the questionnaire. The integration of the results Obtained in the quantitative study allowed us to move from the identification of themes, constructs and categories to culture the valuation of esta tradition, contributing With This to Obtain reliable data That allow us to Identify the genre in Which culture the roots esta tradition of culture predominate.

### Cultural valuation, Tradition, Tourist, Root

La neguentropia enfocada a la intencionalidad del Recurso Humano de la organización de la egión centro del estado de Coahuila

The neguentropia focused on the intentionality of the Human Resource of the organization of the central state region of Coahuila

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### **Abstract**

The modern organization is run aground between the desire that things will improve automatically and the inability to produce a necessary change, internal trying to convince before this emotional discomfort of its staff, this should aim precisely to a positive change for its improvement; the Organization as a natural system, has a total amount of energy. Part of this energy is released and that the system uses to carry out its functions. The rest of the energy is not usable and corresponds to the entropic energy. The total amount of energy in a system is the sum of the energy entropic more free energy or Negentropy. Insofar as a system approaches equilibrium and stability, increases the amount of energy at the expense of the Negentropy entropic. The political, social and economic conflicts of the modern organization, can be reduced to a basic search for new sources of Negentropy. As the Organization a thermodynamic system still more complex than the physical or biological systems, you need access to sources of Negentropy to feed on that order stored in nature to have a chance of surviving. On the other hand, the acceptance of the intentionality focused on the intentional awareness of the Organization, definitely tends to carry out a necessary transformation of the behavior of where is the perception of tactics and techniques of control supported, to allow the change in the organizational mindset. To complement all this intentionality, in a very important way should be achieved as a strategy, an approach to learning to live, Act, and work way more fulfilling and effective, forming part of the human resources of the organization.

Negentropy, intentional consciousness. Effectiveness and attitude

# Análisis e interpretación del absentismo en una empresa de piezas y ensambles para la industria automotriz de Puebla

# Analysis and interpretation of absenteeism in a company of parts and assemblies for the automotive industry of Puebla

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#### **Abstract**

This paper presents the main results and conclusions of a study carried out in the period January to June 2017 on the registered incidents that cause absenteeism in the company of parts and assemblies for the automotive industry of Puebla, gather in which they showed that the major cause of absence from work is caused by the concept of disability due to illness. Formulas coefficient of frequency and severity were applied to get the higher rate of accidents during this period and presented loas days lost because of disability due to accidents per million man hours worked. Similarly different patterns of absenteeism, as well as proposals to reduce the recommendations made on the supervision of senior officers and middle managers that are specifically intended for those who have the possibility of improving care worker described. For organizations, human talent represents an indispensable element, without it they could not operate and carry out the fulfillment of established projects; destined to produce goods and services. Therefore, it is necessary to create an organizational climate and develop strategies that allow the individual to feel satisfied and identified with the organizational objectives and at the individual level. Currently, there are many organizations that are being affected by a high rate of absenteeism., which causes high costs and low productivity. The causes that promote these situations are varied and complex, which have different characteristics depending on the case. Hence, that this phenomenon is related to the company's policy, the quality of the work environment, the dissatisfaction of the workers.

Work absenteeism, Disabilities, Worker, Coefficient, Assistance

Necesidades de capacitación en el mercado de trabajo rural: Caso mujeres emprendedoras de la comunidad El Estanco, Municipio de Almoloya de Juárez, Estado de México

Training needs in the rural labor market: case of women entrepreneurs from the comunidad El Estanco, Municipio of Almoloya de Juárez, State of México

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#### **Abstract**

The objective of this research is to detect the training needs of women entrepreneurs, specifically in rural areas; based on the application of a questionnaire to 53 enterprising women. This article shows the economic participation of women entrepreneurs in rural areas and confirms that they have other training needs to carry out activities on their own, that most of them started entering the market in conditions of irregularity and instability. It is concluded that I do not lack training in the technical aspect, but also in the emotional context. In addition to having the necessary requirements for their growth, they need to improve the laws and procedure so that they can formalize their business and they are.

Rural labor market, Training needs, Women entrepreneurs

# La lealtad del cliente: Un estudio de tres casos de cafeterías en Ciudad Juárez Chihuahua, México

# Customer loyalty: A study of three cafeteria cases in Ciudad Juárez Chihuahua, Mexico

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#### **Abstract**

Having loyal customers generates great benefits for the company; the manager who accomplished how loyalty is formed can improve his policies towards restaurant service and to establish a better base to generate loyalty in his customers. In this study an analysis of the phenomenon called "Loyalty of the consumers" was carried out; it was developed in three coffee shops in a medium-sized city. Semi-structured interview was used into a group of 62 clients. Each establishment is managed as an independent unit. In the analysis, 13 categories were identified, and a data matrix was elaborated to deepen the study. A network was designed showing the different dimensions of loyalty. To reinforce the information obtained, graphs and images of different groups of informants that were addressed at the time are presented. The findings revealed that customer satisfaction is the first step towards a relationship of loyalty, which has both objective and subjective elements. The service is the element that gives more value to the customer; the quality is not static; customers adjust it to their needs. Positive emotional ties help to build long-term relationships with customers.

Loyalty, Satisfaction, Service, Quality, Customers

# Análisis del desempeño laboral y competitividad en una pequeña industria manufacturera

# Analysis of labor performance and competitiveness in a small manufacturing industry

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#### **Abstract**

It is important to identify the problems that affect labor competitiveness in a company, investigate the factors that intervene in labor competitiveness, in order to detect problems that affect workers in order to find the solution to these problems and also to improve the competitiveness of both the employees as well as the company. Examples of the most common problems that affect labor competitiveness are the salaries of employees. This qualitative research was carried out since we relied on articles, books, magazines and newspapers, in this way information was obtained that provides more knowledge of what are the factors that affect workers and that prevent a competitive advantage for the company.

Competitiveness, Performance, Competitive advantage, Extra-employment

Propuesta de reclutamiento 2.0 como ventaja competitiva para la contratación de talento humano en las organizaciones

# 2.0 recruitment proposal as a competitive advantage for hiring human talent in organizations

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#### **Abstract**

New information and communication technologies have revolutionized Human Resources departments and recruitment and selection processes to find the ideal candidate for each position in an organization. Traditional recruitment practices are no longer efficient in the new connectivity scenario; so the search, recruitment and selection of talent through the web is the evolution of the traditional recruitment model in which companies disclosed to the market the needs of talent and jobs to cover, which is known as Recruitment 2.0. This research aims to reflect on the study of new recruitment techniques as a competitive strategy for attracting talent in organizations and facilitate the recruitment of adequate talent in organizations. The type of research that has been carried out is descriptive; In order to obtain the necessary data to collect information about the impact of recruitment 2.0 for the attraction of talent, the interview with the head of the HR department of a company located in Metepec, State, has been used as an information gathering technique. from Mexico.

### Recruitment 2.0, Labor Profile, HeadHunting

# La sana convivencia y la gestión humana como detonador de la productividad organizacional

# Healthy coexistence and human management as a trigger for organizational productivity

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#### **Abstract**

An organization is a system in which the human resource is a main element for the achievement of the desired results when it is stimulated generating synergy, empathy in an adequate environment that allows better living conditions; so Theodore Schultz and Gary Becker rightly called human capital to people involved in the productive processes of an organization for their intellectual capacity to acquire knowledge and skills that allow flexible and innovative decision making. This article is generated from a documentary research on healthy coexistence as a trigger for organizational productivity, with the purpose of serving as a reference to generate a process optimization model based on activities of healthy coexistence and human management with a focus systemic that allows to visualize how they impact on indicators of organizational productivity such as better results in the achievement of objectives and proposed goals, considering both their environment and their context; within which are suppliers, customers, competition as well as society; so it must be kept communicated and monitored for control.

Healthy Coexistence, Productivity, Organizational, Thought, Systemic

# La influencia de la Cultura Organizacional y el liderazgo en las empresas

### The influence of Organizational Culture and leadership in companies

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#### **Abstract**

This research analyzes, with a mixed design, the extent to which the organizational culture and the operational environment influence the leadership activities of an organization in the midst of a significant organizational change and whether the culture promotes the development of leadership or vice versa in the maquiladora industry in Ciudad Juárez , Chihuahua, Mexico. 172 surveys were carried out for management level employees and supervisors from different areas. The hypothesis associated with the research question was tested using the chi-square test and subjected to testing with the signed Wilcoxon rank test. Additionally, 18 in-depth interviews were conducted using the Seidman protocol. The results of this study provide significant differences between the perceived and preferred leadership of the respondents. The results of this research demonstrate and confirm the integral and interdependent nature of the key concepts that are used as theoretical foundations for the study of the operating environment in the development of leadership. The practical implications of the results are subject to discussion. The opportunities for future research and the limitations of the study are presented.

### Human Resources, Leadership, Organizational culture

### Bienestar laboral en empleados de empresas hoteleras de Villahermosa, Tabasco

### Labor well-being in employees of hotel companies in Villahermosa, Tabasco

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#### **Abstract**

This article exposes the relation of the theory of demands and resources with the well-being of work, aims at the analysis of the labor welfare in the hotel companies of Villahermosa through the degree of satisfaction of the employees with respect to the experiences in their jobs. The method used was the case study, the population under study was composed of 100 employees of companies dedicated to temporary accommodation services and the instrument was the CVT-GOHISALO. The data were analyzed with descriptive statistics and by means of the ANOVA analysis. In the diagnosis of work well-being, one could look at the highest level; therefore, it is possible to infer that their level of satisfaction with the conditions of their jobs in the terms of labor welfare tends to the maximum.

Employees well-being, Working conditions, JDR Theory

### Gestión de Recursos Humanos de 60 años o más en el Sector Público de Salud Pública

# Management of Human Resources of 60 years or more in the Public Public Health Sector

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### **Abstract**

The global ageing pulation are changing the shape of the workplace. Companies need to look forward and prepare for the aging workforce and understand the organizational changes this will bring. This is why we propose to evaluate the aging workforce in a public health institution located in the Valle of Toluca during 2016 and 2017, with the purpose of create a managing an aging workforce model for that reason we applied interview and questionnaires to Human Resources Manager and aging workforce active on the institution. In addition we analyse different age management models especially in Europe, the most important were University of Strathclyde Model (2013), Innobasque Innovation Agency model (2013) and the Metallurgical Business Federation of Valencia (2007).

Ageing, Human resources management, Workforce

# La empleabilidad como fortaleza del cambio en la gestión del capital humano: flexibilidad, compromiso y aprendizaje

# Employability as a strength of change in human capital management: flexibility, commitment and learning

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### **Abstract**

The demographic evolution that tends to an imminent aging of the population caused by low mortality, fertility, birth rate and the increase in life expectancy, which tends to present changes in the age structure of the Economically Active Population in the long term This, in turn, has an impact on the companies' templates, who will have to adopt new ways of managing their human resources, since in a single organization there will have to coexist three generations that grew up in different socioeconomic-cultural contexts. Given the new forms of administration of human resources to which companies have to resort in this age of knowledge, we must allude to the management of diversity within them and emphasize people as a fundamental element of the creation of competitive advantage. Consider that the staff with more experience and knowledge should have a correct management, this staff usually tend to be the oldest people within the organization, hence the need to raise a correct age management.

Employability, Human Capital: Flexibility, Commitment, Learning

# Liderazgo y sustentabilidad en pequeñas organizaciones en Monclova, Coahuila

## Leadership and sustainability in small organizations in Monclova, Coahuila

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#### **Abstract**

Nowadays, it is essential to incorporate sustainable leadership into organizations, becoming a competitive advantage. Leadership not only involves managing staff, they are also obliged to respond to dynamic and labor changes. The focus of this study is based on centralizing a better development of organizations. The descriptive methodology supported by a mixed, qualitative research scheme with documented descriptive and quantitative basics using interviews, a field study with real variables, objective developments and relevant statistical management was applied to 30 entrepreneurs of small businesses with a level of 95% confidence and 5% margin of error.

Leadership, Labor sustainability, Competitive advantage

# La importancia de los materiales didácticos en la lectoescritura de las lenguas originarias

### The importance of the didactic materials in the literacy of the original language

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#### **Abstract**

The different ways of learning are based on observation and in knowing how to listen to these processes are the learning patterns, in this way children practice through the imitation of actions through the game as they grow, concrete learning in real situations as participants in the activities. Classrooms are spaces that can include these experiences in the construction of didactic materials situation that recreates the language in relation to its context that is socially determined by sociocultural practices, which gives children communicative, participative and favorable competence for literacy.

Language, Culture, Didactic Materials, Literacy and Learning

# Diagnóstico sobre estilos de aprendizaje en estudiantes de las áreas de gestión ambiental y biología celular y molecular, de la Lic. en biología de la Universidad de Guadalajara

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#### **Abstract**

There are many reasons associates to student's academic efficiency, one reason is about the learning's style, and in a particular way our research is focused on identify the learning's style that's better for biology's degree students, in the Environmental Management's field (EM) and Cellular and Molecular Biology (CMB). A descriptive cross-sectional study was made and a Honey- Alonso's evaluation instrument was applied to 31 students: 13 from (EM) field and 18 from (CMB) field. The results indicate that students from (EM) field developed Active learning's style (46%), under the high and very high performance category. And students from (CMB) with Pragmatic learning's style (72%), under the high and very high performance category. It concludes that is necessary increase the percentage of performance in the categories high and very high in Active and reflexive's style for (CMB) students and in the four learning's style for (EM).

### Learning's style, Academic performance

Diagnóstico de los conocimientos en matemáticas que poseen los estudiantes de nuevo ingreso de Ingeniería Bioquímica de la U de G.

Diagnosis of the knowledge in mathematics that new students have of Biochemistry Engineering of the U de G.

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### **Abstract**

Basic and applied mathematical competences are the fundamental basis for the training of engineers, whatever the field of specialization. In the University Center of Lagos, University of Guadalajara, we have detected in the students of new income, a failure rate of 50% and 85% in the basic subjects of the Linear Algebra and Concepts of Differential and Integral Calculus, respectively. In the present study, the behavior of the new income population of the Biochemical Engineering's bachelor was analyzed during the years 2012 to 2014, through the application of a diagnostic test to assess specific Mathematical knowledge by specific reagents. The tabulation and statistical analysis of the data obtained, applying the chi square independence test, shows the correlation between the number of successes in the diagnostic examination and the probability of desertion throughout the degree.

Engineering, Mathematics teaching, Reprobation, Desertion

# Aplicación de la estrategia mapas conceptuales para el desarrollo de la competencia comprensión lectora en Biología

# Application of the strategy conceptual maps for the development of the reading comprehension competence in Biology

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#### **Abstract**

Reading now demands a privileged space in the development of science and society, so it is necessary to give it primary attention through education. Therefore, reading is not only a process in which the student is only dedicated to the decoding of words, but to understand and assimilate for the same that analyzes it and how to interpret it according to their previous knowledge. This is how the present Research has as objective the development of the Reading Compression levels of students of Upper Middle Level, through the conceptual maps tool. First, identify the levels of reading comprehension through a diagnosis, to then evaluate the impact of a didactic intervention through the construction of conceptual maps, with content of the subject of Biology, as a tool for the development of comprehension levels reader With respect to the methodology, the study of exploratory, descriptive, quantitative and experimental type, and has the purpose of measuring the degree of relationship that exists between the reading strategy and conceptual concepts and the level of reading comprehension in Biology.

**Engineering, Mathematics teaching, Reprobation, Desertion** 

# Diferencias de género en promedio escolar y atención y concentración en alumnos de Medicina de la FAMEN UJED, Durango

# Gender differences in school average and attention and concentration in Medicine students of FAMEN UJED, Durango

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#### **Abstract**

Objective: to determine the significant differences, statistically, between men and women of the Faculty of Medicine of FAMEN UJED, according to the efficiency of the attention and concentration and the school average. Methodology: exploratory, transversal, retrolective and comparative research. We used 287 files of the students, taking the results of the attention and concentration of the short neuropsychological battery in Spanish NEUROPSI and the average of the school referred by the students. Contribution: With statistical significance, males have a higher score in attention and concentration ability compared to women. No statistically significant difference in the school average was observed.

Attention and concentration, School average, Gender

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# Análisis del mercado laboral actual y posible del Egresado de la Licenciatura en Trabajo Social del CUCSH, U de G

# Analysis of the current and possible labor market of the Graduate of the Social Work Degree of the CUCSH, U de G

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### **Abstract**

The irregularity between the flow of graduates from educational institutions and the tiny opportunities of the productive sector to integrate them into the labor market for graduates is the setting of interest of the Academic Body 547 of the CUCSH, of the U de G. Who proposes to start the follow-up project for graduates of the Dept. of T.S. Institutional Program seen as another alternative option, to assess academic development and enrich the experience to provide feedback to teaching, research, dissemination, and contribute to the improvement of quality in the training and development of student competencies. Higher education institutions face new challenges that constantly praise economic, social, cultural, and technological changes that transcend the social impact of this globalized world (Alonso, 2011). The urgent need to give public faith of the competences of the graduates for their professional practice demands new profiles and innovative mechanisms to ensure their compliance at the end of higher education studies. According to the Research Institute on University and Education (IISUE) of the UNAM; The preparation that they receive within the universities is one of the main challenges that one currently has. On the other hand, students are questioned about their perception of satisfaction with the training received, their performance, academic trajectory and their insertion into the labor market. The National Association of Universities and Institutions of Higher Education (ANUIES) uses as a measuring instrument the studies of graduates to compare the performance in the different institutions and establish projects that achieve a social impact, through methodologies developed by academics and specialists in planning to achieve that the process is effective and can achieve the expected results ANUIES, (2003)

Graduate Profile, Labor Market, Professional Skills and Vocational Training

### Hábitos de lectura en universitarios, como base del analfabetismo funcional

### Reading habits in university students, as a basis for functional illiteracy

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#### **Abstract**

The National Institute of Statistics and Geography (INEGI), in 2011, reported that Mexico has 33 million inhabitants with functional illiteracy, ranging from the basic level to the higher level. Functional illiteracy is a term that applies to people unable to translate written and oral language, and includes those who can not extract knowledge from a text when reading it, which entails not knowing how to express it correctly when writing. (Barton 1994). Since the great rise of Information and Communication Technologies (ICT), for example the audio-book, the possibility that students with access to them have taken an interest in written texts, together with the economic failure to buy books written. There is ample evidence that those persons with adequate reading habits have a minimal possibility of presenting dysfunctional illiteracy; On the contrary, those who do not have reading habits are more likely to present this problem in their adult life. For this reason, a descriptive-transversal-observational-quantitative study was carried out in the present investigation, which allowed to generate a diagnosis in the matter of reading habits in university students, enrolled in the careers of Engineering in Industrial Production, Chemical Engineering, Bachelor in Marketing and Bachelor of Nutrition; all of them from the Acolman Professional Academic Unit. The results obtained show that the majority of the student community of the Acolman Professional Academic Unit lacks adequate reading habits and has several distractions when it comes to reading; so that secondarily may be causing functional illiteracy. Based on the results obtained in the present investigation, the development of effective intervention strategies is proposed, opening the possibility of a new line of research.

Functional Illiteracy, Reading Habits, University

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La observación de campo como experiencia exitosa en el estudiante universitario de la Universidad Tecnológica de León, para el rescate de las tradiciones y cultura gastronómica

Field observation as a successful experience in the university student of the Universidad Tecnológica de León, for the rescue of gastronomic traditions and culture

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### **Abstract**

Culture plays a key role in sustaining and strengthening the quality of life and well-being of individuals and communities. Goods, practices and cultural expressions are fundamental vectors of the creation, transmission and reinterpretation of values, skills and convictions through which individuals and communities express the meaning they give to their lives and their Development The participation of the university student in extracurricular experiences allows him to obtain meaningful, experiential learning, which positively impact on the development of his profession and in his daily life, to connect the past with the present It allows to preserve the ancestral knowledge and to transmit them to the future generations participating actively in the transcendence of the culture. Under this premise, the Social constructivist approach provides the teacher with the tools that make it easier to promote the student's academic development in the acquisition of generic and professional competencies.

Observation, Learning experience, Gastronomy, Culture

# Estrategia de aprendizaje, Reto 2018: Promover la lectura a través del pensamiento crítico

### Learning strategy, Challenge 2018: Promoting reading through critical thinking

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#### **Abstract**

The create strategies of learning for be to develop how a challenge in the higher education to make possible the participation active of the students, "promote the reading through from the critical thinking" was the opportunity for blend motivation, vision clear and a competition academic, in a framework of action in an environment virtual of learning. The objective of the research was interpreting the proposal methodology made for the challenge 2018. The contribution main is the creation of the strategic what can be in higher education, you didn't required cost unusual, on the contrary, you use the resource existing in the students and the university. One result important, the students was able of make 486 arguments in a week, and the 11% of a group was capable of a read for more 300 minutes for day in a week, the overage in México is 49 minutes in higher education according to INEGI in the year 2016.

Reading, Critical Thinking, Motivation, Vision, Challenge

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Educación dual como un modelo para el desarrollo de habilidades y destrezas en equipos colaborativos interuniversitarios dedicados al desarrollo web en la nube

# Dual education as a model for the development of abilities and skills in collaborative interuniversity teams dedicated to web development in the cloud

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### **Abstract**

This article presents the results obtained after having implemented some of the characteristics and practices proposed for dual education, focused on the development of personal and professional skills, as well as the use of tools, of the members involved in software development. avant-garde tools that are in the cloud. The field of interest includes collaboration between higher education institutions with the aim of strategies and work strategies, as well as the relevance of a real problem in the working world, such as the case of a study to improve the development of skills in the personnel involved. Based on the measurement of the impact of the use of platforms in the cloud throughout a project, the authors conclude that these tools favor collaborative work and that they facilitate the elaboration of software projects to offer services available in the cloud, thus achieving. To make the codification and evaluation stage of a computer system more efficient.

Dual education, dPaas, Cloud development, professional competences, Interuniversity teams, Web development

# Estrategias de aprendizaje y su correlación con variables cognitivas y promedio escolar

# Learning strategies and their correlation with cognitive variables and school average

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### **Abstract**

Cognitive assessment has been growing in various fields of research, not only in the applied area of clinical cases with some organic damage, but in studies that begin to identify the relationship of these cognitive processes with different contexts and social situations. Within these new fields of application are the educational contexts. With the objective of identifying learning styles, the average obtained in high school and scores in three cognitive tasks in university students, as well as the correlation of cognitive tasks with learning strategies and the average with learning strategies. Three cognitive tasks and the ACRA instrument were applied to 142 university students, finding positive correlations between the comprehension task and factors of the learning strategies and negative correlations between the cognitive tasks of the manipulative component and factors of the learning strategies. This allows identifying differences in cognitive tasks and their relationship with questionnaires that only verbally identify the use of learning strategies, but not in an observational way the execution of a learning task.

### Cognition, Learning, Strategies, University Students

# Perfil axiológico del licenciado en comunicación humana (estudio de caso)

### **Axiological profile of the bachelor in human Communication (case study)**

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### **Abstract**

The objective of the present investigation is to reflect on the moral construct of the work of health professionals, in this case, of the Human Communication Graduate, in relation to punishable behavior relationships in the exercise of the areas of health and of Education. Qualitative and descriptive methodology. The complexity of the professional in Communication has a bipolar competence, on the one hand it positions it on a par with the health professionals, hence its importance when performing the service as a professional in education of the word and its high impact of the ethical commitment that has with the population it serves.).

### **Ethics, Health, Education**

### La reprobación y su vínculo con el estrés escolar en estudiantes universitarios

### Failure and its link to school stress in college students

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#### **Abstract**

Failure and its relation to school stress in university students. Scool failure is a problem that our system faces in higher education, associated with the lack of study habits, family problems, behavior, etc. However, academic stress does not currently receive enough attention in the context of research. Therefore, this paper aims to study the relationship between school failure and the level of stress in university students. In this study, 30 students from the 2nd semester of the Engineering in Information Technology and 20 students from the second semester of the Higher University Technician (TSU) participated. Likewise, effects on low levels of accreditation have been found, increasing failure during the period of school stress. The methodology used is quantitative, with a correlational exploratory design. The participants were 50 college-level students who have submitted more than one failed subject, for whom they designed and applied a written questionnaire to obtain information quickly and easily. This study contributes to the results that there is an important correlation between the number of cases of failed students and school stress in college students

### Reprobation, School Stress, University Students

### Análisis de las competencias emocionales de egresados universitarios

## Analysis of the emotional competences of university graduates

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### **Abstract**

The objectives of the present quantitative study were to diagnose the level of emotional competences (EC) of the engineering undergraduate student to generate training strategies, also to identify those skills by gender, with the same aims. The sample selected through non-random sampling consisted of 49 men and 29 women whose ages ranged between 20 and 34 years of age. The self-assessment of emotional competence was applied to them through email and social networks [Universidad Nacional de Educación a Distancia (UNED), 2006]. The data was analyzed with the statistical program SPSS 24. The results show that in self-control, empathy and motivation, they have 1.3% of opportunity area and in self-consciousness, self-confidence and social competence have a 5.3% risk, therefore, at the global level in the EC of the graduates, there are no significant differences. Regarding gender, no relevant contrasts were found in the categories evaluated. It concludes on the need to include the EC in the curriculum, mainly because they are one of the reasons for being of universities since it guarantees the employability of the future graduates.

Emotional competences, Emotional education, Graduates, University Curriculum, University-company relationship

# Modelo de diseño instruccional para la modalidad semipresencial en Universidades Tecnológicas

### Instructional design model for the blended modality in Technological Universities

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### **Abstract**

As part of the work carried out by the members of the academic body called "Integral computing solutions", a proposal for instructional design has been designed, under the line of research "Educational Technology", which is intended to be implemented on a learning management tool that it is currently used in the Academic Area of Information and Communication Technologies, which belongs to the Technological University of Xicotepec de Juárez. Virtual learning environments are popular when talking about distance learning, however, methods and tools should be implemented to help meet the goals and objectives that are raised at the beginning of each course. The purpose of this research is to look for models of instructional design that adapt to the subjects of the career of T.S.U. In Information Technology and Communication Area Computer Systems, taking into account the objective and goals pursued by each of them, for this, a review of the curriculum map of the race was carried out in order to analyze the competencies that are to be achieved in Each one of the courses, in this way, was able to propose an instructional design model based on the needs of the academic area..

Virtual learning environments, Instructional design, Learning management

# Factores de salud física y mental como procesos de intervención en la Educación

### Physical and mental health factors as intervention processes in Education

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### **Abstract**

The present article is proposed as main objective to know the relationship between health and education of middle high school students, its an explorative study, phenomenon is examined from a distinct perspective to other studies made; descriptive, since it is specified how is the phenomenon study and correlational (Hernandez 2014). A survey is applied to 224 students from middle high school "3" of the city of Saltillo Coahuila. Results show that students depend on a balanced diet and exercising to feel well and with energy enough to perform the necessary activities in their educative process. On the other hand, emotional stability is also important for students, the fact that the educational institution has specialized personnel constantly, this case psychologists, allows them to feel oriented and that the necessary support in their personal life and academic development is given.

### Health, Physical, Mental, Education

# Entornos Sociales basados en el aprendizaje de jóvenes de bachillerato del Estado de Coahuila

# Social Environments based on the learning of young people of baccalaureate of the State of Coahuila

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## **Abstract**

It is known that eating habits are different between geographical areas of the country. The customs, traditions and characteristics of food production are very dissimilar. This research work is entitled Social Environments based on the Learning of young people of Baccalaureate of the state of Coahuila and is directed to the proposal of schemes of regional Quality of Life that favor the Academic Performance and Styles of Learning in young people of baccalaureate. In order to typify the aforementioned phenomena, the three axes mentioned will be measured through an instrument, which contains 202 variables, 189 of which are quantitative. It is worth mentioning that in order to complete the final application, it had to go through two phases of piloting, consolidating normality with an alpha of .89. Some of the results of this work is that the Quality of Life, according to a measure of central tendency measurement, informs that the students present emotional, physical and economic stability.

Quality of Life, Academic Performance, Young boys, Baccalaureate

# Inteligencia y tendencias vocacionales en alumnos de nivel medio superior

## Intelligence and vocational trends in high school students

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### **Abstract**

Objectives: The general objective is to identify the relationship between intelligence and vocational tendencies of upper secondary students. Methodology: The research is quantitative, descriptive, non-experimental, transversal, correlational. We used the Questionnaire of Interests and Aptitudes of Luis Herrera y Montes and the intelligence test Domino de E. Anstey. Contribution: The research will allow students of secondary education to have knowledge of themselves by identifying their interests and aptitudes and relate them to intelligence, knowing how to adapt to their environment, solving problems in an appropriate manner that leads them to insert productively into the workplace, being productive and socially adapted when making a successful vocational decision. In this way, social problems that are caused by people who are not socially productive due to lack of work and studies will be avoided.

## Vocational trends, Intelligence, Vocational decision

## Violencia en adolescentes de secundaria

## Violence in adolescents of high School

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### **Abstract**

The main objective of this study is to explore the attitudes of violence in students of the Technical Secondary School 67 of Guadalupe, Zacatecas. In order to achieve the objective, an exploratory, transversal method of non-experimental type was used, using the questionnaire technique of open questions, with a sample of 200 adolescent students. The results obtained indicate a low conceptual knowledge of violence, as well as a risk factor within the educational institution with the incongruity of the duty to be of parents, teachers as managers and the behavioral application of knowledge in a truthful or objective and impartial way.

Violence, Stereotype, Social influence, Social representations

# Educación musical: Estrategia transversal en educación preescolar

Music education: Cross curricular strategy in preeschool

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#### **Abstract**

Through lifetime, human being has contact with elements that are related to music, such as sounds, rhythm, melody, among others. It is observed that Preschool Education Program (PEP) at Mexican Educational System includes few aspects of music, generally for the three grades, in the field of Expression and Artistic Appreciation, which shares with corporal expression, dance and visual arts. This research is a quantitative, cross-sectional approach and its objective is to study relationships between music education elements and cognitive, psychomotor, social and affective preschooler's development. Correlation analysis results show evidence of relationships between music education and the development areas of the preschooler. Contribution: Enhancing the preschooler's whole development through the music education as a cross curricular strategy in preschool education.

Music education, Cross curricular strategy, Preschooler whole development

# Auto aprendizaje desde el procesamiento profundo / elaborativo

## **Self-learning from deep processing / elaboration**

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### **Abstract**

This research answers the question what is the relationship between self-learning and the learning styles of higher education students? The methodology used is of quantitative cut, for the collection of the data was used the questionnaire of ILP-R (SCHMECK), the sample was formed of 48 subjects: 28 students of the Autonomous University of Coahuila of the degree of Science, Education and humanities and the other 20 students belong to the University of León of Barcelona Spain; With the working hypothesis self-learning is related to deep/abstract procedure. The statistical analyses performed were descriptive, integracional and relational.

Self-learning, Procedure, Deep, Elaborate

# La Autoestima como conductor del Éxito Educativo

### Self-esteem as a driver of Educational Success

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### **Abstract**

It is evident that in our country education has taken a lot of importance, and with this the growth of the academic performance of the students, but at present several aspects such as the development of selfesteem have been neglected. Having a high self-esteem is extremely important in the teaching-learning process, this is how the question arises. How does school performance relate to students' self-esteem? The study population is the sixth year students of the Rubén Humberto Moreira Flores school. We worked with an instrument that consists of 5 signal variables and 37 variables of the phenomenon of study, with a decimal scale; which were processed in the SPSS and Statistic programs. The variables are homogeneous which allows to say that the decisions made will be reliable, in addition to the ways to evaluate are a tool for students to learn to live and work as a team. School performance is enhanced by working with respect in the classroom, so coexistence motivates students to be able to express themselves and give their points of view, which generates understanding and acquisition of new knowledge that helps to excel in life daily, so that the development of skills implies dedication to study. Deriving from the results of this research, it is argued that it is in favor of Zapata (2009), by saying that academic performance is understood as the system that measures achievements and the construction of knowledge in students. Therefore, it is proposed to create spaces as departments for the development of self-esteem and also provide feedback exercises for children.

## School performance, self-esteem, children

# Planeaciones didácticas, propuesta para la educación básica en hospitales

# Didactic planning, proposal for basic education in hospitals

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### **Abstract**

The following article addresses the issue of education in the pediatric hospital of Tuxtla Gutiérrez Chiapas, its purpose is to design basic educational plans for hospitalized students. It is based on the sociocritical paradigm, its vision is social transformation, thus responding to specific problems within the groups where its members participate, which has a close relationship in the case of the students of the program. Hospital. The results marked the significant learning necessary in student-patients who for health reasons can not reach regular classes.

Hospital education, didactic planning, inclusion, basic education

# Actividades artísticas y recreativas, una forma de potenciar el desarrollo cognitivo en estudiantes universitarios

# Artistic and recreational activities, a way to promote cognitive development in university students

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#### **Abstract**

Artistic activities are seen in most educational systems as extra-curricular; that is, it is assumed that their practice should be taken outside the school curriculum. However, this research arises to corroborate the relationship between cognitive development and artistic and recreational activities, with the aim of prospecting a variant to the current educational systems in Mexico, which are characterized by being restrictive and dogmatic. It is hypothesized that there is a relationship between artistic and recreational activities and the cognitive development of university students. A quantitative research methodology was developed, elaborating an ex profeso instrument, with analysis of correlational scope.

## Artistic, Recreational, Cognition

# La Formación de estudiantes como investigadores y de investigadores como evaluadores en la FENACI Coahuila 2017

# The training of students as researchers and the researchers as evaluators in the FENACI Coahuila 2017

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ID 3er Coautor: Claudia, Cervantes-Marmolejo

#### **Abstract**

An analytical vision of the Feria Nacional de Ciencias e Ingenierías Coahuila 2017 (FENACI) is presented, a scientific and / or technological projects contest coordinated by the CONACYT through Science and Technology Councils of the States of the Mexican Republic, to encourage and reward the creativity, originality and scientific merit of students at the elemental, secondary and higher education levels. The FENACI accredits projects to participate in INTEL ISEF. We analyzed the training of students as researchers in 209 proposed projects, and 65 recognized researchers as evaluators, in order to find areas for improvement and possible development alternatives for FENACI. With these objectives, the methodology consisted in treating 19 nominal and ordinal variables with frequencies and percentages, descriptive statistics and t-tests. The proposals refer that the evaluators agree on the evaluation criteria of the projects, since they appear to be 2 populations of judges due to their coefficient of variability, and also design a practical diploma for the student's advisory teachers with protocols on the discovery process, applied research and technological innovation.

Research projects. R&D&I. Investigators. Evaluators

## Educación musical preescolar: Perspectiva y demanda de los padres de familia

## Preschool music education: Parents' perspective and rights

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### **Abstract**

This is a cross sectional quantitative research approach and its objective is to know the impact of music education and teaching music in the pre-schooler's wholistic development, from a parents' perspective. The priority in Basic Education is Math and Spanish contrasting with music education contents which are few. As a result, a relation was found between the music variables and the wholistic development as evidence. Although the parents' interests is to see that their children only feel the beat and sing, they don't consider relevant the children understanding the music activities. Contribution: Enhancing the cognitive, motor, social and affective development process through music education which involves preschoolers, teachers and parents.

Music education, music teaching, preschooler wholistic developmen

# Nivel de aptitud desarrollo de pensamiento computacional por grado en estudiantes de educación secundaria

## Skill level computational thinking development by grade in high school students

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#### **Abstract**

A study of Computational Thinking (CT) and its relationship with the academic degree in secondary level students is presented. The CT is composed of skills to solve problems and understand human behavior. The objective was to identify the level of aptitude development of computational thinking by grade in junior high school students who belong to the AS group of USAER. The study is quantitative and correlational type, sampling was not probabilistic. A previously validated computational thinking test (CTT) was applied. The results show the CT areas that should be strengthened and these are: simple conditional, compound conditional and simple functions. Maturity and cognitive development by academic grade does not define the level of CT development.

Skills development, Computational thinking, Problem solving

# Redes sociales y habilidades sociales en alumnos de la Preparatoria 6 de Tuxtla Gutiérrez, Chiapas

# Social networks and social skills in students of Tuxtla Gutiérrez High School 6, Chiapas

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#### **Abstract**

The present document named social networks and social abilities in the students from the high school 6 in Tuxtla Gutierrez which belongs to the subsystem of the upper middle education that aims to respond to individualization process that the generations are facing through the use of the internet and the social networks. The above mentioned by means of a no probabilistic correlational research. This research is based on the socio anthropology concept estesica in relation with the use of the social networks in the teenagers who are dominated by the daily use of mobile devices, these teenagers live in a world full of information and knowledge but with no communication. This situation also generates inherent anomias shaded as individualization of the school and family groups that carry everything to an empty era, accompanied by a super saturation of feelings that teenagers cannot assimilate or even analyze.

# Internet, Social networks, Social abilities

Plan estratégico para contribuir a disminuir la deserción escolar de los jóvenes que cursan sus estudios en las instituciones de educación media superior del Municipio de Carrillo Puerto, Veracruz

Strategic plan to help reduce the dropout rate of young people who are studying at higher education institutions in the Municipality of Carrillo Puerto, Veracruz

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#### **Abstract**

The present has as objective the creation of a strategic plan with the participation of students, parents, teachers of Higher Education Institutions and municipal authorities, to contribute to the decrease of the dropout of high school students in the Municipality of Carrillo Puerto, Veracruz. The research took as subjects of study three telebachilleratos making a total of 12 deserters, 9 parents, 6 professors of the IEMS and the opinion of 2 municipal authorities. It also supported instruments for the collection of information such as the survey, interviews, focus group and observation method. The study took into account three stages of the phenomenological method, the descriptive, structural and discussion stage. The contribution given is to propose activities that benefit students who are currently studying at the high school level.

School Dropout, Strategic Plan, Balanced ScorecardResumen

# Los Zurdos y la Química. Universos que coexisten para bien y para mal

## Lefties and chemistry. Universes that coexist for good and for evil

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## Abstract

The people who use the left hand are called left-handed and show predominance of the right cerebral hemisphere, defined as laterality, a characteristic that manifests 10% of the world population. In a right-hand world, this difference causes a certain degree of stress, accident propensity and increased learning time in manual activities. This paper presents an overview of some characteristics of left-handers and their problems in the field of chemistry, particularly in the procedural area in laboratories where the teaching-learning process presents a particular problem, rarely visible to most teachers in the area. The technique of sowing microorganisms in a Petri dish with a scheme designed for the use of the left-handers was applied, the results of the impressions of the left-handed students are presented. The reason for this work is to provide an alternative tool for both students and teachers to help the teaching-learning process.

Left-handed, Chemistry, Learning laboratory, Petri dish

## El Laboratorio Nómada del Agua, Con-Ciencia ambiental desde la Educación Básica

## The Nomadic Water Laboratory, Environmental Science from Basic Education

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### Abstract

The Projects supported by CONACYT in the "National Strategy to Promote and Strengthen the Dissemination of Science, Technology and Innovation in the Federative Entities: Coahuila 2017" highlights the "Nomadic Water Laboratory" COAH2O, which is a bus equipped as interactive and itinerant laboratory, where with videos, infographics, experiments and observation, children learn in the laboratory the nature, importance and problems of water, as well as the value of science, technology and innovation as means to provide solutions to sustainable development. The method was the Discourse Analysis through Text Mining in a Hermeneutic Unit with 505 cases and 1,515 texts. The contribution of the research according to the results was: identify the basic concepts about the nature, importance and problems of water, the function and value of scientific knowledge and the sustainable development, to provide teachers with an informal education tool that complements their academic program, that problems are solved with our individual and collective actions, to promote scientific-technological vocations, the formation of a scientific culture in children and, improve the logistics of activities and didactic contents of COAH2O.

Environmental education, Scientific education, Basic education, Text analysis

# Diseño e implementación de Realidad aumentada como herramienta de aprendizaje en preescolar

# Design and implementation of Augmented reality as a learning tool in preschoolt

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### **Abstract**

The Augmented Reality can be aplies as a non-traditional teaching method, becoming in a technologic-educational tool, capable of being used trough a mobile device. It has the goal to provide the knowledge transmission by allowing pupils to develop in different knowledge areas. In this document is reflected the development of the prototype, trough the method of the project.

Augmented reality, use of the teaching, technologic-educational tool

# Aplicación de diferentes canales de aprendizaje en Ingeniería

## Application of different learning channels in Engineering

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### **Abstract**

The matter of Advanced Industrial Control and contributes to the training of the mechanical engineer in the application of programmable logic controllers in the mechanical automation processes, there are two difficulties in this learning process: 1.- The correct understanding of the logical diagrams by the students. 2.- Lack of equipment that covers the different brands of logic controllers used in the industry. The objective of this paper is to establish the effectiveness of the learning channel used according to the perception of students. The methodology that was followed was as follows: Use case practices and methods that weigh a particular learning channel during the course of advanced industrial control subjects and the subject of Pneumatics and Hydraulics, then use an exit survey at the end of each course to measure the results of the sequence. The present article shows that the learning channel used more effectively by the students of both courses analyzed was Kinesthetic with 89 and 90% respectively.

Application of different learning channels in Engineering

# Educación con Tecnologías de la Información para enfrentar retos en la era digital Education with Information Technologies to face challenges in the digital age

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### **Abstract**

In the actuality the use of the IT it's a tool indispensable in the development in activities inside of the classroom, this it's allows realice homework in form synchronous and asynchronous, in this way is posible acquire abilities to easy the teaching process and make dynamic relation learning between students and teachers, with the porpose of make a new profile of competitions. The objetive of this Project is work with the students of the Instituto Tecnológico Superior de Irapuato in matter Investigation Workshop II, the metheodology of e-learing uses in educcative support sistema, this is conducive to interships and teamwork and verbal competence, and technology using this technologica resources for activities we could make acces for the ubicua education, favoring learning for the students.

Augmented reality, Information technology, Meaningful learning

# Elementos externos de la tesis, Un nuevo enfoque

## External elements in a thesis, A new approach research

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#### **Abstract**

This essay encompass the external elements of a thesis. Those are the initial parts and the final parts of a scientific research. It begins with the cover or the front cover, the back cover, the credits page, dedications, general index, introduction and the final elements will be integrated later such as the annexed an the colophon. This external elements are too integrated the redaction and the punctuation signals and the unification of the scientific research. Each one of these elements must be well used to get a new focus in the thesis knowledge. There will be the moment of getting high quality thesis. This is the principal purpose of this essay

## **External Elements, Thesis, New Approach**

# Realidad Aumentada, Un espacio de aplicación para la práctica educativa

## Augmented Reality, An application space for educational practice

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### **Abstract**

In the actuality the use of Information Techology as support teacher is very important for the development of academic strategy for the benefit of the students and whit this obtain a great learning. In our days find educative tolos who search the find of goals. Today the technology who use the móvil devices reach to incorporate virtual data's from objects acound us, that can get better interacction of information allowing flew technology like augmeted reality, thad changes the creative ways and make more educational content. Base don interviews on hig schools, we can asume that the technology fosters interest for the academic things and stimulates learning, this base don results about 63% of students who used IT strategy. This article see to analyze the augmented reality to convert in a academic strategy and meke better and more skills and abilities.

Augmented reality, Information technology, Meaningful learning

Deserción y desempeño en matemáticas de estudiantes de Ingeniería en Tecnologías de Manufactura de la Universidad Politécnica de Baja California

Dropout and performance in mathematics of Engineering students in Manufacturing Technologies of the Universidad Politécnica de Baja California

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### **Abstract**

The multitude of factors involved in dropout and academic performance makes it extremely difficult to predict which student is at risk of dropping out of school. Therefore, this paper explores and evaluates the relationship between the failure in the subjects of mathematics of the students of Engineering in Manufacturing Technologies of the Polytechnic University of Baja California and the desertion that occurs during or at the end of the first year. It was found, when evaluating the cohorts from August 2009 to April 2017, that on average 39% of the students who enter the program abandon it at the end of the first year. Of which 88% are removed in the first two quarters. Regarding the correlation, we found one of r=0.505 and r=0.415 with a significance of p<0.01, between the first four-month dropout rate and the failure rate of differential and integral calculus and linear algebra, respectively.

### **Dropout, Mathematics, Failure**

## Didáctica de un didacta intelectual

### Didactic of an intellectual didact

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### **Abstract**

This research arises from the necessity of the intellectual didacts existence in the school. These are characterized for using a reflexive, critic and creative self-thought. As general objective it is wanted to understand the work style of an Intellectual Didact. As specific objective it is intended to understand the didactic of an intellectual didact. It is used the case's study method with an ethnographic-qualitative cut and the investigation model action-research with a deliberative vision. It is considered that the improvement of this school's results could be built from a didactic meditated and applied by an intellectual didact for the specific context where he is located, and from it, the students could rebuilt their way of thinking to develop their intelligence, into a free and open dialogue environment, and so, to generate long-term and useful learnings for their daily life which allow them having a politic vision to participate in a releasing social transformation of their community.

Didactic, Didact, Intellectual, Intelligence, Freedom

# Formación en investigación bajo el enfoque de la interculturalidad

## Training in research under the intercultural approach

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#### **Abstract**

The research in the Intercultural Universities should be governed by the premises of the intercultural approach and articulated with the other functions. However, studies reveal that the Intercultural University of the State of Tabasco (UIET) requires actions to improve the articulation of substantive functions and strengthen the intercultural approach in research. The purpose of this project was to generate capacities for the design, development and evaluation of related and binding research proposals, in order to contribute to the interrelation of the substantive functions of the UIET, for which a training program was developed under the modality of diploma. This program was financed by CONACYT (Project: 0190359) and was organized in five modules. Appraisal instruments were applied to each of the modules and to the research proposals developed. The results include the participation of 34 teachers and 10 students, the design of 12 research proposals with an intercultural focus, and research discussion documents from an intercultural perspective.

Research, Interculturality, Linkage, Training

Indicadores y caracterización del estado del proceso de enseñanza aprendizaje del Cálculo Diferencial e Integral en la carrera de Ingeniería Financiera de la Universidad Politécnica del Golfo de México

Indicators and characterization of the state of the teaching-learning process of Differential and Integral Calculus in the Financial Engineering career of the Universidad Politécnica del Golfo de México

ABREU-TORIBIO, Luis Alberto, CARRILLO-CÓRDOVA, José Francisco, TORRES-LIMA, Pastor Gregorio y PERALTA-JIMÉNEZ, José Ramón

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#### **Abstract**

The article presents the indicators and results obtained in the process of characterization of the state of the teaching-learning process of the Differential and Integral Calculus in the career of Financial Engineering of the Polytechnic University of the Gulf of Mexico for the implementation of a didactic procedure for the teaching process - learning the differential and integral calculus in the career of Financial Engineering from the approach and solution of contextualized problems, where the mathematical modeling and the integration of the ICT for the achievement of an active, reflective and contextualized to the profession in which the students are going to play.

Mathematics teaching, Problem solving, Contextualized problems, Integration of ICT

# Análisis de la actividad cerebral, el cálculo y el promedio escolar en estudiantes de medicina de la FAMEN UJED

# Analysis of brain activity, calculation and school level in medical students of the FAMEN UJED

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### **Abstract**

Objectives and Methodology: Identify the behavior of quantitative brain activity, the ability to calculate and the school level in the Medicine students of the FAMEN UJED. The research was experimental, exploratory, cross-sectional and observational. With descriptive and comparative statistical analysis. Contribution: We have found a low percentage of students with alteration in the ability to calculate justifies that care must be taken that every medical student must have satisfactory efficiency in the ability of calculation to ensure the proper execution of medical procedures involving the use of the calculation for the exercise of medicine.

## **Dropout, Mathematics, Failure**

# Importancia de la reproducibilidad y la replicabilidad en el desarrollo de proyectos que promueven la transversalidad

# Importance of reproducibility and replicability in the development of projects that promote transversality

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### **Abstract**

As González (2006) indicates, experimentation is an important part of both scientific and industrial research, which is why, within the engineering courses, emphasis must be placed on the correct methodology to be carried out for the achievement of the objectives, optimizing with this in the processes, time and economic resources, the engineering graduate must be aware of this process so that he can be a key piece in the improvements of any company where he provides his services. Of vital importance to equip the student of engineering tools that help you sort and clarify the variables that are part of the established design. In this tenor, the Design of Experiments is a statistical tool that allows to optimize processes and products in the development of projects, minimizing costs. The application of this strategy is aimed at contributing to the engineer's training, so that inserting himself into the labor field is an easy process due to the preparation he has acquired. The intention of the present work is to give a panorama of the applied and of the implemented improvements with the purpose of diminishing the variance of the error

Learning, Projects, Mkills, mathematics

# Ambientes y estrategias de aprendizaje en una competencia de microbiología

## Learning environments and extrategies in a microbology competence

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#### **Abstract**

Learning environments provide elements that support the development of skills and competencies in the student. This diagnostic-quantitative study investigate how the teaching-learning process is make through competence in the course of food microbiology and recognizing the best learning environment where the student takes knowledge from the information transmitted. One group of students of the Microbiology course in CUCBA of the U. de G. was evaluated, distributed in four treatments. The objective was to evaluate the effect of the Learning Environment and strategies in a microbiology competition. There were four treatments: T1 = The students worked with the explained by the teacher, T2 = The students performed activities in class and extra-class tasks (with teacher). T3 = Students worked with individual task activities and team work in class (without teacher). T4 = The students carried out a questionnaire of the units of competence. The results were: T1 =92 $\pm$  12.1, T2 =91 $\pm$  13.0, T3 = 87 $\pm$  12.6 and T4 = 89 $\pm$  14.5 resulting different among them (P $\leq$ 0.01). The best learning environment was T1. It is concluded that the students need the teacher as a guide and with activities for a better use of the competition.

Learning, communication, knowledge construction collaborative work, personal interaction

# Actividad electrofisiológica cerebral y habilidad lectora en alumnos de la carrera de Medicina de la FAMEN-UJED Campus Durango

# Brain Electrophysiological Activity and Reading Hability at Medical Students of FAMEN-UJED, Campus Durango

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### **Abstract**

The role played by brain activity in reading is of great importance. The objective is to identify the correlation between the average of the quantitative brain activity and the reading ability, in Medicine students of the FAMEN-UJED, Campus Durango. The research was exploratory, non-experimental, observational and cross-sectional with descriptive and correlational analysis of a sample of 288 FAMEN-UJED medical students, selected with a 95% reliability of a universe of 1139 students, evaluated with quantitative electroencephalography, and the Brief Neuropsychological Battery in Spanish (NEUROPSI). A statistically significant, negative, very weak correlation was found between the voltage registered in FP1, FP2 and T3, with the reading ability. It was concluded that quantitative electroencephalography allows identifying students with poor reading ability, giving the opportunity to establish early strategies of educational attention that optimize this ability to positively impact the neurocognitive and professional development.

Brain activity, Electroencephalogram reading hability

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Pruebas de software como estrategia de calidad en el sistema único de registro de aspirantes a la educación superior

# Test of software as a quality strategy in the unique system of registration of aspirants to higher education

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#### Abstract

SICES in 2017 requests ITSUR and deSoft to develop the SUREDSU platform, a web platform that will be developed to detect the educational expectations of students in the upper secondary schools of the state of Guanajuato. With this project, deSoft faces new challenges: making software for an external client, developing a platform aimed at users between 17 and 22 years old, and also developing software with a high level of concurrency. The members of deSoft, share a great interest in the quality of software generation, their quality strategy is certification in the CMMI-DEV model which was achieved in 2013 and which involves the application of software tests. To overcome the challenges faced with the SUREDSU platform, system tests have been applied: stress, usability, functionality, interface and data validation. Achieving identify the defects before delivery of the software and thereby meet the expectations of the client and end users.

Quality, Test, Bug

Aporte evaluativo sobre las características del acompañamiento tutorial en la modalidad a distancia: El caso de la DACEA-UJAT

# Evaluative contribution on the characteristics of the tutorial accompaniment in the distance modality: The case of the DACEA-UJAT

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### **Abstract**

In this work of diagnostic nature, addresses aspects of the needs of tutoring students of the system at a distance, as a proposal for inclusion in the Action Plan Tutorial (PAT) in the Academic Division of Economic and Administrative Sciences (DACEA). Derived from the results obtained from the research "Diagnosis of tutoring needs for students of distance modality". Given the nature of the proposed study object, our methodological approach to follow in the research was of a mixed quantitative and qualitative profile; through it, two different subjects who share the same institutional context were contemplated: the tutor and the tutor. This reflection contributes to the implementation of shared strategies with the authorities of the DACEA focused on the first guidelines aimed at improving the process of accompaniment in educational programs. Proposals were made focused on the improvement of learning habits and the development of school life in this type of studies and the achievement of institutionalizing teacher training workshops

Educational Programs, Annual Tutoring Program, Mentoring Strategies, Process Imp

# Inserción laboral temprana en estudiantes universitarios morelenses de nuevo ingreso

## Early labor insertion in new university students from Morelos

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### **Abstract**

The labor insertion in young people is an issue that becomes part of the social, political and institutional interest every day. There are few studies that address the issue of the labor insertion of students who finish the upper secondary level and simultaneously enter higher-level studies. Having as objective the present investigation to identify the correlation of the early labor insertion with the socioeconomic and sociodemographic level of the students that finished high school and enter the first semester in higher education. 142 new students entered the UAEM, the AMAI index questionnaire was applied to identify the socioeconomic level, questionnaire to investigate the sociodemographic variables and the labor insertion. Weak negative correlations were found between the level of schooling and occupation of the father with the work situation and the hours worked by the students and a weak negative correlation between the level of education of the mother and the hours worked, and the level of occupation of the mother. mother with the work situation.

Labor insertion, High school, Socioeconomic level, Sociodemographic level, Students

# Principales barreras de comunicación durante la formación del informático administrativo

## Main communication barriers during the training of the administrative computer

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#### **Abstract**

The need for communication in the human being has been a factor for its evolution, guidelines must be established to carry out the communication exercise in an effective and productive manner. Higher education requires communication as an important element, in the research the analysis is presented to identify the main barriers of communication in the educational process of the administrative computer career of the Centro Universitario UAEM Valle de Chalco of the Universidad Autónoma del Estado de México. They were examined through the development of two instruments to recognize the communication obstacles, it was applied to the total of the warehouses and to 122 students of the degree in administrative computer science. Based on the results, five solutions were proposed to support teachers and students to achieve effective communication that contributes to communication skills, and the order and implementation period of each solution was determined.

Learning, Communication competence, Communication, Higher Education

# Los factores de deserción: Perspectiva del estudiante

## The dropout factors: student perspective

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#### **Abstract**

The Coordination of Tutoring has various actions, its objective is to strengthen learning and address the problems of desertion, educational lag and failure rates, among others. In this way, the president's work aims to know the factors of desertion in students of upper secondary level that could affect their stay in the institution and know their perception about it. The results of this analysis will be used as support for the Tutoring Coordination to design pertinent strategies and thus reduce the dropout rate. To carry out this research, a questionnaire was applied to 98 young people between 15 and 19 years old. The results obtained show that the main components that generate desertion are economic, family and motivational. Regarding the teachers' support judgment on their students, 62% of the respondents state that it is "regular" that on rare occasions their concerns about the activities implemented by the school to originate the permanence are heard; while 55% say it is "sufficient", and 16% say there are no actions. It is interesting to find that 86% of young people say they perceive a good relationship between students and teachers. As we have mentioned, a substantial factor is the motivation, since if this is insufficient, the student can make the decision to drop out of school. This primordial aspect is possible to achieve if you work in each class session together with the group and individual tutors, because that is where you can achieve an academic environment of support and active listening. This will be a precise component for the academic continuation of young people. Likewise, it is necessary to outline actions that communicate to young people about financial support such as scholarships offered by the institution, as well as extracurricular actions that may be of interest to them. These mechanisms will consolidate their personal needs, an important component for comprehensive education.

Desertion, Tutoring, Student, High school

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## Visión universitaria, su afinidad con la realidad laboral

## University vision, its affinity with the labor reality

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#### **Abstract**

Education and job market are two closely associated terms, but paradoxically disjointed. What these swinging theories, policies and reforms do is to make the graduated students find poorly paid jobs, without benefits and neglected by the normativity of the companies that find these graduated students unprepared to perform a job. Vision univeritaria, su afinidad con la realidad laboral, does more than just show the relation among both environments; its objective alludes to: identify the affinity between the students' perspective and the reality of the job market. Answering to: do the students know the minimum wage and the benefits established by the law? Are the job fields in accordance with the academic development? And among other questions, are the graduate students going to continue studying? Due to its objectives, questions and analyzes this research is exploratory and transversal; it's based on the perspective of 224 students from different schools: plastic arts, psychology, Spanish language, and educational sciences from the UAC in Saltillo. Only 59 students know the minimum wage; most of them know about IMSS as a benefit by law. The survey respondent will continue studying and are about to surpass their parents in educational level.

Wage, Benefits by law, Job field, Academic development

La vinculación como medio para mejorar el desempeño profesional y lograr el desarrollo humano integral del ingeniero

# Linkage as a means to improve professional performance and achieve the integral human development of the engineer

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#### **Abstract**

Mexico faces serious problems that greatly affect its development; one of them is the education system; delicate to improve the living conditions of humanity, with the responsibility of preparing the student for work and for life; provide comprehensive training, which not only depends on the knowledge and skills that are acquired in classrooms, but the convictions, feelings and ethical values that regulate professional performance as a graduate. The linking of Higher Secondary Education Institutions should contribute to establishing strategies for the improvement of education, with values and a broader sense that glimpse work environments, as well as aspects related to personal and integral development. The objective of this paper is to capture information on the graduates of the Technological Institute of Puebla (ITP) in the labor sector, to know their areas of opportunity and if the role of linking fulfills its mission to promote strategies and management actions that strengthen the integral formation of the student. The method used for this work is the systems approach.

Human development, Integral development, Linking

Mediación institucional para la transferencia tecnológica entre universidad y empresa. Reflexiones sobre un sistema de gestión cognitiva

Institutional mediation for technology transfer between university and business. Reflections on a cognitive management system

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#### **Abstract**

The prevailing economic model suggest that technological development is one of the top priorities in the public policy. This perspective is based on a knowledge system that constitutes the modern society basis. Technology transfer is understood as a mediation among several organizational institutions focused on the prevention and solution to several problems through applied knowledge and innovation development. However, knowledge application and its development levels its overvalued above knowledge production as a primary resource to generate innovations than can be useful in the economic and business. This paper discuses briefly about the importance of a system based on knowledge management rather than one focused on obtaining benefits. Also, we expose some of the most relevant theoretical perspectives that support the models that analyze the knowledge production and cognitive exchange, as well as those that seek to elucidate their primal applications such as technology transfer and innovation.

Knowledge, Innovation, Cognitive managment, Technology Transfer

## Talento emprendedor en estudiantes universitarios: Una propuesta de medición en la Universidad Autónoma de Ciudad Juárez

## Entrepreneurial talent in university students: A measurement proposal in the Universidad Autónoma de Ciudad Juárez

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#### **Abstract**

Entrepreneurial talent in university students: a measurement proposal at the Universidad Autonoma de Ciudad Juarez. In Mexico, with the creation of the Instituto Nacional del Emprendedor five years ago it has been proposed that an alternative of labour incursion by university students is the creation of a business, which would allow them to have a source of employment and income. Different institutions of higher education, such as the Autonomous University of Ciudad Juárez, have tried to contribute to the promotion of entrepreneurship. However, some critics say that too much is promoted the possibility of being entrepreneurs without stopping to think if you really have the character to achieve it. Therefore, the objective of this research is to determine the level of entrepreneurial talent that the students of the different programs of study in the Division Multidisciplinaria en Ciudad Universitaria of the Universidad Autonoma de Ciudad Juarez have, as well as its presence in each study program, its relationship with the level of progress in the trajectory of the students and the genre. The research was descriptive, nonexperimental, transversal with quantitative approach using the survey technique. The target population consisted of the enrolment of university students enrolled in the January-June semester of 2018. The contribution of the study is to propose a measuring instrument that allows to determine the university entrepreneurial talent, to identify and to justify the needs of business formation from the classroom and to promote the development of skills of entrepreneurship in each curriculum.

Entrepreneurial talent, Students, Public university

## La formación de investigadores conforme al sistema de creencias de los estudiantes de un posgrado de calidad

# The training of researchers according to the belief system of the students of a quality postgraduate program

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#### **Abstract**

The objective of this research is to characterize the training of researchers according to the belief system of students of a quality postgraduate program. The approach of the problem defines the difficulties that the students present in the development of their formative process, in particular to their thesis and the relations with their advisor. The method is qualitative cut based on symbolic interactionism. The sample is not probabilistic of intentional character conformed by 15 participants of a postgraduate course that is oriented towards the formation of researchers in education with registry in the National Program of Postgraduate of Quality (PNPC). The results define the belief system of students in the following theoretical categories: a) Category Being a researcher, b) Category Development of the thesis, c) Category Relationship with the advisor. The conclusions define that being a researcher is a lifestyle, and that the training process implies the development of skills anchored in the development of the thesis and in intimate relation with the advisor.

### Educational research, Researchers, Training

### Vivencias sobre el uso de Kahoot! en la educación superior

### **Experiences on the use of Kahoot! in higher education**

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#### Abstract

The employment of game dynamics by the teacher, stimulates the active participation of the students by promoting a positive environment for learning, if a student is motivated, he is going to learn more and in a better way by appropriating knowledge in a meaningful process. From the subject of Veterinary Bacteriology, the use of the Kahoot application was entrusted as a didactic tool to encourage interaction and increase the learning capabilities of the undergraduate students of the Veterinary Medicine and Zootechnics degree, of the University of Guadalajara. The result shows that the use of this tool improved academic performance, and achieved a collaborative learning environment. Motivation and an excellent teacher - student levels of interaction and teamwork were observed. For the students it was nice and fun to use the Kahoot app as a didactic game.

Learning, Game, Technology, Kahoot, Evaluation

Análisis comparativo por género de las funciones ejecutivas, el aprovechamiento académico y estatus escolar en alumnos de la Licenciatura de Medicina de la FAMEN-UJED

Comparative analysis by gender of the executive functions, academic achievement and school status in students of the Medicine Lincenciatura of the FAMEN-UJED

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### **Abstract**

This article analyzes the differences in neurocognitive abilities between men and women regarding academic achievement and academic status through the statistical analysis "t de student" for independent groups. Data was collected in a period of time from August 2013 to July 2016 by means of application of the "brief neuropsychological test in Spanish NEUROPSI", which evaluates neurocognitive functions. From said test 8 simple variables were taken to be studied: similarities, mathematical ability, sequencing, changing hand position, alternating movements, and opposite reactions; also, the dichotomous nominal qualitative variables "gender" and "academic status", and the categorical interval quantitative variable "academic achievement" were considered. The objective of the present research is to establish the differences in gender regarding the executive functions in relation to the academic achievement and academic status in the students of the B.A. in Medicine from The Faculty of Medicine and Nutrition of the UJED. The sample was integrated by 288 files from which 161 (55.90 %) were women, and 127 (44.09%) were men. As a result, three variables with significant differences between women and men in the different groups of comparative analysis.

Executive functions, Gender, Academic achievement, Academic status

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## Exploración de la Inteligencia Emocional en la Formación de Egresados de Ingeniería

### **Exploration of Emotional Intelligence in the Training of Engineering Graduates**

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### **Abstract**

The objective of this study was to identify the level of training in Emotional Intelligence (EI) of the engineering undergraduate student to detect possible training strategies on the topic. Methodology of qualitative approach was used and the sample was selected for convenience, being composed of 25 men and 10 women between 23 and 32 years of age. University professors applied interviews to 35 undergraduates, where they discussed the EI training they received during their training at the University. The results show that with the exception of three interviewees, the majority pointed out that they did not remember the subject where they were taught these topics of emotional control, some even stated that they had not received any teaching about it in their training. From the testimonies it is derived that the topic of EI does not form part of the curriculum of the University Technical Level (TSU) and Engineering, but it is identified that some professors willingly train students in this topic, by personal initiative teach these skills through group techniques in combination with the theoretical contents of the subject they teach. It concludes on the need to develop through emotional competencies courses to the future graduates, because emotions are a primary component that contributes to predict success in the workplace.

Emotions, Skills, Emotional intelligence, Bachelor's Degree, Curriculum

### La Identidad del Estudiante Universitario como Lector. Facultad de Humanidades Pijijiapan

### The Identity of the University Student as Reader. Faculty of Humanities Pijijiapan

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### **Abstract**

At the moment it has been considered that to read, is an unpleasant activity and that sometimes it is boring, nevertheless; This should not be conceptualized as such, because when coming into contact with the printed and the non-printed, the reading subject acquires many experiences and knowledge, that is to say; to read is to learn to live, to read is to inform oneself, to read is to cultivate oneself, to read is to participate in what your society is living, besides; that allows greater enrichment in verbal expression, for this reason we could understand reading as a cultural practice and social activity. Reading is a mode of social communication, with a deep emphasis on the word "social", because it has to do with the formation of the personality, with the taste and with a vision of what the reading practices of the majorities are. Reading is a human activity, where the reader comes into contact and communication with the great thinkers, that is; It is an interactive process between the reader and the text.

Reading, Reading, Text, Comprehension

Innovación en el diseño de modelos educativos basados en competencia en las instituciones de educación superior en México

## Innovation in the design of educational models based on competence in higher education institutions in Mexico

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#### **Abstract**

The objective of this work is to describe and explain the importance of the innovation of educational models to determine the implications and conditions (EBC) competency-based implementation in an institution of higher education (IES). Theoretical - empirical literature that addresses the topic to discuss it conducted a review. The competency (EBC) model of education grew out of two movements in the 1960s, which are the most recent facts of the twentieth century. In the case of Mexico, it meant to carry out reforms in education (2016), establishing a new model of education, with a focus on skills. However, there is a great controversy in the model by the different actors. Some authors consider that it focuses on the automation of the individuals. Others considered that it is required of the systematization of the learning process, through a solid institutional structure and the training of the teaching staff that give rise to the creativity of the students to design and implement their own mechanisms of learning.

### **Educational model, Competences, Learning**

### El desarrollo de la inteligencia emocional en las universidades

### The development of emotional intelligence in universities

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### **Abstract**

Currently, the accelerated growth and development of new technologies is causing great changes in the cultural formation of people, as well as in the acquisition of knowledge and especially in universities. Requiring important changes in their academic work. Since the productive and social sectors demand integral people that develop a combination of cognitive and socio-emotional skills. The aim of this article is to evaluate whether in the usual educational practices of UTCJ teachers, they develop emotional intelligence (EI) in students through the application of socio-emotional skills. This research has a quantitative approach and focuses on a cross-sectional descriptive correlational study, through the application of an assessment instrument, to assess emotional intelligence in the performance of their educational practices by diagnosing five socio-emotional competencies. Finding that in the development of EI, 10% reached an autonomous level, 55% of teachers reached a high level, 31% reached a satisfactory level, and only one case was at an unsatisfactory level. So it is important to promote more the development of socio-emotional competences, in the professors of the university, since most of them, although they are in the outstanding and satisfactory levels, it is necessary to take them to a higher level, so that they develop better, these competences in their professional practices and can generate graduates with a higher level of emotional intelligence.

Socioemotional Competencies, Emotional Intelligence, Educational Practices

Perspectiva de las competencias específicas para los estudiantes de Administración de Empresas, modalidad Semiescolarizada

### Perspective of Competencies Specific to students of Bussines Administration, Semiescolarizada mode

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### **Abstract**

This research is quantitative and positivist approach cutting, it is descriptive study, where the object of study is the Bachelor of Business Administration Semiescolarizada mode of the Faculty of Administration of the Benémerita Universidad Autónoma de Puebla (BUAP), whose purpose was it assess Vocational training in this modality, determining the specific competencies that are being developed in their training, from the perception of the students. For which it was an analysis taking as subjects of study to students through which their perceptions were leading us to locate how to value the students the development of specific skills in Vocational training in the Semiescolarizada educational modality of that discipline. From this perspective it was important to consider a number of methodological elements that allow you to analyze the processes of Vocational training as the profile, the selection of specific competencies that would work, as well as other Tuning Latin America Project. In this way, it is providing to the knowledge the experiences of students to attend a program that has a professional competency-based training.

Competencies specific, Business Administration, competency-based, Educational modality Semiescolarizada training

### Evaluación de los elementos de fondo de la tesis

### **Evaluation of the fund elements of the thesis**

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### **Abstract**

This essay analyzes the importance of the evaluation of the internal elements of a thesis. These takes in count a very important element which is the interview as part of the investigation research of the students. It will be a very important part writing the approach research, the introduction and the chapters of the thesis. Creating a high quality research product.

### To evaluate, Element, Internal elements, Thesis

## Retos de la Educación Superior Frente a un Contexto de Competitividad Mundial Challenges of Higher Education Faced with a Context of Global Competitiveness

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#### **Abstract**

The current and future needs demanded by Higher Education Institutions (HEIs) are oriented towards the training of competences that respond to the demands of the globalized world. Therefore, HEIs must have managers that design strategies to lead, direct, encourage, improve and increase the generation of knowledge. Therefore, the knowledge manager in HEIs must have knowledge and skills that allow them to relate the theoretical with the practical, to contribute to sustainable development at the social, technological, academic, scientific, local, regional, national and global levels. Achieving this, that HEIs enter a globalized competitiveness, as large companies and modern society are demanding

Manager, Knowledge, Competences, Competitiveness

Análisis de la necesidad de un programa de Tutoría Andragógica, para la modalidad mixta en el Instituto Tecnológico Superior de San Luis Potosí, Capital

Analysis of the need for an Andragogic Tutoring program, for the mixed modality in the Instituto Tecnológico Superior de San Luis Potosí, Capital

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### **Abstract**

The tutoring in Higher Education, and specifically for the National Technological Institute of Mexico (TecNM), is the process of accompaniment during the training of students, which is specified through personalized attention to a student by competent and trained academics to this function, relying conceptually on the theories of learning rather than those of teaching; Although in our system this program has helped to reduce dropout rates as well as detecting and channeling personal situations that affect the students' performance, there is a large number of young people who are forced to abandon their studies and at the best of cases seek to enter later some of the higher education modalities that have arisen for young people who work as is the case of the mixed modality offered at the Higher Technological Institute of San Luis Potosí, Capital, (ITSSLP, C), although this may represent the last opportunity to conclude your studies; In the present investigation, this problem is addressed, finding that the risk of deserting again is latent as proof of this is that in the first generation, from one bimonth to another, 23% of the enrollment was lost, so by means of a questionnaire We sought to know their context as well as their needs, finding that 57% of them requested psychological and / or motivational support, giving rise to the need for an andragogic mentoring program, since they are mostly adults, and this is already a challenge. that at present in this type of modalities there is not a program of this style, only with the figure an adviser that guides them in the academic part.

**Tutoring, Andragogy, Mixed Modality** 

### Estudio de calidad ambiental en una zona crítica de Zapopan Jalisco, México 2018

### Environmental quality study in a critical zone of Zapopan Jalisco, Mexico 2018

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#### **Abstract**

The environmental quality conditions were analyzed in a critical area of the municipality of Zapopan. The concentration of particle of 0.3, 0.5, 1.0, 2.5, 5, and  $10\mu$  was determined and compared with a table of ranges, to estimate health risk. The levels of sound pressure and the subjective perception of the population was studied through surveys to know complaints, symptoms and discomfort that the population reports. They highlighted discomfort such as stress, nausea and headache, by the presence of unpleasant odors and noise levels to which they are exposed, highlights that 57.3% reported that the quality in this area is "terrible", 24% say that it is "bad" and 14.7%, they report it as "regular". It's evident that the vulnerability of the population due to exposure to pollutants and noise.

Environmental pollution, environmental quality, health effects, urban area

### Calidad de los servicios bajo la percepción de la gerencia del sector hotelero

### Quality of services under the perception of management of the hotel industry

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#### **Abstract**

Selling products or providing services with Quality is a permanent issue any size Within Organizations, specially in the tourism industry globalization Where the services provided Demands That foreign clients to meet international quality standards. In the city of Campeche, small hotels With the city's colonial characteristic style are opening, Which Represents an Important investment in infrastructure made by Their owners but this is not enough to be well perceived by Their guests. The main objective of esta research is to Identify the perception That quality About the hotels' managers as intern customers and Have Largely responsible for the elements operating results. This study is descriptive non-experimental transverse With design, a sample was not Calculated from the population under study, Which is integrated by small hotels, Instead it was built from data of the Mexican Business Information System. The results Obtained through the Quality Perception index Indicate That, Contrary to what was expected, the managers Consider That the services provided by the companies collaborate Where They do not reach adequate quality levels, Which is a point starting to review the Processes That Currently EXECUTE and if Necessary, design new strategies allow them to raise That the quality of services and be competitive Their in the Market Where They Participate.

Quality, Leadership, Organizational Culture, MSMEs

### Diseño de viajes turísticos personalizados a la ciudad

### Design of personalized city tourist trips

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### **Abstract**

In this article we propose a mathematical model to design personalized tourist trips around the city. Suppose you are a tourist who wants to visit specific tourist places, and you have some time available to do it. Due to the closeness and/or available time could be possible to visit another interest points, but you do not know how to perform it. So, you want to have a "route" of tourist places including those places you want to visit and that minimizing the total travel time. Also, it is possible to indicate the start and end points in the route, being the end equal to the starting point or not. We show how this can be modelized as a combinatorial optimization problem, called vehicle routing problem (VRP). Where the "route" will be the personalized plan of points of interest to visit. This plan can be design for one or several days, also considering the walking time you want to do during the tour, and the use of different means of transportation.

City Trip Planner, user preferences, MIP model, routing, VRP

### Registro de tamales Región sur del Estado de Yucatán

### **Tamales record southern Region State of Yucatan**

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#### **Abstract**

The tamale is an endemic food of Mexican gastronomy and nowadays a standard Yucatan cuisine, esta being the support of many families versatility and STI Because of flavors, the use of various ingredients, as much as products and tecniques Brought from the old continent; Also on wich culinary techniques and utensils from the mayan Comunity, Have Been Adapted. They are made to hold the hard work and long days, Also for festivities or traditional parties. The tamal has many changes Suffered Since its origin, changes That Have Been influenced by other continents's cuisines, the ones That Brought Them With a variety of products That came to stay, products like achiote, oils, wheat flours, and many others. The Ones That Have Been perfectly accord to dress and potentiate the delightful flavor of every Already Existing variety of tamale.

### Tamal, Endemic food, Yucatan, Cuisine

### **Project: Mx Trek Tours Thn**

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#### **Abstract**

The municipality of Tehuacan and ITS region unique climate and orography Have; semi desertic zones value is so high That the biggest ecological zone in Its kind was created here: the Tehuacan-Cuicatlán Biosphere Reserve. It has, ITS Among attractions, the first SPA in America: San Lorenzo's spring, as well as paleontological Several speleological and archaeological sites, as well as other places man with a huge potential to Increase Tehuacán's touristic industry. This priceless heritage is completely underused: there is not a single company in the zone offering high-quality touristic services, NEVERTHELESS a single one offering the whole spectrum of touristic services Involving every aspect of professional tourism business should. Evidence shows a great number of That tourists in esta zone are outlanders, many of them from foreign country clubs. Tehuacan is an attractive region to them Because of Its multiple archaeological sites, traditions, culture, gastronomy and history. Domestic market is well used to this kind of attractions, due to the large amount in Mexico, tough few places can offer the touristic ensemble owns Tehuacan. Alternative tourists are our target market. This project shows the way to high-quality Set A tourism business up, use and promotion of trough each single factor conforming ITS touristic heritage, natural Either, geological, historical or culturally

### El uso del social media en las empresas restauranteras de Villahermosa, Tabasco

### Use of social media in business restauranteras Villahermosa, Tabasco

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### **Abstract**

The research Consist of a study of the use of Social Media in the restaurant companies of Villahermosa, Tabasco. Social networks as one of the Most Important tools of social media are being used by companies to perform marketing, due to the profound changes have Caused That technological development in the way of doing business. The objective of the article is to analyze the use of social networks in restaurant companies in Villahermosa, Tabasco, Mexico, as an area of opportunity for them. The research was non-experimental, transectional, correlational, quantitative. The development of the research shows an acceleration of the use of Social Media Marketing, and Facebook is the social network Most Used. The results show That some of the SMEs Surveyed make intensive use of social networks, Facebook is the MOST used, followed by WhatsApp and the Least used is YouTube. That it was Also Observed That marketing personnel is a factor Affects the use of social networks. It was found That if the use of WhatsApp Increases, the use of Facebook Increases more..

Social Media Marketing, Use, SMEs

## Competitividad turistica en los restaurates y cafeterias de Salvatierra, Pueblo Mágico

## Tourism competitiveness in the restaurants and cafes of Salvatierra, Pueblo Magico

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#### **Abstract**

Competitiveness is a key part of the economic growth of a country, state and municipality Because It Reflects an impact of the economic spillover That exists, however it is not always continuous, even and does not always cause growth; the different models of tourism Have Been generating Characteristics of each place and in That Way generate new alternatives and competition strategies. Quantitative research was Carried out, with a non-experimental, cross-sectional design of descriptive type, through a convenience sampling to 15 restaurants and cafeterias with previously and taking into account a count made in the city of Salvatierra was found on May 31 50 restaurants and cafeterias of Salvatierra, Magical Town. The objective of the research is to Identify the lack of Competitiveness in the restaurants and cafes of Salvatierra magical town through the factors of innovation and Tics. The present investigation will Identify the lack of Competitiveness in the restaurants and cafes town of Salvatierra Magico through the factors of innovation and Tics

Competitiveness, Innovation, Information and Communication Technologies

## Analysis of the implementation of tics in tourist services providers in the village Magical Salvatierra, Guanajuato, Mexico

## Análisis de la aplicación de las Tics en los prestadores de servicios turísticos en el Pueblo Mágico de Salvatierra, Guanajuato, México

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#### **Abstract**

In the present article, it Intends to carry out an exploration and a diagnosis to detect the current situation of the use of information and communication technologies as key factors to Encourage the development of tourism in the Magical Town of Salvatierra, Guanajuato, Mexico. It seeks to know if the providers of tourist services in the ICTs Involve Their provision of service. The research has a qualitative approach, with an exploratory scope. For This purpose, the local president, 2 former tourism directors of the municipality, president of Local the chamber of commerce, one owner of a travel agency and 25 businesses of the service sector, and observation of the use of ICTs in the establishments Were interviewed. The study Allows us to close up commercial establishments That the service industry Know About ICTS some of them Implement them, others, Despite The Fact That They apply them, are willing to apply them, a small number of establishments are not interested in ITS application. Contributing esta information or models to generate Proposals That support the promotion of tourism of the Magical town of Salvatierra.

Information and communication technologies, Tourism, Magical town

## 6 Ingeniería y Tecnología

Implementación de paneles solares para el ahorro de energía eléctrica en el Instituto Tecnológico de Iguala

## Implementation of solar panels to save electricity at the Technological Institute of Iguala

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#### **Abstract**

The present work will help to realize the implementation of solar panels in one of the buildings of the Technological Institute of Iguala (building "C") to obtain a saving in the consumption of the electrical energy. The calculation will be carried out of how much energy is consumed in Watts per day for lighting and electrical appliances in building "C", to then know the monthly Watts cost per hour and thus be able to establish how many solar panels will be needed to cover the total spending of watts per month. Subsequently, with all these data, the depreciation of the total sum (\$) of the solar panels will be carried out in order to know how long they will be paid and the savings obtained each month from this installation. Implementing solar panels that generate energy from solar radiation implies a great advance for our institution, since they allow generating an economic saving that is reflected in improving the quality of the service provided to the students of the campus.

Savings, Solar Panel, Implementation, Electric Power, Students

## Estudio del comportamiento térmico de las viviendas respecto a su orientación

### Study of the thermal behavior of houses with respect to their orientation

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### **Abstract**

Current housing is not designed adequately for the climate or its immediate environment, nor is the orientation and topology of the dwelling considered. The variation of the climatic conditions of a place causes that the daily differentiations of temperature are different producing a repetitive cycle every 24 hour, of increase and decrease of temperature causing the periodic transmission of heat. Thus, when the external temperature increases, the heat begins to cross the outer surface of a material, each of its particles will absorb a certain amount of heat for each °C of elevation of temperature, according to the specific heat of the material. The present work focused on the thermal behavior in Saltillo's, Coahuila, home with respect to the orientation of the spaces impacting on the level of comfort, using a quantitative and field methodology, a monitoring was carried out in two houses with almost the same orientation of the space and then the data was compared with the Ener-habitat program regarding the properties of the material with different orientations, identified as the most critical orientation west, Southwest in summer, but with area of opportunity in winter.

### Comfort, Housing, Climate

## Creación un observatorio tecnológico en innovación social para el sector vitivinícola en México

## Creation of a technological observatory in social innovation for the wine sector in Mexico

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#### **Abstract**

The actual investigation has the objective to identify the essential aspects to create a Technological Observatory with Social Innovation for the Wine Cluster. This Technological Observatory could be valid for all Mexico. It will be use documentary research for the elaboration of the results using the hermeneutic analysis for the formation of the information. The contribution of this research is to detect the social problems derived from the cluster and look for strategic social innovation actions in this new agro industrial cluster.

Technological Observatory, Vitivinicultural, Decision makeing, Social innovation

## Criterios de sustentabilidad en la arquitectura de alojamientos y el turismo de naturaleza en la Huasteca Potosina

## Sustainability criteria in accommodation architecture and nature tourism in the Huasteca Potosina

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### **Abstract**

Objective: to identify the elements of congruence between the vernacular architecture and the international requirements of tourism sustainability with respect to the design and construction of accommodations in nature tourism in the Huasteca potosina region. Methodology: Exploratory observation tours in the rural areas of the Huasteca potosina region, with the purpose of analyzing and characterizing the vernacular architecture when considering the cultural elements of the design, the natural materials of construction and the functionality that represent the traditional dwellings of the Huasteca Potosina In these tours were visited and photographed current tourist buildings that provide accommodation service in natural environments, ie, related to nature tourism. Based on the documentary research, the global criteria of sustainable tourism dictated by the Global Sustainable Tourism Council (GTSC for its acronym in English, 2011) were analyzed. Contribution: A simplified criteria guide to guide the monitoring and compliance with the sustainability conditions applicable to architecture and building services in nature tourism.

Eco-lodgings, Tourism infrastructure, landscape intervention, Ecotourism

## Comparativo actualizado de un agente virtual conversacional con arquitectura BDI

### Updated comparative of a conversational virtual agent with BDI architecture

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### **Abstract**

Today many types of conversational virtual agents are used for various purposes. The objective of this work is to present the latest research on the architecture of a BDI agent to integrate them and obtain an improved and updated model.

Conversational virtual agent, Design, Architecture

## Análisis del comportamiento térmico en la basílica de la Soledad ubicada en la ciudad de Oaxaca

## Analysis of thermal behavior in the Basilica de la Soledad located in the city of Oaxaca

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#### Abstract

The present research work consists of an analysis of the thermal behavior of one of the temples built with quarry stone and the construction techniques of the seventeenth century in the city of Oaxaca de Juarez, Oaxaca, cataloged as a historical monument. The study was carried out with the objective of determining the thermal response of the Basilica de la Soledad, in order to verify if there are damages caused by local climate factors and its effectiveness to provide comfort conditions. The analysis was performed with the measurement of the air temperature, of the surface of the walls and the temple nave, as well as the relative humidity of the air, a thermography camera was used to detect heat bridges and humidity that deteriorate the quarry. This document will serve in the area of restoration and conservation to take into account the information in the maintenance or improvements of the thermal comfort of the building.

Thermal behavior, Air temperature, Surface temperature, Quarry Stone, Heritage

### Fundamentos para construcción de Instrumento Ambiental para la Industria Minero-metalúrgica

## Fundamentals for the construction of an Environmental Instrument for the Mining and Metallurgy Industry

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#### **Abstract**

The theoretical bases are presented, concentrated in a figurative representation of elements that will base the formalization of a proposal to build an instrument of environmental data collection in the Mining-Metallurgical Industry; With this, it is proposed to perform quantitative measurements that are also aligned with various international and national organizations, which are formalized in the legislation of the country's current system and international environmental treaty forums. A descriptive methodology is used, of quantitative cut that allows to detail indicators, factors and other elements, from reflections that converge between the legislation and global goals. Environmental Management is the general platform of this study, from which the various concepts that are integrated in the format of indicators or elements to be described are derived to theoretically support a measurement instrument applicable to the mining-metallurgical industry.

Environmental management, measuring instrument, mining-metallurgical industryt

### El patrimonio edificado como alternativa de visita turística en la Huasteca Potosina

### The built heritage as an alternative to a tourist visit in the Huasteca Potosina

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#### **Abstract**

Objective: Identify and treasure up urban-architectural elements of patrimonial order in the Huasteca Potosina. Know processes and constructive characteristics of the vernacular architecture, using as an analysis unit, el ejido La Lima, in the municipality of Ciudad Valles. Identify and select representative examples of religious architecture in diverse populations of the Huasteca potosina, investigate historical and contemporary use backgrounds. Methodology: Descriptive and qualitative approach. Review of documentary sources, fieldwork with direct and participatory observation, photographic record, data analysis and socialization. Contribution: Include heritage built in the discussion of tourism in the Huasteca, adding historical values and use as a precedent for a new alternative visit, finding that both: the vernacular architecture and religious architecture are essential elements to understand the Huasteca potosina in an integral way.

Huasteca potosina, Built heritage, Vernacular architecture, Rreligious architecture, Cultural tourism

## Análisis térmico de un edificio escolar durante el verano en condiciones de clima cálido húmedo

## Thermal analysis of a school building during the summer in hot humid weather conditions

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#### **Abstract**

Coatzacoalcos is located in a special economic zone, and although it has been a region benefited by the petrochemical industry and maritime traffic, its climatic conditions have a negative impact on electricity consumption and the development of work activities. For this reason, it is important to carry out actions that adequately take advantage of existing natural resources, such as renewable energy and passive architectural techniques to provide thermal comfort satisfaction to users of buildings that have already been built or in planning phase by not making irrational use of electric power. With this motivation, this paper presents a comprehensive analysis of the thermal conditions of a library that has the highest concurrence of students in the region, estimating heat gains by the ASHRAE method for the highest impact loads, as well as as the detection of the sections that capture the highest heat gains by means of thermography. The thermal comfort temperature is also estimated, and with the results obtained there are alternatives that provide thermal comfort to users.

### Thermal load, Thermal comfort, Coatzacoalcos

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Calculo de un sistema fotovoltaico para cobertizos en la zona de San Cristobal Tepatlaxco, Puebla

# Calculation of a photovoltaic system for sheds in the area of San Cristobal Tepatlaxco, Puebla

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#### **Abstract**

In the community of San Cristóbal Tepatlaxco there is a large number of sheds devoted to the milking of cattle, to perform this function they have electric milking machines, however this intrinsically produces an excessive consumption of electrical energy, which in turn generates a unaffordable monetary cost for producers. The present work develops a research that aims to solve this problem, this through the use of solar panels, a proposal is generated in which it is calculated would generate 8,160 kWh / day which meets the electrical needs of the sheds that In the future it is proposed to expand the amount of cargo, the project is calculated in such a way that in the long term it allows expanding the installed capacity of the system to rural areas of difficult access that do not have electric power service by CFE, in addition to the study It establishes the proposal as a highly recommendable solution since it is a source of renewable energy despite representing a considerable initial investment.

Solar energy, Photovoltaic conversion, Milking machine

## Determinación de factores que afectan la disponibilidad en equipos críticos del área de molienda en un ingenio azucarero

## Determination of factors that affect the availability in critical equipment of the grinding area in a sugar mill

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#### **Abstract**

A production system in which there are no stoppages is the ideal of any company, so in this work we make a study comparing the factors that reduce the time that an equipment can be available to perform the primary function of the equipment. The objective is to compare the factors that affect the availability of critical equipment in a sugar mill. The work focuses on the beginning of the process at the batey area and mills, the decision is made because they show the highest number of stoppages. To be able to generate the results, it starts with the collection of faults and stops presented in the analysis area, with the pertinent information a fault book is generated to facilitate its analysis, a 49.10% availability is obtained for the mill area and 94.73%. for batey. It is concluded that the Mean Time Between Failures, Mean Time To Repair and availability indicators from these indicators establish strategies to reduce equipment unavailability.

### Availability, Critical equipment, Maintenance

## Caso industria de software: aplicación de un modelo conceptual para la creación de capacidades de innovación

## Software industry case: Application of a conceptual model for innovation capacity building

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### **Abstract**

The IT industry in Mexico plays a key role in the national development strategy, not only Because of Its growth potential, but Also Because of the positive effect it has on other Sectors and on the country's Competitiveness. In order to Promote the generation and exploitation of scientific and technological knowledge, to knowledge management model was Implemented to create innovation capabilities in a Mexican software company. The project was Approached from the participatory action research, under four phases; organizational diagnosis, planning and change, collaboration and monitoring and control. The main results Were improved communication flows, use of Existing knowledge for the creation of projects, Strengthening of Human Capital in innovation, application of a financial plan Aimed at R & D & I, collaboration with universities,

Innovation capabilities, software industry and model

### Metodología para la realización de un diagnóstico energético en la Universidad Veracruzana

### Methodology for conducting an energy assessment at the Universidad Veracruzana

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### **Abstract**

Methodology for the realization of an energetic the Universidad Veracruzana diagnosis at, you have as objective to know how and from what way the electric power Have being used, the intention of esta methodology Is That the energetic audit Should be performed in a time of two to three weeks, and Those persons WHO make the diagnosis would be students and teachers in the school itself, the study allowed the installation of metering equipment for Obtain information of the electrical parameters, take levels of lighting, calculation of the heat balance of the building, make a proposal of energetic efficiency based on the maintenance in the system of air conditioning (Chiller), make the correction of the power factor. An Important part of the relization of energetic diagnosis in University Is That the students Strengthen Their learning In This area of knowledge and Make Their Proposals for the improvement of energy-saving and economic savings be Reflected.

### Energy saving, Diagnosis, Maintenance

Primer acercamiento a la percepción de las setas comestibles como recurso alimenticio en la Sierra de Santa Rosa, Gto.

## First approach to the collection of edible mushrooms as a food resource in the Sierra de Santa Rosa, Gto

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#### **Abstract**

Edible mushrooms are natural resource with a high nutritional and economic value. Mexico Occupies estar place in biological and cultural diversity, Which, intermingled With ethnobiological aspects, you has-been little Studied and valued. For This study, random samples Were taken Within the area of interest, with weekly records in the rainy season. In Addition, to Identify the use by the population, surveys Were Carried Out with illustrative materials of the specimens found in the town of Puerto de Santa Rosa close to the study area. 24 species of edible mushroms Belonging to the division Basidiomycota Were identified. The most representative species for Their frequency in the area Were Lactarius indigo, Lactarius deliciosus, nuda Lepista, Clitocybe gibba, Cantharellus cibarius and Collybia peronata. The surveys indicated that the species consumed by the inhabitants are Ramaria flava, Lycoperdon perlatum and Amanita caearea, also indicating that due to the lack of information and knowledge they have about the edible mushroom species found in the area, there are very few the species harvested, leaving a great potential to be used sustainably.

### Mushrooms, Amanita, Diversity

## Aplicación de manufactura esbelta en área productiva en empresa de telecomunicación

### Lean manufacture applied into productive area at telecommunication enterprise

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#### **Abstract**

The objective of this study is to implement an inventory control system, through the application of Lean Manufacturing tools, such as Value Stream Mapping, Kanban, 5 S's. The first step was to analyze the inventory and how it is handled globally in organizations; the second step was to identify different Lean Manufacturing tools to be implemented in this project, in terms of theory; the third one to describe the process of data collection, analysis of the data to achieve the objectives set, to determine actions to be taken, as well as, the implementation of lean manufacturing methods; the fourth step shows the results obtained from this work , finally the fifth shows the conclusions and recommendations. Among results reached are: the level of raw material in production area was reduced, the material supply cycle was reduced from six hours to three hours; raw material space was established in production areas.

Inventory Control, Area Distribution, Lean Manufacturing, Material supply and Value Stream Mapping

Uso de las TICs como método para elaborar trabajo Recepcional y automatización de formatos de estadías (F-DV-007 y F-DA-029), aula virtual y plataforma de generación de formatos digitales

Use of ICTs as a method to prepare work Reception and automation of stay formats (F-DV-007 and F-DA-029), virtual classroom and digital format generation platform

HERRERA-RODRÍGUEZ, Eloína, LOPEZ-RODRÍGUEZ, Sonia, MORENO-MORENO, Ricardo y HERNÁNDEZ-MÁRQUEZ, Yesenia

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#### **Abstract**

The use of the information technologies at Technological University of Tlaxcala has provided an effective alternative in the process of stays and certification. The objective of this work is to release the *Stays and certification on B-Learning mode* project, which indicates how the use of ICT has supported the students of High Technician and engineering in its stays process and development of their school work to reduce the time of certification. The methodology is to employ the properties of the virtual learning space or Virtual Classroom of the University (AVUTT) and the development of Automation of Stay Formats (SAFE) software. The methodology implemented at the University has served as a support to minimize time and guide students in the process of stays and certification.

Information technologies, Virtual learning space, Recepcional work, Automation software

Las TIC's en el proceso e-a y su relacion con el rendimiento academico: caso ingenieria industrial a nivel Licenciatura de la Universidad Veracruzana - Región Veracruz

ICTs in the e-a process and its relationship with academic performance: case of industrial engineering at the level of the Universidad Veracruzana - Veracruz Region

LAGUNES-PAREDES, Yolanda, RAMIREZ-ROMAN, Adolfo, SUAREZ-ÁLVAREZ, Ángel y VELÁZQUEZ-CAMILO, Oscar

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#### **Abstract**

In the teaching labor, strategies are constantly implemented in the E-A process in order to improve the student's achievement; In the present work the contribution of information and communication technologies was studied, as a strategy to promote cooperative learning and strengthen information search skills that have a favorable impact on the academic performance of students. In the educational program, Industrial Engineering of the Universidad Veracruzana - Veracruz Region, it was observed that the use of ICT in the E-A process had an impact on the academic performance of their students, of which more than 75% of them considered that the use of ICT for school achievement is relevant.

Tecnology, Education, Academic Performance, Transversality

# Las TIC en la acción tutorial en el Centro Universitario del Norte, de la Universidad de Guadalajara

# TIC in the tutorial action at the University Center of the North, Universidad de Guadalajara

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### **Abstract**

The purpose of the work is to determine the technological tools used and the activities carried out in the tutorial action at CUNorte, and to identify the use made of the Integral Tutorial System. The study was conducted with a population of 66 tutors from 5 educational programs, out of the 11 the Center has, finding that 95% of tutors recommend using TIC in the tutorial action, the same percentage ensures that TIC support to improve the tutorial process because they facilitate communication between the actors, (being faster, easier, more precise, efficient and effective), 80% of the tutors use the ITS, and some of the activities they carry out in the systems are: follow-up, review academic record and inform. Finally, the modality of tutoring that was identified was mixed, because of the combination of face-to-face sessions with the use of technologies. It is a quantitative and descriptive study.

**Institutional Program of Tutoring, Tutoring, TIC, Modality** 

## Tlaxcala desde la Realidad Virtual

## Tlaxcala from the Virtual Reality

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### **Abstract**

The "Tlaxcala from the Virtual Reality" project has the main objective of generating a virtual museum of Tlaxcala, presenting different tourist places, besides its traditions and typical dishes. We consider that the main contribution is the Tlaxcala research reflected on a virtual world, which will allow it to be a means of diffusion. For the development of this project we used the Methodology of Scientific Research and the Virtual Reality Methodology of.

## Virtual Reality, Culture, virtual world

# El impacto de la tecnología en los negocios: Caso de estudio en las mype's de Valle de Santiago, Guanajuato

# The impact of technology on business: Case study in the mype's of Valle de Santiago, Guanajuato

RAMÍREZ, Lidia\*†, URIBE, María Guadalupe, MENDOZA, Patricia Del Carmen y BRAVO, Bibiano

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### **Abstract**

This article shows how technology has an impact on the businesses of Valle de Santiago, Guanajuato. According to a market study, it was verified that companies of small-scale magnitude show a low use of technological tools. This reflects that organizations lack a vision for the future, taking as reference competitiveness, globalization, the digital age, innovation, lack of economic capacity, investment among others. Today we find that the products and services are at your fingertips from the simple use of the mobile we can buy instantly, have a conversation via chat, send information by e-mail, and see special programs from an application in order, there are many ways to be in contact with customers. In the study, 550 surveys were applied to entrepreneurs of the Micro and Small Mype's companies, with a descriptive - transversal quantitative methodology. With a linear regression model where the behaviours of said data is reflected, that so much correlation exists between the variables of investigation; as well as the importance that they give to the handling and the use of the TICs, according to the internal and external factors.

Technology, Business, Tools, Innovation, Mypes

Diagnostico para la implementación de códigos QR, como herramienta tecnológica de difusión de los principales edificios patrimoniales del centro histórico de la ciudad de Puebla

Diagnosis for the implementation of QR codes, as a technological tool to disseminate the main heritage buildings of the historic center of the city of Puebla

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### **Abstract**

The technological tools (ICTs) are one of the important resources not only for the tourist activity of a city, but also should be considered as a teaching element. Its use provides an enrichment of the specific themes of each place that is used in it. The significant learnings, provided by the TICS technological tools, allow tourists and visitors a conceptual, practical and eloquent knowledge of the different tourist attractions, this must be translated into practical instruments that allow access to relevant sites where cultural events have taken place and the coexistence with professional actors of their specialties. The present investigation aims to make a diagnosis of the use of QR codes as a technological tool for dissemination of the main heritage buildings of the historic center of the city of Puebla. The use of technological tools such as the QR code will allow access to a digital era that exists today, and make the culture and new technologies join together, and also be used in any of our future cultural consumption.

Technology Tool, Diffusion, Heritage Building, QR Code

## Aprendizaje en línea: Implementación de las TICS en la Educación Superior

## Online learning: Implementation of ICT in Higher Education

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#### **Abstract**

Today, education-oriented technological advances have enabled the use of technological tools that allow the creation of multimedia material that requires little technical knowledge and, at the same time, are easy to master. Many of these tools are available on platforms such as Blackboard, Moodle or Schoology. Multimedia resources for digital learning and teaching can be presented in many ways, including: Interviews, video classes, Web seminars, demonstrations, case studies, interactive presentations such as tutorials, online discussion forums or documentaries. In addition, multimedia resources can include software tools such as simulations, live chats or video conferencing, online discussion forums, blogs and wiki-creation, or simply images and graphics. While the idea of using multimedia resources as an educational tool may seem exhausting and unnecessary, there is no doubt that to be competitive in a globalized world requires a set of skills to streamline our work, including the Information management. The use of these multimedia resources provides many benefits for the classroom. Under this premise, this paper raises the use of multimedia tools to improve teaching processes in higher education. The general objective is to determine, based on the results obtained, whether there is a significant improvement in the student's performance in the learning processes in different areas of knowledge.

Platform, 'Blackboard', 'Blog', Multimedia

## El uso de las TIC en la educación. El caso del CUNorte de la U. de G

## The use of ICT in education. The case of the CUNorte of the U. of G

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### **Abstract**

It is unquestionable that during the last decades the use of information and communication technologies (ICT) has been extended to all social spaces, and education is not the exception, especially at the higher level, where they are considered as an option to break the barriers imposed by time and space, by allowing it to pass from synchronous and face-to-face education, to asynchronous and online education; also to increase enrollment with less infrastructure, given the growing demand for school services by the population; but above all, to innovate and improve work in schools, given the potential they have shown to have in the business world; however, reviewed research on the subject, show contradictory results, on the one hand successful cases where the intended objectives have been met, and on the other, situations where the use of ICT, subject to the limited competences of teachers and students, it has been translated only in digital literacy of these, or in a variant of entrenched traditional practices. In this sense, the present work shows, from an exercise of contextualization of the University Center of the North of the University of Guadalajara, which were the aspects that motivated the incorporation of technological tools to the teaching-learning processes, and the policies and guidelines that govern academic work.

Education, ICT, educational mode B-Learning, policies and guidelines on the use of ICT

Integración de la TI/SI y capital intelectual como base estratégica en la industria del coco: Caso Coco Colima S.A de C.V.

Integration of IT / SI and intellectual capital as a strategic base in the coconut industry: Case Coco Colima S.A de C.V.

LINO-GAMIÑO, Juan Alfredo, RAMÍREZ-CACHO, Sergio Iván, JOVER-JIMÉNEZ, Isabel Felicitas y RÍOS-SILVA, Luis Octavio

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### **Abstract**

The strategic planning in the correct operative planning of the companies added to the integration of IT / SI and the correct integration to the intellectual capital of the company do that the added value that the processes generate are in case successful, the objective of the present investigation it is to improve the operability of the company in question through the intervention of processes, added to the incorporation of information systems and the correct training, an observational methodology was used applying the case methodology, which throws a before and after its application in a successful way, since it is observed in the foreground an improvement in the core business of the company. The diagramming of the processes adding to the integration of the control panels in the SAP system, has resulted in an operational and quality improvement in the product and derived from this in the time of departure, which is followed by the next step that is the certification and with it the continuous improvement of the company.

Competitiveness, IT, Coconut, Colima, Integration

# Acceso, impacto y retos de las TIC en los sistemas educativos formales

## Access, impact and challenges of ICT in formal education systems

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#### **Abstract**

It is unquestionable that during the last decades the use of information and communication technologies (ICT) has been extended to all social spaces, and education is not the exception, especially at the higher level, where they are considered as an option to break the spatial and temporal barriers, by moving from synchronous and face-to-face education, to asynchronous and online education; also to increase enrollment with less infrastructure, given the growing demand for school services; but above all, to innovate and improve work in schools, given the potential that they have shown to do in companies; however, recent research shows contradictory results, on the one hand success cases where the intended objectives have been met, and on the other, situations where the use of ICT, subject to the limited competences of teachers and students, has been translated only in digital literacy of these, or in a variant of entrenched traditional practices. In accordance with the above, this work shows studies that account for the current state of access and impact of technological tools in formal education systems and the challenges they face.

Education, ICT, Access, Use, Impact

# Las actitudes de los estudiantes de nivel superior hacia las TIC en una Universidad de Cancún

## The attitudes of higher level students towards ICT in a University of Cancun

PREZA-MEDINA, Sergio Roberto, HERNÁNDEZ-CHACÓN, Sandra, CEBOLLÓN-MEZA, Ángela y SAAVEDRA-RIVEROS, Érika

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### **Abstract**

This article presents the results obtained through the application of the INCOTIC tool in its section F referring to the attitudes of students towards ICT. The sample was 71 students of the third semester of an educational program of Engineering in Information and Communication Technologies, at a University of Cancún. To guarantee the accuracy of the information, seven members of the Applied Research Group in Education and Technology validated the applied instrument. Likewise, a Cronbach's Alpha reliability index of 0.899 was obtained. The study was conducted to obtain information from the students about the attitude of students in the use of ICT in their academic environment. The design of this research was non-experimental, with a quantitative approach. For the data analysis, the SPSS software was used. With this, the results for the descriptive measures were obtained, as well as the hypothesis test. With the study and the data analyzed, it was demonstrated that the attitude of higher level students towards ICT in their academic environment is excellent and that it potentiates collaborative and autonomous work.

Attitude, INCOTIC, Higher education, ICT

# Repositorio de Objetos de Aprendizaje – TIC: Vídeos animados como estrategia didáctica en el proceso de Enseñanza – Aprendizaje

# Repository of Learning Objects - ICT: Animated videos as a teaching strategy in the Teaching - Learning process

MALDONADO-MARTÍNEZ, Abish Amparo, GALICIA-ESCALANTE, Alejandra, APOLINAR-PEÑA, José Jesús y ESQUIVEL-GONZÁLEZ, Jesús

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### **Abstract**

As part of digital teaching, a Repository of Learning Objects is an option focused on the collorary of students. By complementing the existing repository through animated videos then students were able to find an option focused on their curricula under the competency-based model and thus achieve meaningful learning as well as the skills expected in the students' careers. University Superior in Information and Communication Technologies, bothe areas: networks and telecommunications and computer systems.

Education, Learning object, Repository, Learning, Animated video

# Análisis estadistico de indicadores en la división academica de TIC de la Universidad Tecnologica Fidel Velazquez

# Statistical analysis of indicators in the ICT academic division of the Fidel Velazquez Technological University

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### **Abstract**

The objective of this work was to implement R as a tool to facilitate the analysis of data generated in the academic division of ICT. The data referring to grades, student status and indicators are processed in Excel. The implementation of R is still in the testing phase for the generation of a final report

## Data analysis, R, Data

Servidor de Cursos Mooc's (Massive Open On-line Curse) para la división de TIC's de la Universidad Tecnológica Fidel Velázquez

# Moocs Course Server (Massive Open Online Curse) for the ICT division of the Universidad Tecnológica Fidel Velázquez

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### **Abstract**

The objective of this work was to configure a Moodle Server to create MOOC courses, of educational content related to the ICTs area to facilitate learning for students. This exercise was successful and could be a pilot test with a course on Algotitmos, now www.dracomooc.com is still in operation and design and production of more courses.

Server, MOOC, TIC's

## Diseño de un GUI para el cálculo de propiedades termodinámicas del Agua

## Design of a GUI for the calculation of thermodynamic properties of Water

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### **Abstract**

This paper presents the development of a graphical user interface (GUI) that allows the calculation of thermodynamic properties p, v, T, u, h and s for water as compressed liquid, saturated steam and superheated steam, this interface is a tool with educational orientation that facilitates teaching-learning processes to engineering students who perform calculations of the properties and physical states of water in the subjects of thermodynamics and energy balances mainly. The interface is developed in the GUIDE work environment incorporated to the Matlab® software, this is a simple and user friendly tool. The results obtained with the use of the graphical interface were validated by comparison with data reported in the bibliography, this was done for different study cases that include each of the physical states of the water, no significant differences were observed.

Graphical user interface, Thermodynamic properties, Water

Elementos que benefician la disminución del tiempo de ciclo de una línea de producción: Nivel de afectación de una buena distribución de planta

Elements that benefit the reduction of the cycle time of a production line: Level of affectation of a good distribution of plant

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### **Abstract**

In the present investigation, it is evaluated whether the reduction of cycle times in a production line is significantly benefited by a good plant distribution due to the distance that the material travels within the production process. All this as a result of an increase in the demand of users who increasingly demand products with higher quality and at more accessible prices. This results in an increase in the search for the optimization of the processes in them, which requires companies to have flexible processes and increasingly shorter production times. The obtained results allow to visualize if having a good distribution of plant ensures an efficient operation of the productive process, focused on the cycle time of the operations and the good handling of materials, this in order to obtain a reduction of costs, basing said activity in a methodology that helps generate balanced workloads that allow continuous production and with a minimum margin of error.

Plant distribution, Production line, Cycle time, Production cost

# Probabilidad y estadística para fundamentar casos prácticos en la especialidad de Ingeniería Industrial

# Probability and statistics to support practical cases in the specialty of Industrial Engineering

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### **Abstract**

The importance of statistics in industrial engineering teaching is described in this paper, and the partial results of an ongoing research are also described. The purpose of this research is to observe the grade of correlation between the teaching of probability and statistics with the process of learning subjects regarding engineering. These subjects must be understood by students to comprehend, analyze and interpret practices designed by the professor, textbooks and real life in situations such as internships. Didactical engineering is employed in this research to analyze the forming part (professors), and the receptors (students). Weaknesses are observed in the students regarding the latest statistics subjects in their studies as future engineers. The primary results, the essential concepts recognized by the student, and the ones that haven't been learned properly. These concepts are necessary for the students to advance and further achieve a better comprehension of the subjects regarding engineering in their degree of choice.

Didactical engineering, Probability and statistics, Industrial engineering

# Tratamiento superficial por láser en materiales compuestos

## Surface treatment by laser in composite materials

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### **Abstract**

Conventional methods for the surface treatment of materials to be joined present some limitations and variations that affect their performance during and after the bonding. This work is about the use of a light-based technology as a method to modify the surface morphology of fiberglass composites to enhance their adhesion in a single lap joint with epoxy adhesive. Examination with scanning electron microscopy showed patterns of laser over the composite surface, and the results of tensile test machine confirm a significant increase in the strength of the joint when compared with the control group submitted to a conventional method with silicon carbide papers.

Laser, Composites, Surface treatment, Adhesion

## Estandarización en el proceso de pintura

## Standardization in the painting process

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### **Abstract**

Project carried out in a factory of school and office furniture, located in the municipality of Aguascalientes. A study was carried out in the painting area, mainly considering the application of the 5's, ergonomics, occupational health and results of improvement of times. As part of the application the 5's, a comparison of the before and after times was made, in Occupational Health of the identification of the injuries and inconveniences of the workers of the area; Subsequently lesions were identified by means of the discomfort-lesion matrix (Mo-Le).

5's Methodology, Standardization Ergonomics, Musculoskeletal disorders

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## Fibra natural de yute como reforzante de materiales compuestos

## Natural fiber of jute as a reinforcer of composite materials

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#### **Abstract**

Composite resin / reinforcing materials have replaced the use of different materials, for example metals. In the present work, the mechanical characterization of a family of jute fiber reinforced composite materials (MC-RY) was performed. The reinforcing material was tested in different combinations of layers and orientation of the fiber ( $0^{\circ}$ ,  $30^{\circ}$  and  $60^{\circ}$ ). The characterization of the composite material was carried out by means of mechanical tests; such as: tensile strength, impact test and Leeb hardness. According to the mechanical properties measured in the different materials, mathematical functions were obtained that relate the mechanical property to the orientation of the fiber and the number of layers.

## Composite material, Yute fiber reinforced, Mechanical characterization

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# Implementación del índice de Taguchi en contraste con los índices convencionales para los estudios de capacidad de procesos

# Implementation of the Taguchi index in contrast to conventional indices for process capacity studies

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#### **Abstract**

In this paper we describe the implementation of the Taguchi Capacity Index (Cpm) in the "Ideal of Pure Water" Filling Center as an alternative to the capacity indices of the first generation processes of the Process Capacity Study, based on the Classical Philosophy of Quality as Cp, Cpk and Cr, where they assert Quality is only to meet specifications. On the other hand, it is shown that second-generation process capacity indexes (from Taguchi) based on the "Loss Function" and the "Average Function" better measure the focus of the Process and the Variability, since they conceive the Quality not only in meeting specifications, but also in reducing the variance with respect to a target value. All this representing a different approach to the Culture of Quality Improvement where Dr. Genichi Taguchi revolutionized processes with his methodology called "Quality Engineering".

## Cpm Index, Process Centering, Variability

# Estudio de calidad y vida de anaquel de chorizo de conejo

## Study of quality and shelf life of rabbit sausage

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### **Abstract**

The company CONIGLIO was created by students from the business development area of the UTSOE, who developed a chorizo based on rabbit meat. The product was evaluated for quality and shelf life for marketing in Valle de Santiago, Guanajuato. The objective of the work was to standardize the elaboration process and determine the shelf life of rabbit sausage. For the standardization, three batches were made to the same process conditions and ingredients and evaluated by 10 untrained judges by an affective survey on a Likert scale, evaluating odor, color, flavor, texture and consistency. The shelf life was evaluated by accelerated life at temperatures of 4, 15 and 25 ° C, monitoring the texture, color, acidity and humidity in the chorizo for 35 days. The mean comparison of the three lots and the sensory ones were statistically the same for all the parameters showing that the product was standardized. The nutritional table gave us a product that provides 135Kcal per hundred grams, showing a greater contribution in protein with 15.82g and lipids with 6.25g. The shelf life of chorizo at 4 and 15 ° C was 27 days and at 25 ° C it was 3 days that it was packed in a vacuum bag.

### Rabbit sausage, Process standardization, Shelf life

# Estandarización de procesos, para la reducción de SCRAP en una empresa dedicada a la fabricación de tornillos para el sector automotriz

# Standardization of processes, for the reduction of SCRAP in a company dedicated to the manufacture of screws for the automotive sector

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### **Abstract**

The objective was to reduce the Scrap by 10% of the screw originated from the processes of the injection machine and adhesive coating machine. Checking and improving the method of preparing the coating of the adhesive. Standardizing processes, applying quality tools. The collection of information were obtained through observation techniques in the processes involved, in this way it was detected in which machine the tests would be carried out. The review were carried out verifying that the checklist activities were followed in specific to the starting of the machine involved in the elaboration of the screw, detecting the conditions and the parameters, tests were carried out with procedures of Heating of moulds, injections in vacuum and with parts. It is of paramount importance to improve the levels of productivity taking advantage of the raw material, in addition, respecting and following the manuals of work, by means of the standardization of the process. In addition, this is how it will appear reflected in a cost reduction, which in the end, is our point of care. As well as the fulfilment of the commitment of quality acquired with our clients.

Standardization, Uniformity, Scrap, Processes

# Uso de ingredientes funcionales no cárnicos en la elaboración de jamón cocido artesanal

## Use of non-meat functional ingredients in the preparation of artisan cooked ham

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### **Abstract**

The effect of partial pork meat substitution by soy protein isolate and native potate starch was evaluated on the physical and organoleptic properties of cooked ham. Three hams were formulated, the control based on pork leg meat (Ham1), and Hams 2 and 3 were made with the functional ingredients. The meat paste of Ham 1 and 2 was made manually. Ham 3 was elaborated using the same formulation of Ham 2, however, the process was carried out with the use of specialized machinery (tenderiser and mixer). The incorporation of both additives (hydrocolloids) improved the texture, taste and water loss, observed in the ham 1, increasing production yield by 58.69% for Ham 2 and 64.71% for Ham 3, respectively. Thus, the net gain calculated for losses in the process \$ 18.6 pesos for ham 2 and \$ 21.0 pesos for ham 3, respectively. Both hams are classified as fine according to mexican regulations. The results of this work showed that the use of ingredients of vegetable origin, are a good alternative for the elaboration of artisan hams from a nutritional, economic and organoleptic perspective.

Artisanal cooked ham, Functional foods, Soy, Potato starch

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# Evolución de la normatividad y su impacto en el aumento de los Sistemas Fotovoltaicos (SFV) instalados en México

# Evolution of the regulations and their impact on the increase of Photovoltaic Systems (SFV) installed in Mexico

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### **Abstract**

In December 2013, a constitutional amendment was promulgated in order to support growth, economic stability and the development of the energy sector. In the present work a review is made regarding the regulations referring the electrical industry in Mexico since the appearance of the amendment, highlighting the aspects and policies proposed to propitiate the use of clean energies in our country, mainly, solar photovoltaic energy. It is described that not only the development of technology make it cheaper and more efficient; also the change in laws and regulations have favored the use of photovoltaic systems in the country. As well is presented the growth projections of the photovoltaic capacity installed in Mexico, this will make it possible to have less and less dependence on fossil fuels for the generation of electric power, helping this way to achieve sustainable development. The union of all these factors lead to a favorable market for the growth of electricity generation through solar photovoltaic energy.

Energy amendment, renewable energy, photovoltaic energy, energy market

Análisis del aprendizaje tecnológico en una planta de corte de la industria maquiladora de Tehuacán, Puebla

# Analysis of technological learning in a cutting plant of the maquiladora industry of Tehuacán, Puebla

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#### **Abstract**

The knowledge-based economy raises the role you dominate the creation of wealth based mainly on the use of ideas. This involves learning processes internal and external that each organization has, both for their processes and productive services and to improve them. The processes of learning in organizations charged radical importance, among which stands out the technological learning, generated in enterprises by its staff, from the directors to the operation, all of them as depositories of knowledge acquired in process of training or practical experiences, same it is vital to know to be able to improve it, which is why the process of technological learning in a maquiladora industry, which is a production company specializing in pants ("jeans") and of denim, with over 50 years of experience in the garment industry, specifically in its cutting plant. It was designed and applied a questionnaire research in order to determine the dimensions that structure the technological learning, its impact on cutting plant and establish proposals for development, whose results contribute not only to this company, but others like rotation.

### Technological learning, maquiladora, cutting plant

# Desarrollo del sistema único de registro de aspirantes a la educación superior

## Development of the unique registration system for aspirants to higher education

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### **Abstract**

This article presents results of the realization of a technological platform created in the Instituto Tecnológico Superior del Sur de Guanajuato (ITSUR) in contribution to the Secretariat of Innovation, Science and Higher Education of the state of Guanajuato (SICES). According to data from SICES, for the 2015-2016 school year, the state of Guanajuato had 24.3% higher education coverage, below the national average of 35.8%, which indicates that of the 554,645 young people in the range of aged 18 to 22 years, only 134,507 study Higher Education. Of this coverage index, 14.2% corresponds to public institutions and 10.1% to the private sector. Therefore, SICES considered it opportune to have information for the follow-up of applicants to Higher Education and with this, to focus attention strategies to increase coverage and retention in Higher Education in the state. During 2017 ITSUR collaborated with the development of a Web platform to detect the expectations of high school students, aspiring students to continue university studies, as well as preferences regarding career choice. This platform was named: Unique System of Registration of Applicants to Higher Education (SUREDSU).

Software, Strategy, Coverage, Retention, Higher Education

# Estudio los convertidores DC-DC y LED de potencia empleados en la trasmisión de datos

## Study the DC-DC and LED power converters used in data transmission

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### **Abstract**

The transfer of information through light, better known as LI-FI, emerges as a recent proposal in terms of wireless communication since this type of communication can be integrated into existing LED lamps, besides, it has advantages of generating little interference, it could be used for communication between automotive vehicles and private communications, security, among others (Dong-2016). Although the main disadvantage of implementing this type of communications via light, is the efficiency of the system and the speed to transmit the information. A system for transmitting information via light is composed of three main elements: 1) power LED, 2) the dc-dc converter that feeds the LED and 3) a circuit that delivers the information to be transmitted. In this work the speed of the LED and the speed of the cd-cd converter will be analyzed, this in order to establish the limit of the band to be transmitted or the modulation limit used. In a first part the speed of LED will be analyzed, to continue with the dc-dc converter and to establish the speed of this, since this converter is in charge of varying the power to transmit the information and its dynamics depends on the evidence and the speed of the system.

## Lifi, Led, Buck converter, Communication via light

Determinación de plomo en muestras de PM2.5 obtenidas en temporada invernal en los municipios de San Francisco del Rincón, León, Celaya, Salamanca y Cortázar

Determination of lead in samples of PM2.5 obtained in winter season in the municipalities of San Francisco del Rincon, Leon, Celaya, Salamanca and Cortázar

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### **Abstract**

The concentrations of particulate material smaller than 2.5 micrometers (PM2.5) were determined in 11 strategic points in the entities of León, San Francisco del Rincón, Celaya, Cortázar and Salamanca, which are part of the main industrial corridor of Guanajuato with support of the air quality department of the Ecology Institute of the State of Guanajuato. The maximum values of PM2.5 obtained were 59.99  $\mu$ g/m3 for San Francisco del Rincón, 3799.04  $\mu$ g/m3 for Cortázar, 73.47  $\mu$ g/m3 for Salamanca, 64.57  $\mu$ g/m3 for Celaya and 65.23  $\mu$ g/m3 for León. In comparison with the maximum limits allowed by the official Mexican standard NOM-025-SSA1-2014, in all sampling points these limits were exceeded. Also, in relation to the values allowed by the World Health Organization (WHO), the values of the remaining entities obtained were between 1.5 and 2.5 times higher; being León the entity with higher values. In the entity of León, the concentration of lead was studied, finding values between 0.4 and 3.5  $\mu$ g/m3, that proved between 2 and 5 times bigger than the limits established in the official Mexican standard NOM-026-SSA1-1993.

Air quality, Metropolitan area, Lead, Particulate matter, Industrial corridor

# Efecto de los sistemas de producción en invernadero hidropónico y microtúneles en el rendimiento del tomate en Yucatán

# Effect of hydroponic greenhouse and microtunnel production systems on tomato yield in Yucatan

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### **Abstract**

In the state of Yucatan, the production of tomato is not considered very important because the farmers think that is a very complicated crop to handle. Now days exist new technologies developed around the world in the agricultural sector that has the fundamental purpose to increase the performance of the superficial unit and the product's quality. These technologies are being used in the state of Yucatan to produce the saladet type of tomatoes. The comparison was taken between a micro tunnel type of production and a hydroponic greenhouse. The cultivation was tomato out of some variety type. Between the two systems was not found a significant difference, although was expected better results in the hydroponic greenhouse system. May be the variety has to do with the results, because at the moment only has been tested in open sky. Also, is important to mention that was registered temperatures up to 40 degrees which are not ideal for the cultivation of tomato inside a hydroponic greenhouse. Nevertheless, the results obtained were satisfactory, because overpassed the reported results 12 tones for each acre. The major performance obtained was 60.1 tons for each acre.

Hydroponic, Greenhouse, Performance, Micro tunnel

# Aplicación del método de Takeda y corrimiento de fase en la reconstrucción de perfiles mediante luz estructurada

# Application of the Takeda method and phase shift in the reconstruction of profiles by structured light

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#### **Abstract**

The study of the surface profile by optical techniques has been accepted in differents sectors, these techniques include triangulation, confocal microscopy, deflectrometry, interferometry, among others, each of them has special characteristics in terms of resolution and dimensions of the sample [1], however the analysis of the data obtained in each of these techniques suppose a strenuous computational work; the analysis of data can be frequency or temporal point. In this work we report the results obtained in the study of profile of a semi-spherical object, by means of methods of phase-shifting and Takeda. The interferograms was used structured light, capturing the reference plane and on the object, the interferograms obtained was processed in Matlab. The result suggest that the technique of reconstruction of profile that shows less peaks, Takeda's method can be favorable in obtaining the surface; the difference obtained between these two techniques in 0.0992 arbitrary units of intensity (u.a.).

Surface reconstruction, Strip projection, Phase shift, Takeda's method

# Comportamiento de extremos recortados de vigas de concreto para diferentes propiedades mecánicas

## Behavior of cut ends of concrete beams for different mechanical properties

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#### **Abstract**

This study concerns the dapped-end beams of typical solution with its reinforcement based on hangers as well as on vertical and horizontal rings considering different concrete strengths under service load, which have been frequently used in recent time for highway. The critical aspect resides in the possibility of a premature cracking in the re-entrant corner of dapped-end. Limiting cracking at a level that does not damage the correct operation of the structure or cause unacceptable appearance is fundamental to the quality and durability of a structure. A numerical model of dapped-end beam was made using the Finite Element Method which was validated with its experimental result depicted good correlation in the Load-Displacement curve. Afterwards, a parametric study was carried out, varying the mechanical properties of the concrete obtained from the literatura. It was found that as compressive strength of concrete, [ff] \_\_c, decreases the load capacity also decreases under service load.

## Dapped-end beam, mechanical properties concrete, Finite Element Method

Estudio ergonómico en el área de inyección de plásticos, propuestas de mejora y taller de pausas activas a empleadas

# Ergonomic study in the area of plastic injection, proposals for improvement and workshop of active breaks for employees

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### **Abstract**

Hardly medium-sized companies are concerned about the ergonomic conditions of workers, for focusing more on legal situations, productivity and quality. In what it works, it is on the Industrial Safety area but Hygiene seldom take the time to study it. That is why we are interested in doing this work on the ergonomic study in the area of injection of plastics, improvement proposals and workshops for active breaks for employees, which aims to solve a problem in the field of Industrial Hygiene, where they are analyzed the work stations and their environment through an ergonomic evaluation carried out by the Fanger methods, Check List OCRA, Rapid Posture Assessment EPR and the RULA and REBA method. Where we found areas of opportunity that were exposed to the manager and plant engineers and collaboratively a series of proposals was reached to minimize this problem and prevent workers from having an occupational disease.

## **Industrial hygiene, Ergonomics, Postures**

# Eficiencia en paneles solares

## Efficiency in solar panels

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### **Abstract**

Solar energy as well as being the most abundant resource on the planet is one of the many viable alternatives known to supply heating, hot water and electricity production in a natural, unlimited and clean way, since it does not pollute, does not emit smoke, CO2, nor does it emit gases with negative effect.

# Evaluación funcional de formulaciones de harina refinada de trigo y harina de integral de quinua para productos de panificación

# Functional evaluation of refined wheat flour and whole quinoa flour formulations for bakery products

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### **Abstract**

Quinoa has more protein than wheat, it has a better balance of essential amino acids, but does not develop gluten. In this work, the physicochemical, rheological, functional and sensorial quality of refined wheat flour (RWF) and whole quinoa flour (WQF) was evaluated. The experimental material was UrbinaS2007 wheat, VallesF2015 wheat and Okko Quinoa. According to the simple ANOVA and the comparison of means Tukey method, significant difference between the formulations was detected (P≤0.05). The volume of sedimentation (VS) of the formulations varied from 52.5 to 23 mL, with treatment of 50% WQF the minimum. Mixing time and mixogram height are lower in formulations of 20% and 50% WQF (MT=3.5 min and MH=50 mm). The extensibility (L) decreased and the tenacity (P) increased in the formulations of 20% WQF and 50% WQF with respect to the control 100% RWF. The tenacity / extensibility (PL) relationship varied from 1.0 to 15.0, with the upper value being 50% WQF, which is associated with low bread volume (BV=395 mL). Cookies made with 100% RWF and 25% HIQ indicated Cookie Factor (CF=5) and sensory evaluation of good quality.

Flour, Rheological quality, Biscuit, Bakery quality

## Automatización de equipo y ahorro de energía en planta de Motores

## Automation of equipment and energy savings in Motors plant

PÉREZ-ORTEGA, Eva Claudia, CHAVIRA-ÁLVAREZ, Alberto, ESPARZA-DELGADO, María Del Carmen y VALLES-NOROÑA, Alejandro

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### **Abstract**

The enormous advances in modern industry require industrial automation, especially in the area related to time and energy savings. The project "Automation of equipment and energy saving in the Motors Plant" is aimed at the automation of equipment whose objective is to eliminate the activities carried out by the company's personnel in the current system, making use of the existing equipment. by means of technology, the first drawings used to carry out these tasks are eliminated. Achieving also has an improvement by covering points where there is a saving in energy and spare parts used for repairs. The problem of switching on and off the machinery in the engine area is solved through an application combined with a programmable logic controller. The results refer to a reduction in the time in which the machinery of the Motoren production lines is on, which is reflected in an energy saving.

## Automation, Programming, PLC, Saving

# Revisión de celdas fotovoltaicas según eficiencia

## Review of photovoltaic cells according to efficiency

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### **Abstract**

In this work was carried out a study of the In Mexico currently the consumption of non-renewable electric energy is increasingly high due to the common energy used for the generation of electric power, which is why they have been able to innovate new technologies to mitigate the impact on the environment, among them is the development of photovoltaic (CF) cells, which take advantage of the energy from the sun to generate electricity. Mexico is among the best countries with the highest solar radiation efficiency. Certainly, this technology has not been fully exploited due to the lack of research support, in addition to the lack of information that exists for the few consumers.

## Photovoltaic cell, National monitoring systems

## Gestión y documentación de procesos en el área de soporte técnico

### Management and documentation of processes in the area of technical support

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#### **Abstract**

This article shows a focus on management and documentation that allows optimizing process control in the technical support area of any company that has experience in the area of service stations, such as gas stations; so that they give solution to common problems presented by the customers. For this purpose, three areas of work are considered: 1. Server assembly, quality control and documents generation. 2. Processes and generation of volumetric control documents. 3. Processes in customer service generating results metrics. It is oriented to understand the execution of the processes and to base them in such a way that they have a follow-up in their continuous improvement; that is to say, that they have a support against possible incompatibilities with some versions that are handled in the software. In addition, the development of frequent activities is combined with the good practices proposed by CMMI in order to have quality control and risk reduction in the performance of any activity.

Technical support, Management and documentation of processes, Quality control, Volumetric control, Customer service

## Obtención de un material compuesto con polipropileno reprocesado y reforzado con fibra de vidrio

# Obtaining a composite material with reprocessed polypropylene and reinforced with fiberglass

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#### **Abstract**

Recycling has currently become a necessity, especially in relation to plastics; which are slowly degraded and eventually contaminate soil, rivers and oceans. The objective of this research was to obtain a composite material with reprocessed polypropylene and reinforced with fiberglass. The experiment was accomplished in the Laboratory of Composite Materials at Instituto Tecnologico de Mexicali (ITM). The composite material was exposed to tension; flexibility, impact and water absorption tests. The results provided an optimal formula of the composite material; which can be moulded into different common use accessories. Contribution: The reprocessed polypropylene used in this research was obtained from bottle caps and plastic car bumpers. This research supports the use of economical technologies in order to develop the potential of university students by including them in scientific; technological and innovation research projects; which provide them with a high-quality education. This kind of research remains as an alternative to reuse plastic waste and also as a contribution to plastic pollution decrease caused by bottle caps and car bumpers in Mexicali.

### Composite materials, Polypropylene, Fiberglass

## Cama epiléptica

## **Epileptic bed**

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#### **Abstract**

Objectives, methodology: This article shows the design and development of an auxiliary bed to prevent falls to people with nocturnal epileptic seizures. A conventional camera that adapts to an alarm, servomotors and motion sensors that when activated raise a guard that prevents the user from having falls; A more servomotor helps the patient to remain in a lateral decubitus position that allows him to expel the oral secretion and reduce the risk of drowning during a nocturnal epileptic seizure. Contribution: If a person suffers a seizure in addition to prevent with a guard, alarms are activated that alert to give aid to the person with attacks. Conventional beds do not have this type of systems and can be adapted to any bed for routine use. We believe that this system can help people minimize the risk of injury during a nighttime seizure crisis.

#### **Epilepsy, Epileptic nocturnal wanderings protection**

# Desarrollo de un instrumento de medición de la Producción Esbelta desde una perspectiva de Sistemas

# Development of a Lean Production measurement instrument from a Systems perspective

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#### Abstract

Design of a Measurement Instrument for the Lean Production System. Taichi Ohno, developer of the Toyota Production System, was the promoter of the working methods of Industrial Engineering. They had to be put into practice in the manufacturing systems, which allowed this model to be an innovative system in the assembly companies. However, Toyota opened its doors to allow research work (Womack, Jones & Roos, 1992), it has been criticized that the slender production system has not accepted acceptance or generalized replication of the success of the company (Dankbaar, 1997). This work is an instrument for measuring the Lean Production System from a systems perspective, that is, considering the structure, interrelations and field dynamics.

#### Lean, System, Instrument

## Diseño de troquel progresivo de cinco pasos para la fabricación de pieza "Contacto Auxiliar"

## Design of progressive five-step die for the manufacture of part "Auxiliary Contact"

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#### **Abstract**

As part of an investigation for a technology transfer project for the company Grupo Multico S.A. de C.V., reports in this article the results obtained with respect to the design of a progressive five-step die to cover the need for a tooling that produces the piece called "Auxiliary contact". Prior to the design, the corresponding calculations and 3D modeling were performed, validating the design through finite element analysis.

### Design, die, FEA Simulation

Destilación solar para la recuperación del catalizador KOH del agua de lavado de biodiesel y el subproducto agua destilada

# Solar distillation for the recovery of the KOH catalyst from the biodiesel washing water and the by-product distilled water

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#### **Abstract**

In the search for the implementation of biofuels such as biodiesel, the main limitation is a competitive price with the petrodiésel; An alternative to reducing the production costs of this biofuel is the recovery of the alkaline KOH catalyst used in the process due to its high conversion efficiency, the disadvantage of this homogeneous catalysis, is its drag on the products at the end of conversion. The stage of purification is necessary to avoid the corrosion of the automotive vehicles, generally it is done by means of distilled water washes, the proposed method is the solar distillation as an alternative to the treatment of the effluent, by means of a prototype of double slope it is demonstrated that it is possible the daily recovery of 0.95 gr of the alkali and 1.13 L of the distilled water, meaning a double economic saving in the costs of the raw materials required in the biodiesel production process.

#### Biodiesel, Recovery, Distillation

## Desarrollo de un sistema de generación de energía para corredores nocturnos mediante celdas Peltier

## Development of a power generation system for night runners using Peltier cells

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#### **Abstract**

Objectives, methodology: The present article shows the design and development of a system that when used by runners generates energy to excite LED lamps and distinguish or illuminate the path through which they run. A series-parallel arrangement of peltier cells are placed in the abdominal area in such a way that one face of the cells is at body temperature and the other face is at the temperature of the air that hits it when the user is running. Due to the Seebeck effect, the temperature gradient between the two faces of the cells, an electrical energy is generated with which LED lamps are energized. Contribution: If a person who likes to go for a run at night does not have the appropriate accessories such as vests or reflective clothing, by using this belt can identify the motorists who can transit through the area in the event that you run to the side of the street.

Night runners, Energy, Seebeck effect

# Sistema de pedaleo dinámico para concentrar la atención de niños con trastorno de espectro autista

# Dynamic pedaling system to concentrate the attention of children with autistic spectrum disorder

TEJADA-VELASQUEZ, Yelena, ORTIZ-SIMON, José Luis, OLIVARES-CABALLERO, Daniel, ROJO-VELÁZQUEZ, Gustavo Emilio y AGUILERA-HERNANDEZ, Martha

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#### **Abstract**

Objectives, methodology: Design and execute a program capable of improving the cognitive abilities of children with Autism Spectrum Disorder, thus providing continuity to the development of a pedaling mechanism performed at the facilities of the Instituto Tecnologico de Nuevo Laredo for that purpose. Demonstrating the scope of learning obtained by complementing the educational learning of infants with Autism Spectrum Disorder with a simultaneous motor interaction: Contribution: Multiple care centers and educational organizations that focus on the treatment of children with ASD are a small number compared to conventional schools (INEGI, 2014) therefore it is necessary to improve the learning conditions for, consequently, improve living conditions and their natural integration in society. This is how a dynamic system in parallel to the education of a child with ASD will accelerate the development of their skills improving their social environment.

Autistic Spectrum Disorder, Dynamic pedaling, Mechanical design

Desarrollo de un modelo de redes neuronales artificiales para predecir la dureza de la superficie de un acero A-36, tomando como variables la deformación térmica y la temperatura, producidas a lo largo del proceso de soldadura

Development of a model of Artificial Neural Networks to predict the surface hardness of a steel A-36, taking as variables the thermal deformation and temperature, produced along welding process

SERVIN-CASTAÑEDA, Rumualdo<sup>1</sup>, LOPEZ-REYNA, Laura<sup>2</sup>, GARCIA-YREGOI, Manuel<sup>2</sup>, ROSALES-SOSA, Ma. Gloria<sup>2</sup> y BARRERA-MORENO, Mario Alberto<sup>1</sup>

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#### **Abstract**

The objective of this research work is to apply a model of Artificial Neural Network (ANN) to predict the transformation of hardness and thermal deformation suffered by a steel plate A-36 during the welding process. The mathematical model for the training of the neural network was carried out in the MATLAB® R2010a software, in which were used as input variables in which the data obtained from deformation (flatness) before and after the welding, and temperature; and as output variable the hardness. According to the results obtained during the training, the best architecture of the network was [3,15,1], that is, 3 input layers, 15 nodes in the hidden layer and 1 output; During the first run a regression value of R = 0.96353 was obtained, that is, an efficiency of 96%. This indicates that the hardness obtained by the model is very close to the real hardness obtained during the data collection.

Artificial Neural Networks (RNA), Hardness, Deformation, Steel A-36

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# Tierra para fundición alternativa de reciclaje en la Carrera de Ingeniería Industrial del Instituto Tecnológico de Iguala

# Land for alternative recycling smelting in the Industrial Engineering Program of the Instituto Tecnológico de Iguala

RODRIGUEZ-MEJÍA, Marco Antonio & HERNÁNDEZ-SANTANA, Jorge

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ID 1er Coautor: *Jorge, Hernández-Santana /* **ORC ID**: 0000-0002-8325-0085, **Researcher ID Thomson**: X-2427-2018 **Abstract** 

The present work describes the importance of designing didactic material that helps the development of the practices carried out by the students in the career of Industrial Engineering of the Technological Institute of Iguala and that require aluminum material and the creation of land to melt. Take advantage of the automotive oil that is discarded in the mechanical workshops of the environment to create recycling that allows us to produce a special refractory material in the foundry (earth) and turn it into working material with activities that promote the development of skills and learning for understanding, identification, experimentation, process management and thermal treatments. That the student is able to promote intellectual processes where he analyzes practical situations conceptualized from what he observes, in addition to incorporating new knowledge in his professional development next.

Didactic material, Earth, Used oil, Foundry, Recycle, Industrial Engineering, Students

## Implementación de un minitractor agrícola rentable

## Implementation of a profitable agricultural mini-tractor

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#### **Abstract**

The agriculture at the state of Yucatan has been very important specially at the southern region. Although to many agriculture is very difficult to get the necessary tools to increase their production and to reduce the time to achieve certain amount of work, especially to ground plow their land. The agricultural tractor is a machine that improves power to help the agricultural workers at their journals in field crops. Unfortunately to the agricultural worker has a very difficult access to acquired one of these tractor machines because of its expensive costs, and its size is getting bigger day after day. That is why this project has the purpose to design a profitable minitractor that will be used in small extensions of Yucatecos farmers' crops. The minitractor will be powered by an 1816 cubic centimeters (cc) gasoline engine. With low fuel consumption, and a high performance transmission designed for the characteristics of the mini tractor will provide enough strength to make the plowing process faster and more agile.

Agriculture, Ground plow, Minitractor, Gasoline engine, Transmission

## Biogeneración de energía utilizando un residuo

### Biogeneration of energy using a waste

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#### **Abstract**

The problem of Climate Change has generated an increase in atmospheric pollution, caused by the use of fossil fuels, whose environmental impact has been negative. Another problem is the pollution of the water resource, due to different sources that come from the industry to the domestic one. Burnt kitchen oil thrown down the pipe represents irreparable damage. That is why; the objective is the analysis of the use of bioenergetics as a solution to these problems and the obtaining of biodiesel from waste oil. As results, it can be said that the Energy Regulatory Commission is the one that promotes the use of bioenergetics. This provides a wide range of opportunities for the development and use of a biofuel. The production of Biodiesel, through the process of transesterification using waste cooking oil, generates two solutions: to minimize the use of diesel and to use the waste of oils of vegetable or animal origin from domestic sources. However, the use of a waste has not been adequately promoted. The generation of bioenergetics is an opportunity, seeking to link them to other solutions.

Discarded cooking oil, RAUC, Bioenergetics, Pollution, Biodiesel

# Sistema de rastreabilidad de masters de producción en un laboratorio de calidad de una empresa industrial

# Traceability system of production masters in a quality laboratory of an industrial company

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#### **Abstract**

This article shows the design and development of a system to achieve the traceability of production masters that are sent to a quality laboratory in an industrial company, with the aim of identifying quickly and timely the lots that have presented a problem in their production. Therefore, it is necessary to identify in detail the process of receiving masters or containers in the laboratory. For the design of the system, the spiral model proposed in software engineering was used. This model was used due the ease and adaptability that must be applied in software development, allowing to make versions of the system more and more complete. The programming language C # was used to develop the system, using VS2012 with a relational database in MS SQL Server 2008. As a result, a system was obtained which allowed quickly and opportunely to identify the traceability of the batches of the masters that presented some problem when evaluated by the corresponding quality laboratory.

### System, Traceability, Spiral model

## Plataforma estratégica para optimizar la contratación de servicios

## Strategic platform to optimize the contracting of services

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#### **Abstract**

Smart Cities have been developed through the accelerated use of Information and Communication Technologies (ICT), providing high efficiency public services, which also include security, productivity, and competitiveness. A Smart City is formed with the increase of investments in education, infrastructure, energy control, technologies and transportation, promoting a better quality of life. In the same way, sustainable economic development, which promotes a prudent and reflective social participation of the environment, together with a tenacious and committed government that offers safe and quality services, optimizing times and resources, results in a Smart City. In this article, the Toc-Toc platform is presented to provide services through mobile, Web and desk applications. The platform helps the continuous improvement in the quality of the services offering seriousness and security for the users who request it, encouraging the local companies to be more competitive, generating jobs and improving the economic and social level of the region.

Smart City, Web, Mobile, Services

Plataformag web y aplicación móvil para control, medición de gasto de agua y optimización de uso (Red inteligente UTNG)

Web platform and mobile application for control, measurement of water expenditure and optimization of use (Intelligent network UTNG)

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#### **Abstract**

At the moment, it is working hard with the conformation of an academic body within the university which the team consists of four members and was exposed to senior management to make the proposal to generate prototypes based on internet technology of things based on in Industry 4.0, like the one presented below, a website for the treatment of information generated by a water consumption meter that allows the sending of data in real time and manipulation by mobile device, which allows the achievement of the environmental objectives as well as the efficient consumption of the resource, when talking about environmental objectives one of them takes the consumption of water, in the environmental quality system this environmental objective was taken to reduce water consumption by 5%, which institutionally is a challenge, that is why a proposal that is taken by the academic body is the generation of this type of ototypes to contribute to the achievement of the goal with the use of technology. At the same time, the academic body will advance in stages to achieve consolidation.

Environmental Management System, academic body, prototypes, internet of things

## Plataforma para el control de producción y comercialización en huertas aguacateras

### Platform for the control of production and commercialization in avocado orchards

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#### **Abstract**

The avocado industry in Mexico has grown in recent years. There are approximately 20,000 avocado companies in the country, of which 12,331 have been certified and recognized until 2014, which belong to the states of Michoacán and Jalisco. On the other hand, the needs of the avocado orchards are increasing, since they require to store information related to the traceability of the production, verifying the packers that make the cuts, employees, suppliers, purchases, sales, payments and collections. Therefore, a computer platform is proposed that allows the management of information to guarantee an orderly control in each of the administrative processes that include production and commercialization, generating reliable and timely information through the issuance of different reports and statistics.

Platform, Traceability, Information, Processes

## Aplicación práctica de internet de las cosas

## Practical application of the internet of things

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#### **Abstract**

We're entering a new era of computing technology that many are calling the Internet of Things (IoT). IoT is a new technological paradigm, which predicts in a near future billion of devices would be able to connect to Internet, opening a new set of services and applications that will enrich human interaction with their surroundings. In other words is the latest market transition that is allowing us to connect the 99% of the unconnected. The key of the IoT adoption and development is based on the interconnection of objects and services that require necessarily the use of protocols and standards through which objects and users can interact, even objects amongst themselves (Machine to Machine (M2M)). The following article presents an overview of IoT's application using a computer or a smartphone in order to control (turn on/off or change sequences) a Christmas light from anywhere in a house using a web browser. All this is to make our lives much easier and safer.

Internet of everything, Arduino, Internet of things, Web page, Programmable Board

Programa simulador de efectos de cambios de masa y longitud de eslabones en modelo dinámico y cinemático de brazo manipulador de 4 Gdl

# Program simulator of effects of changes of mass and length of links in dynamic model and cinematic of arm manipulator of 4 Gdl

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#### **Abstract**

Mathematical analysis for robotic manipulators helps to anticipate and foresee the behavior of these types of systems based on the application that they were created for. This paper analyses a 4-dof robotic arm in order to understand its trajectory tracking demeanor. Using Simulink® from Matlab®, the robot's performance is dissected to comprehend the effects of changes made on its physical characteristics, such as links' length and/or mass.

Manipulator arm, 4 gdl, kinematic analysis, Dynamic modeling, Track tracking, Robotics, Control

# Evaluación de un sistema de compresión de biogás purificado para el sector agropecuario

## Evaluation of a purified biogas compression system for the agriculture sector

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#### **Abstract**

Today one of the alternative types of energy is bioenergy, in its different forms, which can be biogas, biodiesel and bioethanol. In the Technological Institute of Ciudad Valles, to date has been working on the characterization of organic waste, in the production of biogas from them and their purification. This has raised the need to design and develop a compression system to compress the biogas, in order to facilitate its management (transport and storage) and ensure its energy value for optimum use as fuel. The designed biogas compression system was connected to a cylinder in which the purified biogas was stored, and for compression the pressure switch was calibrated at 4 kg / cm², in order to control the pressure of the stored biogas. The evaluation of the compression system consisted in the calorific value measurement and the density, where a calorific power of 13,098 kcal / kg and a density of 0.651 kg /  $m^3$  were obtained.

Biogas, Purified biogas, Compression system, Calorific value, Density

## Repercusión de la degradación arrecifal en la disipación del oleaje

## Impact of reef degradation on wave dissipation

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#### **Abstract**

The performance of the Limones reef of Puerto Morelos Reef National Park is evaluated as a coastal protection structure against the water waves. The analysis is made based on the comparison between the incident, reflected and transmitted amplitude. To obtain the map of amplitudes product of the water wave-reef interaction, the WAPO numerical model (WAve Propagation On the coast) was used, which is a model based on the equation of the mild slope, capable of simulating the phenomena of diffraction, reflection, refraction, shoaling and breaking wave. Regarding the shape of the Limones reef, this was simulated for the current condition and for a supposed degradation condition with which its current height is reduced 0.50 m. The current condition was taken from the 2016 CONABIO bathymetry. The wave transmitted under the current condition of the reef is less than 50% of the incident wave in terms of amplitude, while for the degraded condition the wave transmitted is of the order of 70%.

#### Reefs, Water Waves, Shore Protection

## Simulación y control de la posición de un servomecanismo de corriente directa por asignación de polos

# Simulation and control of the position of a direct current servomechanism by pole assignment

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#### **Abstract**

The assignment of Poles for the position control of a servo using the Akcermann's formula, is a method used to find the K state feedback gains. This paper presents a simple procedure for the design of control systems of 2nd order and its simulation. If we apply this method manually the profit-getting procedure would be tedious. To make this operation easier, were used series of Matlab commands (including acker) to calculate the K gain matrix, for a system of one input and with a feedback control signal. Subsequently, with the values obtained from K, a series of numerical simulations were carried out in the LabVIEW Control & Simulation Loop, which allowed to verify the control of the system position and the different types of response; Cushioned, overdamped and subdamped.

Ackermann's Formula, Assignment of poles and State-Feedback Controller

Modelo educativo del Siglo XXI soportado por tecnologías de acción y a distancia como generador de una escuela de negocios dentro del Tecnológico Nacional de México

Educational model of the XXI Century supported by action and distance technologies as a generator of a business school within the National Technological Institute of Mexico

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#### **Abstract**

**Objectives, methodology**: Educational Model for the XXI Century is present into the Institutos Tecnologicos in Mexico, is based on the formation and development professional competences which are oriented to the educative process to forming professionals who promote productive activity, scients research, innovation, technology transfer, knowledge, tecnlogy and comunication strategies, creativity, entrepreneur in the country to achieve major development. This research develop educational model conceptualization base on competences, teaching and learning, that current are obtained thru documental analysis and study, to purpose to stablish a base to generate educational model proposal, using information and comunication technologies to focus strategies to develop school bussinness into the Institutos Tecnologicos in Mexico.

**Contribution:** The results, show that if technology is used into the Institutos Tecnologicos school bussiness will generate better students and graduates profesional skills, which allow them improve their performance in different productive áreas. The conclusions reached are that the bussiness schools proposal, have a visión to develop students and teachers skills and competences in the new neccesities context, which are generate in the different kind of productive sectors

Educational model, Business schools, Technological Institutes, Communication, Information technologies

## Instalación y selección de una plataforma educativa

## Installation and selection of an educational platform

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#### **Abstract**

Educational platforms are a necessary technological resource at present. Within the educational technology LMS are one of the most important tools and there are several options to access this resource, but which option suits us more and why. In this research we search for options and make comparisons to find the most appropriate, going through the technical characteristics of the servers, the installation and the suppliers that already offer the complete product ready to start working. Many of these platforms sell us the solution but you have to take into account many details, not just the aesthetics or the price.

### LMS, Educational Platform, Servers, Hosting, Supliers

Aplicación móvil Android para la transacción y consulta de información académica docente del Instituto Tecnológico Superior del Sur de Guanajuato

Android mobile application for the transaction and consultation of academic teaching information of the Higher Technological Institute of the South of Guanajuato

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#### **Abstract**

The present work talks about the construction of an application for Android mobile devices that allows teachers of the Higher Technological Institute of the South of Guanajuato to transact and consult academic information. The project helps to strengthen the development of mobile applications in the academic body. Development of applications under software engineering methodologies. The approval is achieved thanks to the financing by the program for professional teacher development. The application is named SICEDroid Docente and is a mobile client that connects to the Integrated School Control System implemented in the institution to transact and consult academic information. A planning for its construction is presented, the design of the project architecture is defined. The results obtained are presented showing some screens of the alpha version of the application. This version can be run on Adroid 4 devices or higher, achieving a probability that 99% of Android users can install its.

Android, Teachers, Application, Institutes, Technological

## Adopción del Uso de la Biblioteca Digital: Estudiantes Reportan

## Adoption of the Use of the Digital Library: Students Report

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#### **Abstract**

Objectives: In the research process, literature review is important both to document antecedents as well as in the interpretation of results. Teaching courses is an effective way of finding undergraduate students with potential for "early introduction to research". With the goal of understanding the processes through which they go through, specifically in the use of the digital library, this study was made to understand students' perspectives.

Methodology: Sixty undergraduate students were trained in the use of the digital library as a requirement to write an essay for the semester. They were asked to assess ten aspects from this experience.

Contribution: The digital library has been at the disposition of the academic community in our University, and until now we consider that the use of this resource has been low, and the results reflect on the type of academic products and the academic level of education of our students when they leave our classrooms with. Knowing more about the students experience when using the digital library, and the training effects, will enlighten us in order to promote this kind of scientific activity

Innovation diffusion, Self efficacy concept, Adoption, Digital library

## Aplicación Móvil para el Inventario de la Jurisdicción Sanitaria 02 del Estado de Guerrero

## Mobile Application for the Inventory of Sanitary Jurisdiction 02 of the State of Guerrero

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#### **Abstract**

The medicine store of the Sanitary Jurisdiction 02 of the State of Guerrero, periodically attends requests for medicines from 16 municipalities that comprise the northern area of the State of Guerrero, making a total of 500 medical units. The requests are made by Health Centers, Hospitals, Cherry Trees, Municipal DIFs, Town Halls, Health Houses, among others, referring to each one as a Medical Unit. The way to carry out the control of the warehouse is through the use of registration forms that are filled by hand, which makes this process slow and inefficient. Due to this problem a mobile application was developed to automate the registration and control of medicines and materials with the filling of the Registration of Application-1 (RS-1) from the application, offering in real time the existence of medicines in the warehouse, saving and take control of the warehouse exits, also allowing users (storekeepers) to view the RS-1, minimize the time in the packaging of the RS-1 and reduce the time in which the medical units obtain their medicine.

Warehouse, Medicines, Materials, Medical units, Mobile application

## Desarrollo e implementación de un sistema web para el proceso de estadía

## Development and implementation of a web system for the stay process

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#### **Abstract**

The administration of information in the development of stay process is one of the important activities that correspond at the academic direction, wich it depends on the full-time teachers that can take a personalized accompaniment to the student. The present research project entitled "Development and Implementation of a web system for the stay process" will automate the work in wich the user will only have to enter the data in the software to be stored in the database, since it contains sections that will facilitate the user's interaction with the system, as well as it serves as a support tool in the operation and institutional improvement related to this process. In the development of the project, the RUP methodology was used to document the system's instruments. In this work, a quantitative experimental study with a quasi-experimental design was used. GC: M1 --- X --- M3, GE: M2 --- X --- M4. A Likert scale instrument with 4 items was used to collect data. The results show that using a web system in this process is effective by applying them to educational institutions that uses it, which will be presented later.

Web system, Development, Stays, Efficiency, Automation

## Johnny-five: Herramienta Java Script para desarrollo de aplicaciones IoT para desarrolladores web

## Johnny-five: Java Script tool for development of IoT applications for web developers

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#### **Abstract**

This document describes the importance more programmers start to develop in the IoT area (IoT or Internet of Things), due to the growing this technology is having. It is also suggested a Framework based on JavaScript named Johnny-Five. The Framework is recommended to Web developers, because they have the knowledge en the programming language in which Johnny-Five is based and they do not need to learn a new programming language to develop IoT projects.

## LoT, Johnny-Five, JavaScript

## Aplicacion movil de notificaciones de la Biblioteca Itsur

## Mobile notification application of the Itsur Library

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#### **Abstract**

The current document presents the development and validation process of a mobile application developed at the Higher Technological Institute of the South of Guanajuato (ITSUR), called BiblioAlert, developed with the purpose of reducing the percentage of debts and penalties in the ITSUR library, helping the user to remember the delivery date of books requested through the consumption of SIABUC web services. BiblioAlert was developed using the Android Studio platform and was oriented towards the student community of ITSUR, however, it is proposed that this application can be used in any institution that has a license from SIABUC. The article presents the development process and its difficulties, as well as the results after having tested and validated BiblioAlert with a control group made up of students from the institution..

Android Studio, Mobile application, BiblioAlert, platform

## Impacto de la publicidad de pago y libre en redes sociales en la ciudad de Tehuacán, Puebla

## Impact of paid and free advertising on social networks in the city of Tehuacán, Puebla

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#### **Abstract**

To know how advertising influences the different media. Contribution: At present it is of no use to have the best product or service if nobody knows it, that is why advertising in business is of vital importance because it helps to the brand positioning, to attract more customers, to make known the benefits of the products or services that the organization offers. There are various media, for which advertising is promoted, which is in turn looking for the sale of some product or service. Within its objectives of advertising is to inform, persuade and remember the information that we transmit the advertising commercials.

Publicity, Influence, Media, Social, Tehuacán

## Sistema para el control de ingreso y salida de alumnos de pre-escolar

### System for the control of entry and exit of pre-school students

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#### **Abstract**

This paper describes the development of a system for access and exit control of students at pre-school campuses. The purpose of the system is to guarantee that the access and exit of the students is validated conjointly with their respective tutors. The system proposed in this work combines the use of hardware (Arduino, RFID and GSM) and software (C # and SQL) to perform the aforementioned process. When the RFID reader detects the card of a student, who wants to enters or leaves the campus, and this coincides with the tutor's card, the system shows both images in a monitor; otherwise, the system denies the student access or exit, and it sends a warning alarm to the staff of the campus. In addition, the system has the possibility to send notifications messages of each event through e-mail and/or SMS to the tutors. As a result, we have developed a system for control, monitoring, administration and notification of access and exit of pre-scholars, which is of great help to protect them from possible risk, particularly the vulnerable ones.

Access control, Arduino, Desktop software

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## Aseguramiento básico de servicios de red en dispositivos de bajo costo

#### Basic assurance of network services in low cost devices

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#### **Abstract**

Currently, there are devices that are used as low cost servers, an example of which is the Raspberry Pi device, considered, a computer about the size of a credit card, developed in the United Kingdom by the Raspberry Pi Foundation, with the objective of the teaching of computer science in schools, allows the installation of an operating system with Linux Debian distribution, and therefore, the installation of network services. In the present work, it is demonstrated that the Raspberry Pi device is a viable option for the implementation of security methods in low cost devices, whose limitations are determined by the device itself, for this the web services, email and a FTP file server (File Transfer Protocol). The results obtained in the investigation, showed viability in the operation of the following security mechanisms in the device: implementation of the Secure Shell (SSH) for secure remote connections, password encryption, and information exchange in a secure manner. However, not all the tests were satisfactory, mainly the use of backup files for the monitoring and analysis of information that causes low performance of the device

Raspberry Phi, Low Cost Servers, Security, Server

## Propuesta del sistema de control de préstamos de equipos (SCPE) de laboratorios TIC de la UTVT

## Proposal of the equipment loan control system (SCPE) of ICT laboratories of the UTVT

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#### **Abstract**

This work exposes the proposal of the Control System of equipment loans of the ICT Directorate(SCPE) of career labs where it is intended to develop a system that automates the control of outputs and equipment inputs (loans) of the ICT Directorate, to reduce time and show reports to be able to make decisions about a next acquisition of equipment or different administration. It is proposed to use the RAD (Rapid Application Development) methodology to develop the system. The SCPE is based on the P-EDU-10 procedure of the Integral Management System that is hosted on the official website for the UTVT at the following address: http://www.sgi.utvtol.org.mx, points 8.3 that refers to the schedules, the 8.5 that refers to the application mainly and also the points: 8.6, 8.7, 8.8, 8.9, 8.10, 8.11, up to 8.12 that refer to the registration process until the final log as follows: "8 Description of the procedure", "8.3 Delivery of the internship schedule for each laboratory / workshop by DC to RTL", "8.5 Request professors who will use the laboratory / workshop, fill out the request for material, reagents, equipment and / or software for laboratory / workshop use."

System, control, loan, schedules

## Repositorio para aplicaciones web (Front-End)

## **Repository for web applications (Front-End)**

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#### Abstract

Advances in software development demand new tools to improve response times to needs within a region. For this reason, the Repository project for web applications (Front-End) has the objective of storing components, which allows web application developers, mainly higher education students, to perpetuate what is developed in software projects on a foundation of data. The methodology applied for the study and development of the project is through scientific research instruments applying surveys to young people of the Computer Systems Engineering (ISC) of the Higher Technological Institute of San Martín Texmelucan (ITSSMT). This is how the assessment of the experts in the area and the consultation of several scientific articles, was the adoption of a software methodology called SCRUM. Among the main contributions offered by this work are the improvement on the experience for the development of software for young people to create web applications, generate collaborative links among students to make code contributions through the repository, in addition to providing an alternative teacher to support your Web Application Programming classes.

Repository, Frond – End, SCRUM, Bootstrap

Estudio comparativo entre virtualización y cómputo en la nube para la implementación de laboratorios virtuales

# Comparative study between virtualization and cloud computing for the implementation of virtual laboratories

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#### **Abstract**

The constant change of the technology has given place to which the organizations can move its loads of work of Technologies of Information (IT) towards the cloud. Throughout the time, these changes can be synthesized in three contexts: use of physical devices, use of virtualization and use of cloud computing. In the academic area, the utilization of the cloud computing carries big advantages as applicative for the implementation of virtual laboratories, for this reason, the purpose of this work is to research about one of the topics of the cloud computing, named Infrastructure as Service (IaaS), developing a prototype following the methodology PDIOO that allows the study of this technology, analyzing its advantages and disadvantages in comparison with the virtualization, to propose it as tool for the Educational Institutions of Top Level that helps in the professional development of the students covering requirements for the accomplishment of laboratory practices with services as "virtualization of operating systems ", topic of study of this work.

Virtualization, Cloud Computing, Infrastructure as Service, Virtual Laboratories

## Importancia de la capacitación del personal a través de una cultura de seguridad informática

## Importance of staff training through a culture of computer security

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#### **Abstract**

The information handled by all companies has become a very important asset, which must be safeguarded and protected by different security tools. Currently, the security issue has become very important and a lot of information can be found about this topic. This has helped the companies to avoid some of the threats and vulnerabilities, however the personnel's lack of a culture about computer security can generate information infiltration or security failures exposing the information to computer intruders. The project is based on the determination of risks and vulnerabilities through an analysis of computer security failures faced by various companies in the productive sector, so a solution proposal is provided. The results presented lie in the content of the training given to the company's staff in order to reduce security risks and data mishandling.

Information Security, Computer Culture, Risks, Threats, Vulnerabilities

# Digitalización del reporte institucional de tutorías

## Digitization of the institutional tutorial report

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## **Abstract**

The purpose of this article is to inform about the benefits achieved when migrating the delivery of weekly and individual tutoring reports manually (printed format) to a digital format (Google form), referred to the Institutional Tutoring program format. (PIT) of the Technological University of Tehuacán (UTT), considering that only the first phase is presented, a better administrative control was achieved, due to that the captured information of the weekly report is enabled for a determined period of time by the tutoring coordinator of each educational program, allowing the reports to be delivered in time and form by the group tutors, in addition it improves the monitoring of all the activities that are related to the PIT. Another point to highlight in this first phase is that by eliminating the physical form report, we managed to make a 100% ecological process contributing to the saving of supplies in the UTT, and also contributing to the care of the environment in general.

Institutional Tutoring Program, Educational Program, Tutoring, Mentoring report, Scrum

# Kinect, herramienta inclusiva para personas con PC

# Kinect, an inclusive tool for people with PC

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### **Abstract**

Currently disability rates are increasing every year, more than one billion people, which correspond to 15% of the world population, suffer some form of disability (OMS). In Mexico, 270 thousand people are added each year to the more than 10 million people with disabilities, of which 12,000 suffer from cerebral palsy (CP). (CCEMedia, Grupo, 2017) Cerebral palsy is a disability caused by a lesion in the brain that affects in the mobility of a person and posture, limiting their activity (ASPECE, 2018) For the above and based on the literature reviewed, the design of usable interfaces is proposed, activities that promote the movement of the upper extremities on an architecture based on the Kinect sensor; for the development of a technological tool that allows to perform activities in children with cerebral palsy promoting an increase in the frequency of movements of their shoulder-elbow-wrist.

## Kinect, Actvity, Palsy, Cerebral

# Herramientas de diseño rápido, para implementar sistemas de información con videojuegos, y su evaluación

# Rapid design tools, to implement information systems with videogames, and their evaluation

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## **Abstract**

Computer training should include methods that allow the evaluation of rapid application design and development tools (RAD TOOLS) to generate quality information systems with video games. A methodology is presented to perform this technical evaluation in visual environments, to select, in an efficient and easy way, the highest quality tools, using new technologies, such as mobile. The case studies chosen for testing RAD tools are the tools of the most popular commercial visual platforms. The testing process was carried out with expert users and novices. Validation results were obtained without significant differences in the technical aspect. This research is aimed at organizations, companies or other end users that develop computer applications and video games that require it; also for institutions of higher education, for their students and professors of computer science, computer systems and related areas.

Development tools, software evaluation, video games

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Minería de datos de la Plataforma Web Institucional para la reservación de los laboratorios y salas de uso múltiple del Instituto Tecnológico de Iguala

# Data Mining of the Institutional Web Platform for the reservation of laboratories and multipurpose rooms of the Technological Institute of Iguala

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### **Abstract**

The automation of services is increasingly booming today because it is already considered a necessity, due to the speed and good control of information. In some cases, such automation has the characteristic of generating large volumes of information. Data Mining (MD) consists of extracting information from a data set and transforming it into a comprehensible structure for later use. The present investigation intends to apply an MD technique with the objective of determining the rules of association so that the programmers, later, resume in the development of a web platform that automates the control of the reservation of laboratories and multipurpose rooms in the Technological Institute of Iguala. For the solution was used KDD (Knowledge Discovery in Databases) which is a generic methodology to find information in a large data set and thereby generate knowledge. An analysis of data mining techniques was also carried out, with the selection of decision trees and association rules being selected.

Data Mining, Knowledge Discovery in Databases

# Prototipo de un repositorio institucional de tesis para el centro de información del Instituto Tecnológico Superior de Irapuato

# Prototype of an institutional repository of thesis for the information center of the Instituto Tecnológico Superior de Irapuato

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## **Abstract**

Currently, in the Instituto Tecnológico Superior de Irapuato (ITESI), there is a problematic in the loaning of the thesis developed by its students. This process is too complicated due to various reasons, like the fact that those theses are stored in CDs, which are found themselves in shelves, which are located in an area that only allows a limited loan to students and teachers of this institute. In this project, a solution to this problematic was developed, in the form of a prototype of an Institutional Repository. This concept is defined as a digital collection of the research projects made by the community of a university. This solution is based on the fact that currently there is an organization, the Red Mexicana de Repositorios Institucionales (REMERI), who proposes the creation of institutional repositories for the universities of Mexico, as well as the cooperation between the best academic institutions of the country in order to create an institutional repositories' network. In order to create this prototype, firstly ITESI's needs for developing an institutional repository were defined, and the software recommended by REMERI to create institutional repositories was studied. Later, this prototype was create using DSpace, which is a template for the creation of institutional repositories, and was chosen as the best option for ITESI, after having compared the information about the software recommended by ITESI. Tests were proposed in order to verify its functionality and measure the acceptance that it would have within ITESI's community, with the purpose of serving as a base for an implementation of ITESI's very own Institutional Repository.

DSpace, ITESI, REMERI, Repository of Thesis, Software

# Aplicación web nominalite

# Nomiteite web application

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#### **Abstract**

The objective of the Project Nominalite is to implement a payroll system through a web application which offers security to the clients' information, which can be updated according to the specifications of the Tax Administration Service (SAT), which has a constant capacitation plan, and which is easy to manage by the user. The process used in the development of the project consists in analyzing the requirements of the productive sector and the Tax Administration Service (SAT) and creating a prototype of the application of with its corresponding interface supported on UML diagrams. In the development and functionality of the project, it is developed a code in C# programming language, web pages codes such as HTML5, ASP.NET, and support to The Java Script libraries, JSON, and BOOSTRAP to facilitate the design and functions of the application. It will count with a test protocol and finally the process will be documented. The outcome of the project is an application that fulfils the requirements presented at the beginning of the project since it shows the payroll seals which means that it meets with the marked standards by the Tax Administration Service, that there were no communication issues between the project's site and the Tax Administration Service page.

Payroll, Specification, Web Language, Standards

# Aplicación para dispositivos RC con Java y Arduino

## Application for RC devices with Java and Arduino

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### **Abstract**

This article proposes an application that can be used to control a radio control device (RC), interacting in real time using the Java language and Arduino. The code used for its implementation, the tracking of the hardware assembly, and the electronics to electrically isolate the Arduino board from the RC device, and the way to integrate the communications needed for the correct operation are presented in practical form. The application in Java has visual components of Swing type, which are used for rapid development of applications, which are very flexible to make visual design changes, without much effort in terms of development and coding, that is, it is exposed in Guided development of both hardware and software, with the aim of achieving a clear methodology of the integration of multiple technologies that can be used as a basis for more complex applications.

Java, Arduino, RC, GUI, PCB

## Aplicación para la medida de la inteligencia utilizando la prueba Terman-Merril

## Application for the measurement of intelligence using the Terman-Merril test

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### **Abstract**

The computational applications support different processes in organizations, one of these processes are those related to human resources, where one of the activities is the hiring of new personnel; the evaluation of human talent to be integrated into a company can be measured through different tests, one of which is the Terman-Merril intelligence test, which measures the intellectual quotient of candidates with a series of sub-tests. In this project, the waterfall method has been used for the development of a web computational application for the Terman-Merril intelligence test, as well as the management of the users and the results obtained to be visualized in spreadsheets for its subsequent analysis and graphing. The ASP.Net programming language and the SQL Server 2014 database have been used for the programming and the storage of information. As a result, it has been applied successfully in some companies, obtaining measurable and evaluable results on the candidates.

Human resources, Terman-Merril intelligence tests, ASP.Net

# Diseño de sistema web para la administración de planes anuales del ITSSMT

## Web system design for the administration of annual plans of the ITSSMT

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### **Abstract**

Information systems are currently a tool to facilitate the control of data and records of processes in an organization, reducing access times and reporting. The present contains the design and the requirements obtained for the development of a web system that allows the administration of annual plans in the Superior Technological Institute of San Martín Texmelucan, where said system is the Annual Work Registry. area within the institution, as well as the monitoring of the review and validation of the same, by the representatives of each area, based on the guide for the elaboration of the Institutional Program of Innovation and Development (PIID) 2013-2018 of the institutes, units and centers belonging to the National Technological Institute of Mexico

Work plan, Program, Planning, Strengthening

# ABO: Plataforma para la gestión de un padrón georreferenciado de donantes de sangre

## ABO: Platform for the management of a georeferenced register of blood donors

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## **Abstract**

ABO is proposed as a digital platform for the management of a standard georeferenced of blood donors that allows intuitively, streamline the search for potential donors while offering them a strategy of monitoring your health through the use of a hybrid web and mobile ecosystem. The Web architecture support the management and storage of the data of the donors and also perform the tasks of triangulation and selection of candidates, while the mobile application functions as an element of interaction for those users to seek donors.

Donors, Georeferenced, Mobile, Web

# La implementación de una aplicación móvil para manejar emergencias en la Universidad Tecnológica de Jalisco

# The implementation of a mobile application to handle emergencies at the Technological University of Jalisco

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## Abstract

The implementation of a mobile application to handle emergencies in the Technological University of Jalisco. The technological universities show their quality by means of the compatibility of their teaching methods with the needs generated by society, nowadays, most of them have contingency plans to face natural disasters and many of them are certified and organized in brigades (search and rescue, first aid, fire control, etc.). But with the occurrence of the recent earthquakes that occurred in the country, the need for technological tools to facilitate disaster prevention and assistance was evident, since during the development of internal drills, there is a lack of a tool to speed up the prompt evacuation of people from risk areas, in addition to giving a more agile and precise support to each one of the students, professors and other personnel that may be affected; hence the need to develop a mobile application as a help and support tool in the detection and monitoring of various variables that may be key, to carry out effective support in disaster situations. This tool will be generated by profesors members of the academic staff with the support of students from the last semesters, in order to take advantage of the solid base of competences acquired during their stay at the university

Disaster, Mobile application, Professional competence

# Sistema web para la administración vehicular de una empresa

## Web system for the vehicular administration of a company

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## **Abstract**

The information systems are fundamental to perform the daily activities of any organization. This article presents the web information system for vehicle control management that was developed for a national company, where it was required to have an efficient control of its vehicle fleet throughout the region, as well as in its other locations in the country. Previously, they worked manually, keeping the records in a format in Microsoft Excel. The programming of the system was done in Microsoft Visual Studio. Net. The database was designed in SQL Server 2008, the design of the pages was developed in html 5 and CSS3. When implementing the system all administrative activities will be automated, there will be a centralized and updated database where all the information about the company's vehicles will be stored, as well as data of the employees that make use of them. In addition, we have the same interface through a web application, with availability of the system within the entire intranet of the company and you can obtain reports that allow you to have control even of all the gas cards that the company owns and to whom they assign him

Web system, Vehicle control, Administration, database

# Ambientador Solar de Tiro Forzado y encendido —apagado por medio de aplicación móvil para Cubículos de PTC's de la UTSOE

# Solar Air Freshener of Forced and ignited Shot-off by means of mobile application for Cubicles of PTC's of the UTSOE

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### **Abstract**

"Solar Air Freshener forced draft for PTC Cubicles UTSOE" arises from the need to generate comfortable spaces environmentally speaking, cubicle areas, taking as reference the ground floor of building A, these conditions, demand space mainly fresh, to carry out the administrative exercise and tutorial of full-time professors, It consists, of the installation of an isolated photovoltaic system, in order to energize a forced draft turbine, responsible for directing the natural air to the cubicle 9 as a pilot test, the air is deposited through the pipe allowing appropriate conditions even in heat season and with the door closed. With the installation of the air freshener, it is ensured that there will not be an electric power consumption coming from CFE, therefore a saving for the university is generated, in turn, that there is comfort for the teachers. Thanks to student growth, the growth of teaching staff has also risen considerably, this demand has forced the university authorities to prepare spaces to be covered 100%, however it is considered impossible for all cubicles to count with an air conditioner.

## Forced draft, Photovoltaic system, Turbine

# Visita Virtual con Modelado 3D de los espacios académicos de la UTSV

## Virtual Visit with 3D Modeling of the academic spaces of the UTSV

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### **Abstract**

With the design and creation of objects in third dimension (3D) in the advertising medium is increasingly innovative and influential in the viewer, technological advances have greatly influenced the approval of people and thereby amplify the number of customers. Virtual reality has changed the way we perceive the real world, allowing the approach and delimiting the distance in different aspects. The present investigation proposes to develop a tour of the facilities of the Technological University of Southeast of Veracruz using virtual reality technology through 3D modeling with specialized software, which will allow virtual visitors to know and the most important spaces of the UTSV. Through a virtual tour, the 3D design will be visualized with animation, through virtual reality lenses, thereby offering users a new experience with more realism and perception, thus achieving the interest of the new applicant.

## 3D Modeling, Virtual Reality, Visit, Promotion

# Programación orientada a objetos para calcular seguros de vida. Una aplicación al caso Mexicano

# Oriented programming to objects to calculate life insurance. An application to the Mexican case

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### **Abstract**

This research uses ordinary differential equations that include multiple representations of the force of mortality; their solutions derive in different survival functions, which have properties identical to the mortality tables. Using an object-oriented programming paradigm such as R-Project and the lifecontingencies library, it is shown that from the biometric function q\_x (probability of death) provided by the Society of Actuaries (SOA), it can developed the other biometric and switching functions. The construction of these calculations is used in the determination of level net premiums (NNP), for the acquisition of a mixed endowment to 20 years for a male. The main conclusion of this research is that it is verified that in the work practice the use of free software and its specialized libraries in actuarial subjects, allows the professionals a more agile and versatile development in the handling of the data, the elaboration of the calculations and the interpretation of the results.

Ordinary differential equation, Object-Oriented Programming, Mortality table, Mixed endowment insurance

## Guía para células de desarrollo de software centrado en el liderazgo

## Guide for leading centered software development cells

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### **Abstract**

The Instituto Tecnológico Superior del Sur de Guanajuato since 2000 and thanks to various state and federal programs, has a Software Development Center (CDS) administered and operating thanks to teachers and students participating in the project, currently and as part of the growth of teachers participating in the center have been integrated into the research area of the institute integrated into two academic bodies that were already recognized by PRODEP, having this background and knowing that it is going to require having committed students who can To support the growth of academic bodies, a study was carried out to learn in these years of life of the CDS how the students perceived their stay in the same and how they supported their training and their leadership skills at the time of joining the field of work and from here the development of a software development methodology for to develop cells that are in an educational context.

Software Methodology, Good Practices, Software development

# SICEdroid Alumno, herramienta de gestión académica

## SICEdroid Student, academic management tool

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### **Abstract**

Mobile devices are being used more frequently to replace access to the services of organizations that were designed for desktop environments. Many of these services are not prepared to face the consumption of mobile devices, forcing organizations to generate new applications with the use of mobile technology to offer a better service to their customers. The Instituto Tecnológico Superior del Sur de Guanajuato (ITSUR), has an academic management platform called SICE oriented desktop, another called SICEnet for the web environment (not ready for mobile consumption), most of the student community has an android smartphone, but not all with desktop computer. This article presents the development of SICEdroid Alumno, presents a mobile application for Android that offers students the possibility of managing their academic information, offering a new way to consume the services that the institution puts at their disposal

Software, Android, SICE, Management, Academic

# Diseño de un Triturador de Botellas Plásticas para la Obtención de PET Reciclado Aplicable en Impresión 3D

# Design of a Plastic Bottle Crusher for the Obtaining of Recycled PET Applicable in 3D Printing

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### Abstract

PET polyethylene terephthalate is a high quality plastic, which is why it is used to manufacture bottles containing carbonated beverages, purified water, oil, preserves, cosmetics, detergents, chemical products and pharmaceutical products. Its thermal and mechanical characteristics make it the most applied material in the packaging of liquids by the industries dedicated to this sector. Currently the use of this material has caused a great deterioration to the environment, since its period of degradation takes between 100 and 1000 years. In this project we propose the design in third dimension, using the solidworks tool, of a PET bottle crusher so that later the leaflets obtained can be used in manufacturing consumables for 3D printers. Nowadays 3D printing technology is being applied for the generation of any type of objects through the addition of plastic material. That is why in this work the use of recycled material is encouraged for the production of new prototypes; decreasing the environmental impact caused by the different activities in which PET is involved.

## Crusher, PET, Recycled Material, 3D Printing

# Fundición de preformas de aluminio reciclado

# **Recycled aluminum preform foundry**

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### **Abstract**

Lab practices are activities part of the curricular plan in any engineering, with the purpose of providing evidence of the studied concepts and provide abilities and capabilities to engineers in formation. However, it is not always possible to perform such practices due to numerous groups, lack of equipment or lack of material and specific consumables to perform them. The following paper stablishes a recycled aluminum can foundry methodology which objective is to elaborate metallic preforms that can be used as input materials in Manufacturing Lab practices, therefore, achieving a better comprehension of theoretical concepts and developing the proposed competencies. The above supposes an opportunity for the program of Manufacturing Technology Engineering of becoming its own supplier, having collateral results such as practices cost reductions and use of several professional skills from the study programs

Foundry, Recycled Aluminum, Preforms, Manufacturing Technologies

# Diseño y análisis de estructura de apoyo para moldes de inyección

# Design and analysis of support structure for injection molds

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### **Abstract**

In this research work, the design of a structure was made as an additional complement to the existing bases that are used to accommodate the injection molds before being taken to the injection machines, or in their case to do the corresponding maintenance, all this was because the existing bases were designed for a single injection mold model. To design the structure was based on the following criteria, which have a minimum weight of 98.1 N, which supports a load of 30 tons, a minimum safety factor of 2, which is a welded structure and easy to assemble and disassemble. For the validation of the design in terms of stresses and deformations caused by the load to be supported, first an analytical analysis was done by the finite element method (FEM) and these results were corroborated in a CAD software simulation, having satisfactory results with a factor of safety in the analytical method of 2.8 and in the simulation of 3.3, thus fulfilling the established requirements and guaranteeing the factivilidad of the design.

## Structure, injection mold, bases

Desarrollo de la secuencia de fabricación de un prototipo aplicando la metodología del diseño total con enfoque a la manufactura 4.0

Development of the manufacturing sequence of a prototype applying the methodology of the total design with a focus on manufacturing 4.0

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## **Abstract**

Development of the manufacturing sequence of a prototype applying the methodology of the total design with a focus on manufacturing 4.0. The didactic sequence of manufacturing a prototype is shown, applying the methodology of the total design with a focus on manufacturing 4.0 using the process simulation tool, this didactic sequence is applied to the problems of a company in the process of rolling semi-axles automotive.. The information of the client's requirements will help to identify the design specifications, these in turn will be clarified in the prototype specifications, subsequently the concepts will be developed to make the detailed designs, finally, the validation will be done by means of a simulation of the process. This contributed to show a sequence of the development of a prototype and in which it could be applied to the development of other prototypes with industrial applications including the approach towards manufacturing 4.0 in the design of prototypes

Specifications, Design, Concepts, Simulation

# Máquina de Inyección de Plástico 3R. INYECPET-3R

## 3R Plastic Injection Machine. INYECPET-3R

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#### **Abstract**

Due to the great need for the handling of PET waste generated in the facilities of CECYTEM Nicolás Romero II State of Mexico, the initiative to manufacture a prototype of a plastic injection machine called INYECPET 3R, with smaller dimensions than that of a industrial machine, following a methodology of life cycle of a project in its 7 phases, for the recycling of PET that solves the accumulation of this waste as well as its refusal obtaining production of disposable cups in the campus of CECYTEM Nicolás Romero II. The manufacturing process of INYECPET-3R is divided into two systems: A) Mechanical System starting with the design and manufacture of the upper and lower structure, Mechanism of opening and closing of mold, the Mold the Mechanism of Injection and the pneumatic Mechanism no There is manufacturing as such, it is only the assembly of said components such as, double effect cylinder, maintenance unit, solenoid valve. B) Control System, Control consists of an Arduino board that is a free hardware platform based on a board with a microcontroller and a development environment, two push button inputs (push buttons), limit switch and a thermocouple (sensor of temperature) and outputs of power elements (TIP120), which perform the energization of relays that allow the ignition and shutdown of 3 resistors, 1 solenoid valve and 1 motor.

Prototype, Plastic injection, Mechanical system, Control system

# Diseño de un sistema de refrigeración por compresión de vapor

## Design of a vapor compression refrigeration system

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#### **Abstract**

The present project is designed a steam compression refrigeration system, considering the use of a refrigerant R134a, which is a hydrofluorocarbon (HFC), which replaces the R12, using commercially and already out. The above for reasons of environmental impact and energy saving. The calculation of the steam compression refrigeration system is performed using the Engineering Equation Solver (EES) software, which is usually used to solve non-linearity problems, but also for the calculation of cooling systems. In addition, the evaporator inlet temperature of -15 ° C is considered. The size of the suction and discharge piping was found, with a value of 12.29 mm and 30 mm, respectively. In addition, the methodology for capturing the EES software is presented, as well as the interpretation of the results obtained, in such a way that the sizing of a cooling system can be established in a simple manner, provided that the design conditions are known and its parameterization.

## Refrigerant, Software, Design, Parameterization

## Prototipo para análisis cinemático de configuración robótica angular

## Prototype for angular robotic kinematic analysis

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#### **Abstract**

The integration of test prototypes promotes the incursion of the engineering student in the knowledge of their specialty, not only in a theoretical or partially practical way, in case of having any limitation for access to real equipment, necessary for the development of professional skills own. The present study exposes an alternative for the introductory analysis of robotics through the implementation of a prototype of angular robotic configuration, constituted by easy-to-use and low-cost devices. This work explains the background and the objectives established. The mathematical solution for the constitution of the physical prototype, the programming of the controller and its communication with a graphical interface by computer are detailed. The results corroborate the functionality of the integrated system and its operation from the computer to achieve the desired behaviours. The conclusions show the reliability of the prototype to be used as support material in the teaching-learning process, for which it has been developed.

Test prototype, Angular robotic configuration, Kinematic problem, Controller programming, Computer graphic interface

## Diseño y análisis estructural de componentes para una impresora en 3D

# Design and structural analysis of components for a 3D printer

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## **Abstract**

The process of printing in 3 dimensions (3D) consists of producing simple or complex forms of mechanical components from the deposition of molten material on a surface so that the shape of a virtual solid model is replicated in a solidified model. Generally, the pieces to be printed are generated on a hot surface and / or in a sealed chamber at a controlled temperature. As part of a research on a 3D printer for the production of precision parts, some results obtained in terms of the design of some components are reported in this article, as part of a design project at the Technological University of the Southwest of Guanajuato, with the purpose of generating and transferring technology to local microenterprises that are engaged in design work and that require specialized equipment to produce complex shapes in 3 dimensions. In the present work some results are reported on the modal analysis that was made to the printer's chassis, structural static analysis is also included to the central support of the extrusion system and to the main support of the printed pieces, in order to determine the type and efficient combination of components to support the other parts; deformations, limit resistance and safety factor were quantified to evaluate the integrity of said components during operation.

## Printing, 3D, Design, Analysis, Components

# Evaluación de la concentración sanguínea de Cobre, Hierro y Zinc en corderos suplementados con Selenito de Sodio

# Evaluation of the blood concentration of Copper, Iron and Zinc in lambs supplemented with Sodium Selenite

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### **Abstract**

In order to evaluate the blood concentration of copper, iron and zinc with the intramuscular administration of sodium selenite; We used 20 lambs of 75 days of age distributed randomly in 2 groups, under the same management conditions. T1 received 5 mg of sodium selenite per 100 kg of live weight and T2 1 mL of physiological saline solution; a basal sampling was performed that coincided with the date of application of the treatments and 3 subsequent samples with a difference of eight days. 80 blood samples were obtained and analyzed, through atomic absorption spectrophotometry; a randomized complete block design was used with 2 treatments and four sampling periods; and the Tukey test (P> 0.05) was applied. The general averages of copper concentration were in T1 0.313  $\pm$  0.024 and T2 0.296  $\pm$  0.037; for iron T1 1,545  $\pm$  0.197 and T2 1,549  $\pm$  0.202, and for zinc, T1 0.332  $\pm$  0.042 and 0.356  $\pm$  0.067 mcg / ml in T2 (P> 0.05). The correlation values were: Se-Cu r=0.6745; Se-Fe r=0.6613; Se-Zn r=0.4375; Cu-Fe r=0.5642; Cu-Zn r=0.3570 y Fe-Zn r=0.3489. Although there was a slight degree of association with the administration of selenium, there was no significant increase in the concentration of copper and zinc.

Copper, iron, zinc, selenium, lambs

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Composición química de pulpa y semilla del tomate de cáscara (Physalis philadelphica) de diferentes localidades pertenecientes de Ixtlahuacán del río y Cuquio con la finalidad de mejoramiento genético

Chemical composition of pulp and seed of the tomato of shell (Physalis philadelphica) of different localities belonging to Ixtlahuacán del río and Cuquio with the purpose of genetic improvement

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## **Abstract**

Physalis is located in the subfamily Solanoideae, Solanae tribe. It is an American genus distributed in: United States, Antilles, Mexico, South America and Central America, with some species present in the Old World. The taxon includes about 90 species, more than half of them grow in the country, reason because Mexico is designated as its center of diversity. Jalisco has 35 species of Physalis, finding Physalis philadelphica, fruit of our study. Objective. To determine if there is variation in: weight, size, chemical composition of the pulp, and seeds of the fruit, from localities belonging to Ixtlahuacán del Río and Cuquio, in three cycles of agricultural cultivation spring - winter, and to identify if the external factors affect this variation. We determine: (1) size (fresh weight, polar and equatorial diameter); (2) chemical composition in pulp and seeds. In tomatoes the weight ranged between 8.33 - 44.10 grams; polar diameter: 16.52-40.14 mm; equatorial diameter: 11.55-48.91 mm; pH: 3.42-4.80; total soluble solids (Brix Grades): 2.0- 8.7%; Citric acid: 0.243-1.786%. Analysis of husk tomatoes of the first date presents higher values in most of the results; the second intermediate values and the third the lowest; this variation in the chemical composition, may be due as a response to environmental conditions.

Tomato of cascara, Degrees Brix, Citric acid, Seed germplasm

# Dron detector de plagas en cultivos de maíz

## **Dron pest detector in corn crops**

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## **Abstract**

The present project "Drone detector of plagues in corn crops" shows the use of a built drone and its use in the early detection of plagues in corn crops. The detection of plagues is done by taking photographs of the crops and a subsequent digital processing of the images by using software. The drone was used for the detection of plagues in corn crops, in the population of San Miguel Zozutla, Puebla, Mexico. There was an increase in the production of corn per hectare monitored and, consequently, an improvement in the economic income of the farmer, thus contributing; that the farmer does not seek to integrate into the crime sector, because the region where the study is made is part of the area known as the "Red Triangle", unfortunately characterized by a high rate in the fuel theft sector.

## Drone, Crop, Plagues Detection, Increase production

Composición química del cascalote *Caesalpinia coriaria* (Jacq.) Willd., y diversidad de usos en el medio rural, del trópico seco

Chemical composition of cascalote *Caesalpinia coriaria* (Jacq.) Willd. and diversity of uses in the rural areas of dry tropics

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## **Abstract**

The forest species in tropical areas, represent a valuable resource in agricultural production systems, many of them are multipurpose. So the aim of this study was to evaluate nutritional quality, content of tannins and diversyty of uses of *Caesalpinia coriaria* in its natural habitat. We took sampleas of foliage and fruits in Indigenous Communyty of Tomatlán, Jalisco state, for bromatologic analysis: dry matter (DM), crude protein (CP), and fraction fiber: neutral detergent fiber (NDF) and acid detergent fiber (ADF), tannins content; literature review was conducted and consultation of herbarium specimens, to identify uses, ecological distribution and altitudinal ranges. The results indicate content of DM of (97 and 95%), CP (4.84 and 12.81%), NDF (10.30 and 46.36%) and ADF (8.18 and 31.01%) for fruits and foliage, respectively; tannins content of 35.5 and 10.4%; the specie is común in semideciduos tropical forest, deciduous tropical forest and savannas in elevations of 0 until 1980 m. The most frequent uses are: source of tannins for tanning, fuel, fodder and medicinal. It is concluded that *C. coriaria*, is important as food for grazing ruminants; for its high content of tannins for the tanning industry and by diversity of uses justification for its conservation and/or propagation.

Nutritional quality, Tannery, Fodder, Vegetation types

# Sistema de llenado y riego automático

# Automatic filling and irrigation system

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### **Abstract**

Being able to save time and money while taking care of the powerful and important natural resource that is water, as well as your health. Although we already know that there are many objects or projects that are dedicated to filling tanks and automatic irrigation system, we know that they help us to improve our lives saving us time and money, but on the part of the tank filling system we did not think completely about all aspects, since this system that exists today is used by a wiring, plastic and a small weight that falls on the water by measuring the amount of water in the tank. This system works perfectly the only thing that has is that with the passage of time and reacting the water with the material that is in contact with it tends to run and fill with scale which is harmful to human beings if It is in contact for a long time, since it is the water with which one is cleaned daily.

# Sistema de ubicación de transporte urbano usando SCADA

## **Urban transport location system using SCADA**

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### **Abstract**

Objective: Implement a location system for urban transport using SCADA techniques. *Methodology:* 1-Determination of the maximum sampling rate for real-time monitoring of the 3G data network, 2-Implementation of a scale model to test monitoring. *Contribution:* In this paper, the implementation of a location system for urban transport vehicles is proposed, the so-called "orugas" in the city of León Guanajuato, focused on the viability of the transfer rate of the 3G data network of the cellular telephony to maintain a reliable monitoring of the positioning of the units and the use of SCADA techniques for such monitoring purposes. This system is designed to benefit the users of the transport system, so the users can know in real time the traffic of the units to plan their trips.

SCADA, Urban Transportation, Location, Mobile devices

# Aplicación de control para elevador adaptable

# Application of control for adaptable elevator

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## **Abstract**

The application of control for adaptable elevator, is a project that seeks to complement by means of an IT tool, the proposal to implement elevators adaptable to stairs that are part of the infrastructure of various buildings, from organizations to homes. The methodology used for the development of the project is XP (Extreme Programming), considering the simplicity it seeks to offer in design and customer satisfaction based on constant communication and feedback. The application has intuitive interfaces for user registration, access (login) and elevator management (up and down), among others. The pilot test made it possible to determine that the proposed objectives were fully covered by it, likewise gave the guidelines for the extension of the project, so in a short term the improvements suggested in the next version or versions will be implemented, looking for innovate in this area.

## Application, Adaptable elevator, IT

## Core Tools para diagnóstico de defectos en maquila y aumento de productividad

## Core Tools for diagnosis of maquila defects and productivity increase

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### **Abstract**

One of the limitations of productivity is the waste or mute in materials, people, natural resources, technology and financial resources, so for every company it is essential to identify the common and special causes that generate a defective product. In our present project we talk about the main defects found in garments of a maquiladora. The main objective is to detect where the problem is so that the people responsible for the process and product quality suggest and apply alternative solutions. The basic quality tools are applied as Cause-Effect Diagram (or Ishikawa), Verification Sheet represented by the Discard of Quality and Pareto Diagram format, ending with an analysis of operator training essential part in the decrease of changes . The percentage of defects is obtained per day and the main area to be attended by production and quality with the support of Management.

Default, Tools, Quality, Productivity, Training

# El enfoque de procesos en el AST de Mecatrónica de la UTN

## The process approach in the Mechatronics AST of the UTN

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#### Abstract

Facing the necessity of training quality improvement, the Technological University of Nezahualcoyotl, decided to do the Work Situation Analysis (WSA), where meet industrialists and teachers to define the professional profile. However, the procedure for doing it, it is ruled but it is not applied in the same way and was not focus as process. Therefore, the objective was to apply the WSA, under the process approach to systematize it in the Mechatronics career. First, it started with the process planning; where customers were identified, input-output, subprocesses, representing them in a SIPOC diagram. Later, it was implemented a work job WSA, with the participation of businessmen and specialist teachers, according with a work Schedule. Information was obtained about the competencies of graduate. Next, to information analysis it was achieved: define the places, functions, task and attitudes required by the productive sector. In the last phase, they were detected the process improvement proposals. Finally, the process approach in the WSA, supplied the activities systematization that impacted customer necessity, it left a deal to obtain objective and reliable information to update the currícula.

## WSA, Process, SIPOC, Improvement

# Perfil de la misión y selección de subsistemas del prototipo Cansat para montarse en drone multitor

# Profile of the mission and selection of subsystems of the prototype Cansat to be mounted on drone multitor

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### **Abstract**

In this work, it shows the mission that we determine must perform the CanSat. In this first stage, the development of a basic CanSat that acquires data from different sensors is performed, such as: pressure, temperature, humidity, UV radiation, acceleration, position, measurement of the earth's magnetic field, etc., selecting the basic ones, this information is sent by a radio frequency link to an earth station conformed by the radio receiver, a PC and the serial port monitoring software. It also makes use of video cameras for recording or for real-time transmission of the Drone's flight using the camera that brings the drone. Project supported by the Program of Support for the Development of Higher Education (PADES) 2017, to strengthen the educational process, through the use of TIC's. A CanSat system is implemented based on the definition of the mission, involving the design, construction and testing of the payload as well as the subsystems; electrical, communications, flight computer and data management. This is the first of three stages, it is possible to impact students with the methodology of project-based learning, and consisted in determining the mission and design of the subsystems of the satellite peak

## CanSat, Data Acquisition, Sensors, Radio Control, Drone

Determinación de las curvas de secado del lodo del sistema intermunicipal para los servicios de tratamiento y disposición de aguas residuales para los Municipios del Rincón, a Nivel Laboratorio

Determination of the mud drying curves of the intermunicipal system for wastewater treatment and disposal services for the Municipalities of the Rincón, at the Laboratory Level

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## **Abstract**

In this work the study of drying curves of the sludge coming from Intermunicipal System for Wastewater Treatment and Disposal Services for the Municipalities of the Rincon (SITRATA), at the laboratory level is proposed, with the fundamental purpose of finding suitable conditions that achieve reduce the humidity of the sludge produced in the plant, towards values that allow its management for its final disposal. To this end, a dryer tunnel trays (Armfield UOP8®) was used, having as independent variables the air speed (1.5 m/s and 2.40 m/s) and temperature (30 °C and 40 °C), the drying speed was considered as a response variable, obtaining the speed configuration of 2.40 m/s and temperature of 40 °C, which gives the highest drying speed for the same amount of sludge (1000 g). To conclude, the amount of heat required to carry out this process was determined, to the operating conditions of this configuration.

Drying, Humidity, Sludge, Speed, Hot

## Comparativa entre Red Neuronal Perceptrón y ADALINE en la clasificación de datos de dos diferentes clases

## Comparison between Neural Network Perceptron and ADALINE in Data classification of from two different classes

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#### **Abstract**

In the present paper, a comparison is made between two fundamental and important elements in the developments and beginnings of artificial neuronal nets, for which the Simple Perceptron and ADALINE (ADAptative LINear Element) network as tools in the classification of data of two different classes, being that for this classification a hyperplane is used to divided and separated the elements according to their class. From the developed and obtained results will address the conclusion that is reached as an effect of the comparison generated based on the performance achieved in the tests of each of the tools used in this task and is indicated according to the results obtained which of they achieved a better performance considering also their individual and structural characteristics in the classification of said data of this nature.

Neural Network, Perceptron, ADALINE, Data, Hyperplane and Classification

## El Técnico Superior Universitario en la innovación y solución de problemas durante su proceso de estadía. Caso de éxito

## The University Superior Technician in the innovation and solution of problems during his stay process. Case of success

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### **Abstract**

In the No. 1 plant of "Electrocomponentes de Chihuahua", which is dedicated to producing harnesses for home appliances, heating units, and air conditioning units, a calibration problem is detected in a sensor of the AMPOMATOR machine in charge of cutting cable, the sensor detects the height at which the cable arrives, said cables are used for the harness production in washing machines, which yield defective products. With the purpose of solving the problem, the company acquires new machinery for said process, but does not solve the issue and requires continuous manual input from the operator, without obtaining the required product quality. The TSU Octavio Ortega Garcia, with the support of the "Gestión de Educación Tecnológica" academic body, offer a solution to the problem, through the substitution of the presses, and the drivers of the AMPOMATOR machine, and KOMAX 711 which was considered obsolete and out of service. This method removes the manual labor for calibration, a higher quality product is achieved, and it saves the company \$10,694.55 dollars per machine.

Academic body, TSU, Problem solving, Savings

## Infraestructura del transporte terrestre de carga

### Infrastructure of land freight transport

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#### **Abstract**

The present investigation is to analyze the infrastructure of land transportation of cargo in Ciudad Juárez, Chihuahua, Mexico. With the objective of identifying the main factors of infrastructure in transportation to measure the level of competitiveness of the road transport infrastructure. The methodology used was of an applied type, with a non-experimental, transectional, descriptive and correlational / causal design. The study had a deductive and quantitative approach, taking into account the database of the Mexican Business Information System. Carrying out a census of 22 companies that offer the land freight service of federal cargo. According to the results obtained, the competitiveness of land transportation infrastructure in Ciudad Juarez, Chihuahua, 75% of the indicators showed a high level, the other 25% represented by the number of tracts and own containers, which was reflected in the quantitative measurement that is not enough to meet the demand in the locality.

### Infrastructure, Land transport, Mexico

## Latencia natural e inducida por almacenaje en variedades cultivadas y especies silvestres de *Physalis*

### Natural latency induced by storage in cultivated varieties and wild species of Physalis

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### **Abstract**

The cultivation of peel tomato occupies the fourth place in sown surface, excelling the *philadelphica* species since it has evolved and selected reporting from 7000 years ago. de C. The experiment was carried out in the Tomato Research Center (CITOCA) of the University of Guadalajara. In 2014. Cultivated varieties: white corral, plus purple, purple R, large tomato, Tequisquiapan and Querétaro and six wild: *pubescens, angulata, acutifolia,* mango grisea, angulata chan, peruviana plum, and 567 philadelphica. An initial test of germination and viability with tetrazolium was made. Subsequently, they were stored in three environments: the environment, at 5°C and in the freezer at -15°C, every three months, germination analyzes were carried out for one year. Identifying dormancy presence mainly in wild species. After storage, in cold conditions most of the varieties presented secondary latency, being more marked in the wild varieties, as they presented greater sensitivity to temperature changes, representing a survival mechanism, whereas the cultivated species lost this characteristic due to the domestication and the selection of genotypes, to facilitate their cultivation

Storage, Secondary dormancy, Induced dormancy

## Caracterización parcial de biopelículas elaboradas a base de gelatina de colágeno obtenida de patas de pollo

## Partial characterization of biofilms made from collagen gelatin obtained from chicken legs

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#### Abstract

Poultry farming is the most dynamic activity of the national livestock and in their slaughterhouses, several by-products are generated, among which are: liquid effluents composed of (fats, proteins and animal remains) and solid waste (bones, viscera, legs, heads and skin). The purpose of the present work was the extraction of collagen gelatin from chicken legs for the formulation of a biofilm. In the first stage of the project, collagen gelatin extraction was carried out from leg remains. The presence of collagen was verified by IR spectrophotometry by showing bands related to collagen: 3300 cm<sup>-1</sup>, 1655 cm<sup>-1</sup>, 1550 cm<sup>-1</sup> and 1250 cm<sup>-1</sup> (Camacho *et al.*, 2001). Once the collagen gelatin was obtained, four formulations of film-forming solution were made using: 1% and 5% polyvinyl alcohol, 1% and 5% Borax. According to the results obtained, the biofilms showed values of 2.96% moisture, 1.33% ash and 47.48% solubility. It was found that chicken legs are a source of collagen gelatin, which can be used in the formulation of biodegradable biofilms.

### Poultry farming, Collagen, Biofilm

## Producción de harina de plátano usando un deshidratador solar, Salvatierra, Guanajuato, México

## Production of banana flour using a solar dehydrator, Salvatierra, Guanajuato, Mexico

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#### **Abstract**

In the present work, basic information is included for the construction of a homemade solar dehydrator. The function of the dehydrator and as its name says is to dehydrate or remove moisture from the food that is inside it. This provides great benefits because without moisture it is easier to preserve food, in this case the dehydrator was used for the dehydration of banana (paradisiacal muse) and later it was easier to grind and obtain our final project. This in order to produce banana flour and consume it as a supplement or substitute for wheat flour.

Dehydration, Banana flour, Temperature, Humidity

Tratamiento por procesos de electro-Fenton y de electrocoagulación del lixiviado del antiguo relleno sanitario La Reserva

## Treatment by electro-Fenton processes and electrocoagulation of the leachate from the old landfill La Reserva

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#### **Abstract**

The leachate from the old landfill called "La Reserva", in the city of Leon, Guanajuato, has high concentrations, COD of 2093 mg/L, turbidity of 91 BTU,  $Cr_T$  of 1.87 mg/L and low level of biodegradability. Its treatment with the electro-Fenton and electrocoagulation processes was evaluated. By electro-Fenton, a COD removal of 72% was achieved, with a  $[Fe^{2+}]_0$  of 100 mg/L and  $\hat{j}$  of 10 mA/cm<sup>2</sup>. Under these conditions an efficiency of  $Cr_T$  removal was obtained, of 77% and in turbidity of 82%. With electrocoagulation, two types of electrodes were tested, made from iron (Fe) and aluminum (Al); the optimal conditions were found with current of 2 A and a time of 30 minutes. At these conditions a COD removal higher than 53% was obtained for both cases and 76.70% and 56.75% turbidity for Al and Fe electrodes, respectively. In relation to  $Cr_T$ , the efficiency was 94.06% and 94.91% respectively.

Advanced oxidation, Electro-Fenton, Electrocoagulation, Chemical oxidation, Physicochemical, Leachate

## Caracterización fisicoquímica y microbiológica de la presa San Luis Taxhimay, Municipio de Villa del Carbón en el Estado de México

## Physicochemical and microbiological characterization of the San Luis Taxhimay dam, Municipality of Villa del Carbón in the State of Mexico

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#### **Abstract**

The artificial bodies of water allow having a reserve for use at any time of the year. The Taxhimay Dam is located in the municipality of Villa de Carbón, Edo. from Mexico; This water resource is used for irrigation and recreational purposes. In this work, the physicochemical and microbiological characterization of the water body was carried out in a period of 10 months, establishing 10 sampling points. It was found that the nutrients SO4, NO3 and PO4 favored the presence of microalgae in the Taxhimay dam, being worrisome the presence of toxic algae. The presence of enterobacteria was constant throughout the study. We consider it necessary to identify the sources that favored high levels of nutrients and microbiological contaminants, in order to establish strategies or a management plan for this dam so that it can fulfill the purposes for which it was created.

Characterization, physicochemical, Microbiological, prey, Taxhimay

## Sistema de posicionamiento de Panel Solar optimizado

### **System positioning of optimized Solar Panel**

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#### **Abstract**

It will be made the prototype of a positioning system with a solar panel, in order to obtain the best electric power generation, this through the best position of the system with respect to the position of the sun during the day and at each time of the year, it will be taken as sensor the solar panel of the system, monitoring the voltage and current readings and in the computer system the power calculation obtained will be made, in reference to the plate data and the most optimal readings obtained, it will be calculated with an inference machine the better reading of power and position the system according to these readings.

### Electricity generation, Photovoltaic system

## Análisis de plantas forrajeras de doble propósito en el municipio de Atlapexco en la Huasteca Hidalguense

## Analysis of double-purpose forage plants in the municipality of Atlapexco in Huasteca Hidalguense

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### **Abstract**

The study area was in the municipality of Atlapexco, located in the Huasteca Hidalguense, analyzed species known amongst the inhabitants of this region which have importance both medicinal and fodder, part of activities such as qualities. It conducted a preliminary botanical and proximal study of medicinal plants in Atlapexco Some persons were interviewed to obtain information of names disease to which it is recommended and instructions for use of the plants with medicinal properties. Each plant collected was pressed for his later identification. It was realized the proximal analysis of 5 species fodder thinking that the suitable combination with them can provide a good nutrition contribution to the cattle beside helping to attack some diseases, that is why they are known as species of double intention.

Medicinal plants, Proximal analysis, Fodder plants

Aeropuerto: Actividad integradora de diseño de ambientes virtuales y diseño de videojuegos

## Airport: Integrating activity of design of virtual environments and video game design

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### **Abstract**

The Project "Airport: Integrating Activity of Virtual Environments Design and Video Game Design" aims to develop a scenario of an airport, containing, runway, hangars, aircraft, control tower modeled in Blender, placed in the virtual terrain of Unity, as well as presenting different animations at the airport. In this project we used the methodology of Virtual Reality found in [1], and its main contribution is that the students develop skills of modeling, creation of virtual worlds and 3D animation, as well as attitudes of teamwork, ethics and that I managed to awaken the creativity of the students.

### Design, Virtual Environments, Animation

## Propuesta de implementación de un Sistema de generación de energía eléctrica mediante Piezoeléctricos en un control de videojuegos

# Proposal for the implementation of a Piezoelectric electric power generation system in a videogame control

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#### **Abstract**

Nowadays there are different ways to generate renewable energy to be able to carry out daily activities of human beings. But many of them are still unknown and that is where the great benefits of being able to use them go unused. The most common energies are solar, hydraulic, wind, piezoelectric sensors, among others. The latter are a form of generating energy which has not obtained the potential, since they are small minerals that have electromagnetic properties capable of producing electric fields using pressure or mechanical movements. It is for this reason that the project focuses on presenting an area of opportunity where the piezoelectric could be occupied and thus generate electrical energy in a reliable and easy to use way. It is for this reason that a proposal for the use of a piezoelectric system in a videogame control is presented since the pulsations that are made when manipulating the control can be exploited by the piezoelectric and thus generate electrical energy

Piezoelectric , Energy, Environment

## Mapa del conocimiento para los estados del conocimiento del Consejo Mexicano de Investigación Educativa A.C

## Map of knowledge for the states of knowledge of the Mexican Council of Educational Research A.C

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#### **Abstract**

This research involves faculty researchers from the Academic Body Technology Transfer and development of projects in Engineering for Instituto Tecnológico José Mario Molina Pasquel y Henríquez, in Puerto Vallarta, University of Guadalajara researcher and researchers of the Postgraduate Network in education AC, The article presents the specification of requirements and software requirements (ERS) necessary to realize knowledge map. The aim is to create a web platform and mobile application that will contain information on educational researchers at a national level, as well as their academic production obtained from the knowledge states of the Mexican Council of Educational Research of the decade of 2006-2016, details will be described of the application, starting with a general description of the project, with the purpose of making known the concept, ideas, likewise, explaining the functions and characteristics of the program. Both in the conceptual part, as in the physical and logical design part of the web platform and the mobile application.

Strategies, knowledge, information and communication technologies, Methodology, Learning, Technical specifications

Reconocimiento de patrones de gestura empleando redes neuronales, buscando herramientas de inclusión a personas con amputaciones de mano o antebrazo

## Recognition of management patterns using neural networks, looking for inclusion tools for people with hand or forearm amputations

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#### **Abstract**

Backpropagation algorithm design is presented through Processing for creating a neural network, through which a series of gesturas hands are recognized using the myo bracelet, which recognizes the forearm muscle signals; It is used as a home automation system to help people suffering from paraplegia, rehabilitation system or fine motor system or amputation.

System, Neural Network, Muscle signals, Paraplegia, Amputation, Assistive technology, MYO®

## Ingeniería inversa aplicada al mantenimiento industrial

### Reverse engineering applied to industrial maintenance

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#### **Abstract**

The Reverse Engineering is a Methodology Applied to Industrial Maintenance that aims to offer a service of analysis and redesign of machines components that present failures due to a bad design through the application of reverse engineering, the applied methodology consists of a first phase of information analysis, where the parametric data from the pieces to be studied are obtained, then the 3D model is made in a CAD package, then validation simulations are carried out through finite element analysis programs (FEA), after which the validated CAD model is already generated, a prototype is generated through a 3D printing machine to validate form and functionality, finally proceeds to the design the manufacturing process through machine Automated as they are from Computerized Numerical Control (CNC), To come to the conclusion with the businessman of what is being sought, with this the application of this technology minimizes costs to the company and reduces downtime caused by failures in non-functional components.

Redesign, Modeling, analysis, validation, manufacturing

Comunicación Robotstudio-Matlab mediante protocolo TCP/IP en un robot IRB-120 de 6 grados de libertad para uso en actividades didácticas

# Robotstudio-Matlab communication through TCP / IP protocol in an IRB-120 robot with 6 degrees of freedom for use in teaching activities

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### **Abstract**

This article is focused in the use of different methods to check the calculations of the kinematic fundamentals of an IRB-120 robot of the ABB Company. One of the methods consists in creating a TCP/IP connection between RobotStudio and MatLab [1]. Another method is to use a physical IRB-120 to compare the results of a physical robot with the ones given by the simulation. The last method is using a homemade algorithm in MatLab designed to obtain the forward kinematic and the inverse kinematic of an IRB-120 robot to have an extra comparation.

Graphic Users Interface (GUI), Forward Kinematic, Inverse Kinematic. Kinematic Model. Algorithm

## Distribución de Planta para la fabricación de dispositivos supresores de energía aplicados a la seguridad de trabajo en alturas

## Plant distribution for the manufacture of energy suppressing devices applied to work safety at heights

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### **Abstract**

The objective of the project was carried out in an energy suppression devices manufacturing company, is to design and implement the appropriate plant distribution that meets the requirements of the manufacturing g process, minimum distances of rounds, and necessary safety conditions of an innovative product. To achieve the objective, the equipment to be installed is first identified (characteristics and operational needs), then the manufacturing process and the adequate safety conditions for the personnel and material are identified too. Based on the information obtained, the distribution of equipment, furniture, tools and corridors begins and is captured in a layout of the process, thereupon, a risk layout is developed based on current regulations and ensuring reliability in the process for workers and materials. Equipment and containers are designed to support handling and storage to guarantee proper handling of materials in its different stages. The main contribution of the project is that the company starts the manufacturing of its innovative product in a planned and orderly manner to minimize manufacturing costs.

Process, Distribution, Security, Plant

## Caracterización del sistema de crecimiento del jitomate en prototipo

### Characterization of the growth system of tomato in prototype

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#### **Abstract**

At present, there is an environmental problem that seriously impacts our crops, some of them are the contamination of water, soil and air. This directly affects the productivity of the field. A clear example of this are those that are dedicated to the cultivation of tomatoes. The following project presents the characterization of the tomato growth process as a proposal to optimize the development of the tomato, in prototype through a mathematical model Factorial Design, methodology that allows us to manipulate the significant parameters to obtain the greatest growth of the plant, and with them greater tomato production in short periods of time, throughout the year. The variables that were taken into account are temperature and humidity. Likewise, the socioeconomic impact in the Tul-Tepeji region, Hidalgo State.

### Optimization, Variables, Linear displacement, Factor designs

## Implementación del análisis preliminar de riesgo para la evaluación de un taller de soldadura

## Implementation of the preliminary risk analysis for the evaluation of a welding workshop

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### **Abstract**

The following project talks about risk analysis, which are possible causes or threats that can occur anywhere, this type of analysis is widely used as a security tool to identify risks (qualitative methods) and others to assess risks (generally of a quantitative nature). In this case, the risks found in the welding workshop of the Technological University of Altamira will be evaluated. To obtain this analysis we will look for a method that benefits and works, which will be tested, in this case the selected one is the preliminary risk method. The data obtained is intended to provide relevant information for the design and development of a safe welding workshop that complies with national and international regulations.

Maintenance, Welding, Risks

## Logística inversa aplicada a los materiales de embalaje de la industria maquiladora, una opción para la sustentabilidad

## Reverse logistics applied to the packaging materials of the maquiladora industry, an option for sustainability

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#### Abstract

In Mexico operate approximately five thousand factories, the diversity of productive activities in this sector affects the complexity to quantitatively establish the environmental, economic and social impact of production processes, however, the above, some results and effects can be perceived to simple view, especially with regard to waste. Ciudad Juarez has made this industry its main source of development, in fact, ranks second nationally, which makes it an excellent choice to carry out applied research projects. In this sense, a proposal of Reverse Logistics (R.L.) of the packaging materials has been carried out, taking as reference a mixed methodology, with a strict adherence to the axes of sustainability. In such a way that it has been possible to establish the direct relationship that exists between the R.L. and the reduction of consumption of materials, return of goods, decrease of costs and consequently the increase of profits of the workers. It is important to note that the practical application presented here can be useful for any manufacturing company

Reverse Logistics, Manufacturing Industry, Sustainability

## Mantenimiento mejorativo en confección

### Improved maintenance in clothing

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### **Abstract**

This work shows an improvement maintenance, applied in a machine of the branch or textile turn, specifically located in the area of clothing. The importance of working in adequate conditions is also presented, in order to develop an adequate job, as ergonomics tells us, defining postures, sequences and correct tools, according to the season, the operator and the conditions. The study and the application were carried out by means of a brainstorm by the operator, since he complained a lot about lumbar and shoulder pain when operating this machine, and thus be able to facilitate the qualitative research corresponding to the different conditions, showing the quantitative results. The research and quantitative and quantitative application of the improvement maintenance was carried out in the textile factory of Corporativo Notimoda S.A. of C.V. Located in the city of Uriangato, Gto. With the work done, it helped to reduce fatigue and increase productivity percentages, without causing any physical injury or muscle fatigue.

### Maintenance, process, productivity

## Caracterización del sistema de crecimiento del jitomate en prototipo

### **Characterization of the Ripening of Fruits by Colorimetry**

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#### **Abstract**

For people, it is of vital importance the kind, quantity, and quality of the food they are eating. Fruits are indispensable elements of any balanced diet. The quality of fruits is directly related to their ripening degree. Usually, people seek to eat fruits at their optimum point of ripeness to obtain the maximum nutritional content and the best sensorial characteristics such as color, flavor, smell, texture, and size. The sense of touch and visual experience are very useful to correctly select fruits at their optimum point of ripeness; however, it is not easy to acquire that ability and experience. For this reason, the relationship between the ripening of some fruits and their external color was studied in this research work. The fruits analyzed here were guavas, avocados, mangos, and bananas. This study led to the development of labels with colors associated to the main ripening stages of these fruits. In this way, consumers can properly select ripe fruits just by a visual comparison of their external color to reference colors printed on a label attached to each specimen.

Fruits, Ripening, Maturation, Colorimetry

## Reducción del tiempo de horneado en la fabricación de insuladores: estudio de caso Six Sigma

### Reduced baking time in the manufacture of insulators: Six Sigma case study

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#### Abstract

This article brings out a case study to illustrate the application of the Six Sigma methodology in a Mexican aerospace company. The research is generated from data about insulators development process and shows the improvement derived from the application of DMAIC methodology phases to get a reduction of insulators cycle time, which is due to decrease in pieces baking time. The practical implications are the improvement directly applied to the production process and learning in the experience of carrying out this project through the identification of factors that influence the insulator tension resistance and its electrical isolation. Although Six Sigma has been successful in recent years in the manufacturing sector, its application must be analyzed to generate knowledge that can be applied in future projects.

Six Sigma, DMAIC, Constant improvement

## Proyecto familiar invernadero de hortalizas

### Family project greenhouse vegetables

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### **Abstract**

Our region faces Calvillo community food cultural problems that are troubling. There are problems in the production, storage, distribution and marketing of food, but especially in consumption, which, due to its relation to nutrition and health, is the most critical point. The human diet must contain carbohydrates, proteins, vitamins and minerals, but the diet of most people does not have an adequate balance. Considering that vitamins and minerals are the most scarce elements in the family diet, it is convenient to contribute to the improvement of the production of vegetables in the backyard, either under open sky or under protected conditions, as is our proposal at the University

Family Greenhouse Project, Project development Family Nursery Facility, Training with its environmental environment

Automatización del control de inventarios para instituciones de gobierno bajo estándares de calidad establecidos por la Norma ISO 9001:2008

Automation of inventory control for government institutions under quality standards established by ISO 9001: 2008

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#### **Abstract**

The Prototype of Inventory Control Software for Government Institutions was designed and developed for automation in the processes carried out in the safeguarding of fixed assets (movable assets) for all those Government Institutions whose main objective is to streamline their processes. This system will be a tool for administration and control of the Inventory supported under the guidelines established in the ISO 9001: 2008 Standard, promoting confidence in the process, increasing the quality of the service and ensuring customer satisfaction. The methodology XP (Extreme Programming) was used for the control and monitoring of the established tasks, the Microsoft SQL Server Database Management System of 2016 was used and PowerBuilder 12.0 as Development software. This project contributes in an efficient control and traceability of the different fixed assets, taking the handling of inventory of transparent and agile way, maintains the movements (Historical) of each asset, supports in the generation of internal and external audits, all its catalogs are 100% self-management and generates different reports required by the State Audit Institute as well as internal operational reports.

Automation, fixed assets, Inventory, Quality, ISO 9001

### Desarrollo de un prototipo captador de agua de lluvia para árboles de reforestación

### Development of a prototype rainwater collector for reforestation tres

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#### **Abstract**

This invention relates to a rainwater collector for reforestation trees, which is a tank sectioned into two half-moon-shaped tanks, with a central clearing that will house a newly planted tree, once the water collector is installed, it receives rainwater through its covers and channels it through the slots to the two half-moon tanks; that later it will be dosed to the plant in times of drought. The methodology for the development of the prototype consisted of several stages; the first was to determine the concept to make the model in software, then the materials and their quantities were determined to quote and make the purchase, then the prototype was manufactured, finally installed and put to the test, meeting the objectives set and expected results.

Water collector, Trees for reforestation, Irrigation

Caracterización de aceite de semilla de mango (Manguifera indica L.) por cromatografía de gases acoplado a espectrometría de masas para su aplicación en alimentos funcionales

Characterization of mango seed oil ( $Manguifera\ indica\ L$ .) by gas chromatography coupled to mass spectrometry for application in functional foods

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#### Abstract

The main objective of carrying out the identification of the oil obtained from Haden variety mango seed for its application in functional foods. The fatty acids were identified by gas chromatography coupled to mass spectrometry. The fat was approximately 15%, for its extraction the Soxhlet method was used. The fatty acids present in the fraction of the oil of the mango seed were the following: palmitic acid, stearic acid, oleic acid, in specific concentrations and in lower concentration heicosanoic acid, docosanoic acid and tetracosonoic acid. Fatty acids with the highest concentration of percentage were stearic acid and oleic acid in relation to the mixture of fatty acid standards used, according to the results of mango seed oil, it can be inferred that the fatty acids identified will have an application, as an alternative source in the food industry and as bioactive compounds.

Fatty Acids, Seed, Mango

### Modificación de equipo de extrusión

### **Modification of extrusion equipment**

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#### **Abstract**

The objective of this work was to obtain the modification of a single-spindle plastic extrusion equipment, which is available at the Technological University of Coahuila, to expand its application area. To achieve this objective, tests were carried out to verify that the equipment was not functional in polymerizations involving vapor or gas emissions. This is because the equipment originally did not have venting sections. Once verified that it was necessary to modify the cylinder, also proceeded to perform the necessary calculations to manufacture a spindle for such purposes. Having the corresponding results, the manufacturer was contacted to make the modification request. With the introduction of a venting zone and the new spindle, an increase in the use of the equipment was achieved, since in addition to conventional polymerizations, it was already possible to carry out polymerization reactions involving volatile emissions.

### Extrusion, spindle, vent, polymers

Diseño, desarrollo e implementación de equipo para el proceso de limpieza de pimienta entera aplicando principios básicos de física con el objetivo de optimizar los recursos en la operación

Design, development and implementation of equipment for the whole pepper cleaning process applying basic physics principles in order to optimize the resources in the operation

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### **Abstract**

The following article has the purpose of showing how the design of a machine was developed by applying basic principles of physics with the aim of reducing lead time, the consumption of electrical energy substituted by an alternative energy and optimizing resources in the operation; the above applied to the process of cleaning whole pepper as a bulk export product, in a company dedicated to the production and export of aromatic, medicinal herbs and spices, that by copyright, in this article we omit its name and we will name it company "Z", but it shows the team's design and the tabulated information that supports the achievement of the objectives. And also the equipment can be used in other companies in the same productive sector. The need to cover the client's requirements gave guidelines to develop the design and construction of this equipment, fulfilling the two most important requirements: 1) foreign matter (stick, leaves of the pepper itself) with a maximum acceptance of 3% and 2) lead time of 50 tons per week.

Desing, Principles of physics, Reduce operating costs, Lead time, Meet the needs of clients

### siGoCertificados: Propuesta de un sistema para seguimiento de certificaciones

### siGoCertificates: Proposal of a system for certification follow-up

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### Abstract

The present project called siGoCertificados: Proposal of a system for monitoring certifications is carried out in the Universidad Tecnológica Emiliano Zapata, the project comprises five phases of development, of which the phase and the first phase in this project are addressed. The goal of siGoCertificados is the creation of a Web application that allows the registration, follow-up and control of the certification process maintained by División Académica de Tecnologías de la Información y Comunicación of UTEZ. In order to achieve this objective, it was necessary to formulate the certification management process, the information system design to control transactions and ensure the integrity of the recorded and managed information. The methodology used is a combination of PMBOK and software lifecycle Cascading Model, divided into five phases of iterative progress. With the implementation of this system, the University will be able to count on timely and reliable information regarding the certifications, in the same way this will facilitate the best decision making in this area.

Certification, Information system, Process, Monitoring and Control

## Inteligencia artificial y psicoanálisis

### Artificial intelligence and psychoanalysis

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#### **Abstract**

We are immersed in a new era nominated hypermodernity, in virtue of which new technologies have changed our lives greatly, so much so that now millions of individuals around the world are hyper connected and have access to incommensurable sources of information. In addition, the algorithms that Artificial Intelligence is composed "decide" which contained Internet show. Psychoanalysis has been immersed in this current maelstrom and has due accommodate today while simultaneously preserving the legacy of Freud and Lacan, i.e. keeping the precepts of the unconscious, free association, demand, transfer. Arise in this writing questions on the Artificial Inreligencia (known by its initials in English as IA) and how to modify our access on the World Wide Web, as well as psychoanalysis is no stranger to this era and new complexities and challenges are presented in the today.

### Artificial intelligence, Psychoanalysis, Extimacy

### Tratamiento in situ de aguas grises de origen doméstico para reuso en riego

### In situ treatment of gray water of domestic origin for reuse in irrigation

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#### **Abstract**

This paper presents the operation results of a system to treat domestic grey water, with the aim of giving it the quality required to be reused in irrigation. It was built a treatment prototype which is integrated by a trap fat and a filtration system packaged with variable grain size material. The operation of the system was carried out by feeding the grey water until achieving stable conditions, that is, obtaining an effluent without large variations in the parameters used for the treatment efficiency control: pH, temperature, turbidity and electrical conductivity. Final results in the effluent showed 10 color units (Pt-Co), less than 10 turbidity units (NTU) and 20 mg of BOD<sub>5</sub>/L, showing like that higher than 90% efficiencies in the decrease in these parameters. Detergents, nitrates and organic matter (COD) were removed between 80% and 90%; fats and total suspended solids, between 75% and 78%. Organic nitrogen and ammonium decreased by 50%. According to the electrical conductivity and the SAR, the effluent of the system presented a suitable quality for use in irrigation.

Grey water, in situ treatment, Reuse in irrigation

## 7 Medicina y Ciencias de la Salud

### Sistema auxiliar de expertos en nutrición

## **Auxiliary Expert System in Nutrition**

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#### **Abstract**

The present work designs and implements an auxiliary expert system in nutrition for mobile platforms, with which, access to nutritional information will be facilitated to any user who has the need to obtain a personalized food plan and has difficulties to assist with a human expert. Using the Android programming language, using the SCRUM development methodology, which involves in stages the activities defined during the development of the project, in this way, the development of this becomes more agile and allows to deliver higher quality to the user. The expert system guides users, taking into account some of their physical characteristics and activities, to take a food plan appropriate to their profile to bring better nutrition and prevent diseases related to poor diet. Through the data provided by the user, the expert system identifies, through the knowledge acquired from a human expert, the calorie consumption allowed for each user, thus obtaining a personalized food plan.

### Expert system, Food Plan, Nutrition, Android

## Preliminary evaluation of the bacteriological quality of air in laguna de Cajititlán, Jalisco, Mexico

## Evaluación preliminar de la calidad bacteriológica del aire en laguna de Cajititlán, Jalisco, México

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### **Abstract**

The Laguna de Cajititlán, is located in the central portion of the state of Jalisco, approximately 25 km from the city of Guadalajara. This area presents fragmentation of habitat, caused by population growth, the development of new subdivisions around the lagoon, overexploitation of the soil and water and insertion of economic activities that have generated the loss and affectation of natural resources. The purpose of this work was to know the bacteriological quality of the air in the Laguna de Cajititlán, Jalisco and the health risks of the population. The sampling was done in 5 points in summer. 100 liters of air were taken using different culture media for the determination of aerobic mesophiles, Escherichia coli, Salmonella and Staphylococcus aureus by the M Air T Millipore system. The samples were incubated at 37oC for 48 hours, the CFU were quantified and biochemical tests were applied for their identification. The total percentage for Gram positive and Gram negative bacteria shows 62% and 38% respectively. The microbiological diversity found as a function of the frequency observed is as follows: Escherichia coli 30.8%, Staphylococcus aureus 51% and Salmonella 4.8%, all considered pathogenic bacteria.

Wastewater, Bioaerosols, Pathogens, Health, Threats, Risks

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Identificación molecular de especies de micobacterias presentes en pacientes con tuberculosis cutánea en Yucatán, México

## Molecular identification of mycobacteria species present in patients with cutaneous tuberculosis in Yucatán, Mexico

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#### **Abstract**

The control of tuberculosis is a priority in the policies of the Ministry of Health in Mexico. In the present work, the detection of Mycobacterium sp. Was performed through the Polymerase Chain Reaction (PCR), as well as smear and culture tests. The study was conducted with 8 skin biopsies from different patients with suspected cutaneous tuberculosis, from the Dermatological Center of the State of Yucatan. Bacteriological studies were performed using the Ziehl-Neelsen method and the culture was carried out by incubation of the samples in Lowenstein-Jensen medium at 37 °C for eight weeks. For PCR, the DNA was amplified with a specific pair of primers for the Hsp65 gene, retaining in all Mycobacterium spp. a size of 439 bp of expected amplification. The growth of Mycobacterium spp. Was observed in three samples after incubation in Lowenstein-Jensen media. The PCR-RFLP indicated other species of Mycobacterium (M. abcessus, M. fortuitum and M. leprae). The sensitivity of the PCR in relation to culture and sputum smear was 87.5%

Tuberculosis, Mycobacterium, Sputum Smear, Culture, PCR

## Estudio histológico del plasma rico en plaquetas sobre lesiones inducidas en el fémur del conejo de laboratorio

### Histological study of platelet-rich plasma on lesions induced in the lab rabbit femur

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#### **Abstract**

We analized the effect of platelet rich-plasma (PRP) on a induced lesion (IL) over femoral diafsis in rabbits to evalued the bone recuperation time. We used 10 male New Zeland rabbits with 1.8 at 2.0 kg of body weight. The rabbits were assigned in two experimental groups: induced lesion (IL) treated with PRP group and IL control group without PRP. IL consisted in a trephine on the femoral diafsis that consisted in a 5mm diameter hole. The PRP was obtanined by blood extraction of 3 ml that was centrifuged at 1400 rpm in 7 minutes and recovered plasma and newly centrifuged at 200 rpm in 15 minutes; each PRP fraction was actived with 10% CaCl<sub>2</sub> and then was collocated over the trephine. We obtained histological samples of IL region from second to sixth week. The PRPactivated treatment on IL makes to recovered the bone structure and the speeds process of bone healt from third week in the laboratory rabbit.

New Zeland Rabbit, Platelet Rich-Plasma, Induced Bone Lesion, Femur Histology

# Characterization of ambient air dust particulates deposited on *Ficus* leaves in the Metropolitan Area of Guadalajara, México

# Caracterización de partículas de polvo ambiental depositados sobre hojas de *Ficus* en la zona metropolitana de Guadalajara, México

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### **Abstract**

Leaves of Ficus were collected in 11 points. The particles was mainly under the age of 10 µm with a spherical shape and oval, and agglomerates of particles. The elemental analysis showed mainly C, Yes, OR, Ca and K with different concentrations of elements such as Zn, Pb, Cd and Ni in addition to W, Fe and Ti. *Objectives, methodology*: Identify morphology and elemental composition of particles present. The sampling sites were established according to the urban trace, land use and types of roadways. MEB was applied x-ray spectroscopy Using atomic absorption measured the concentrations of trace metals (Cu, Zn, Co, Ni, Cd, Cr and Pb) the ambient dust deposited on the surface of the sheet. *Contribution*: On the site with industrial, commercial, services and housing identified greater presence of elements analyzed with high levels of heavy metals. We stress the importance of conducting further analysis that allows us to control cyclical fine particles in the air and the evolution of the same.

Quality of air, Ultra fine particles, Heavy metals, Geophysical observations

## Bruxismo y Cefaleas

### **Bruxism and Cefaleas**

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### **Abstract**

Bruxism or teeth grinding is a pathology of not well defined etiology, which currently constitutes a serious problem of oral and mental health, so it involves both the dentist and the psychologist for treatment and care. The influence of a stressful situation on its appearance and development is not perfectly determined, however, there are characteristics that can be related to its presence. Some investigations report a twice higher incidence of headache (headache) in individuals with craniomandibular dysfunction than in subjects seeking routine dental care. It has been found that these headaches are of personal or subjective presentation, and that muscular hyperactivity is an important component in these patients. *Methodology*. An applied, observational, transversal and prospective study was carried out in students of the Faculty of Engineering of the Universidad Veracruzana. *Objective:* To compare levels of anxiety and stress among individuals with and without headaches. *Results:* The stress to which university students are currently subjected makes it necessary to delve into this subject, with the purpose of developing and establishing programs that allow the timely diagnosis and application of preventive measures, thus improving the quality of life of these students.

### Bruxism, Teeth Grinding, Headaches

### Microencapsulation and antioxidant activity of Betabel juice (Beta vulgaris)

### Microencapsulación y actividad antioxidante del jugo de Betabel (Beta vulgaris)

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### **Abstract**

The objective of this work was to perform the microencapsulation of beet juice (JB) (Beta vulgaris) by spray drying, using as gum arabic (GA) wall materials at a concentration of 30%. The antioxidant activity of JB and the microcapsules of JB during storage was evaluated. Antioxidant properties were determined: percentage of inhibition (DPPH method), redox potential, content of phenols, anthocyanins and flavonoids. In the JB a percentage of inhibition of  $73.27 \pm 0.77\%$  was obtained suffering an oxidation of 15.57%, this percentage was similar to that obtained in the microcapsules ( $75.55 \pm 1.00\%$ ). The redox potential of the JB was 239.25 mV, lower than the 298.2 mV obtained in the microcapsules, as regards the content of total phenols, the JB had  $230.53 \pm 0.28$  mg EAG / L and the microcapsules 534.68 mg EAG / L. The content of flavonoids and anthocyanins obtained a higher content in the microcapsules compared to the JB, however, this had a higher betalaine content.

Microencapsulation, Betalains, Gum arabic, Beta vulgaris

Eficiencia de la nanopartícula NBelyax como agente desinfectante para un amplio espectro de superficies en entornos hospitalarios. Estudios in situ en dos hospitales mexicanos "Hospital Tacuba" y "Dr. Fernando Quiróz General Hospital"

Efficiency of the NBelyax nanoparticle as a disinfectant agent for a broad spectrum of surfaces in hospital environments. On-site studies in two Mexican hospitals "Hospital Tacuba" and "Dr. Fernando Quiróz General Hospital"

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### **Abstract**

This study identified the presence of pathogenic microorganisms on inert surfaces of different areas intended for direct medical care in two general hospitals of the national public sector located in Mexico City. In these hospitals the effectiveness of the nanoparticle NBelyax as a broad spectrum disinfectant agent was determined using the microbial challenge process through the evaluation of the percentage reduction of Colony Forming Units (UFC). Obtaining results of 99.999% effectiveness for pathogenic microorganisms of E. coli and S. aureus.

Nanoparticle, NBelyax, Bacterial challenge, Hospital, E. coli, S. aureus

## Satisfacción laboral del personal operativo del Hotel Valgrande en Coatzacoalcos, Veracruz

# Work satisfaction of the operative staff of Hotel Valgrande in Coatzacoalcos, Veracruz

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### **Abstract**

Tourism in Mexico Represents a significant foreign exchange income. Between January and October 2017, revenues from international travelers Were 17,371 billion dollars, 9.02 percent more than in the same period of 2016, According to data from the Economic Information System of the Bank of Mexico (Banxico). For many tourism companies, Mexico Second Most Important Represents ITS market, after the United States. (Reyna Quiroz, 2017). Coatzacoalcos has sites of interest and has grown little by little as a tourist site,, Although mostly, people WHO stay at hotels in this place do for business Reasons, since the area is Industrial Considered by Having Petrochemical Industries as: La Cangrejera, Pajaritos, Morelos and Braskem Idesa. The objective is: To determine the degree of work satisfaction of the operative staff of the Hotel Valgrande in Coatzacoalcos, Veracruz. A quantitative investigation will be Elaborated with a descriptive scope, using as a tool for gathering information, a questionnaire of 44 questions analyzing: working conditions, training, promotion and professional development, Among Others. With This, we will verify the level of satisfaction to the operative staff works there and it'll That allow to give suggestions for improvement in it.

Work Satisfaction, Staff, Hotel

# Estrategias efectivas de aprendizaje para el adulto que estudia y trabaja en las licenciaturas ejecutivas de Unitec

# Successful learning strategies in adult studies and works in the form of executive degrees in Unitec

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#### Abstract

Learning strategies are one of the MOST Relevant topics of research in education, describes tools methodologically That Facilitate the acquisition, development and implementation of Processes to manage the Acquisition of content, as well as ITS discrimination, Facilitating the steps of an effective learning process. Learning strategies Represent changes in the traditional paradigm, from behaviorism sustained in the stimulus-response relationship, to another That Arises from the constructivist approach, Which is Characterized by the influence of mediating variables and by the Active elaboration of meanings on the part of the student himself. In This new premise is the primary objective That the student is an active subject in the learning process, it is significant the employment in the teaching-learning process, the use of metacognitive strategies, Which help to plan, Regulate and Evaluate student learning; It Also AIMS to dominate a series of skills and competencies (learning strategies), and to teach you to be able to self-Regulate your performance as a response to the Demands and Demands of the task and situation, to Become a student Strategic, Reflective, Critical, autonomous and capable of developing meaningful learning. The research is divided into two presented parts: in the first, different theoretical postulates are the student's Mentioned Regarding strategies and learning; In the second, the results Obtained after the application of the instrument to Identify the metacognitive strategies used by the students

Meaningful learning, learning strategies, metacognition

# Factores que influyen en el desempeño de las voluntarias del comedor comunitario "San Francisco" de Izamal, Yucatán

# Factors that influence the performance of the volunteers of the community dining room "San Francisco" of Izamal, Yucatan

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#### **Abstract**

Objective: Analyze the factors that influence the performance of volunteers of the community dining room "San Francisco" of Izamal reinforce the methods and techniques that guarantee the hygiene and quality of food. Methodology: Based on the descriptive research, in the community dining hall of Izamal, "San Francisco" was collected and analyzed quantitative and qualitative data of the factors that influence the performance of the volunteers. Results: Based on the information collected, the following results were obtained: volunteers are women between 29 and 54 years old, every day they make tortillas by hand to complement the dishes, every day they clean the kitchen, dining room and bathrooms area, they serve food to the beneficiaries. Contribution: Optimal levels of food handling can be achieved only by performing simple actions such as periodic sensitization that will provide knowledge about the proper handling of food

Performance, Volunteers, Dining Rooms

Impacto de la cultura organizacional en la estabilidad laboral en una empresa maquiladora de Ciudad Juárez, estudio de un caso

# Impact of the organizational culture on job stability in a maquiladora company in Ciudad Juarez, a case study

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#### **Abstract**

The purpose of this study is to investigate the impact of organizational culture on the stability of the employees of the maquiladora industry of Ciudad Juarez. A descriptive correlational type investigaction was Carried out; The objective was to analyze the relationship Between organizational culture and job satisfaction through the Pearson correlation coefficient. The Organizational Culture Assessment Instrument (OCAI) was applied with a Likert scale of 5 points and an adaptation of the work developed by Coexphal satisfaction instrument. These instruments Were applied to a sample of 60 employees, the Data Collected Were Analyzed through the software Statistical Package for the Social Sciences (SPSS). The findings Indicate That the dominant culture is That Market, and in overall terms there is no correlation Between the job satisfaction and organizational culture.

### Organizational Culture, OCAI, Job Satisfaction

Efecto de un extracto hidroalcohólico de *Bursera fagaroides* sobre los niveles de poliaminas de intestino y riñón en el modelo de linfoma murino L5178Y

Effect of a hydroalcoholic extract of *Bursera fagaroides* on intestinal and kidney polyamine levels in the murine lymphoma model L5178Y

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### **Abstract**

The polyamines (PAs), Putrescine (Pu), spermidine (Spd) and spermine (Spm) are naturally occurring polycationic alkilamines that are indispensable for growth and cellular differentiation. In addition to their de novo synthesis, cells can incorporate PAs from extracellular sources, such as cancerous tissue, food, and intestinal microbiota. However, more studies are required to elucidate the distribution and flow of these, both in normal tissue and in the cancer phenomenon. In the murine lymphoma model L5178Y the level of intestinal PAs were diminished in presence of tumor plus *Bursera fagaroides* treatment borden but not in its absence. Interestingly, the levels of PAs increase in the kidney of mice with lymphoma and those were tumor free since intestinal cells are rapidly dividing and renal cells are not this may be proof the PAs are necessary to maintain cellular growth. In order to elucidate the distribution and role of PAs in the cell. The L5178Y murine lymphoma model is widely used in immunological studies. In particular, to test *in vivo* the antitumor activity of substances of natural origin.

Polyamines, L5178Y in vivo, kidney, intestine, post-column Derivatization

# Medio osteogénico para evaluar la diferenciación celular *in vitro* sobre andamios tisulares

### Osteogenic medium to evaluate cell differentiation in vitro on tissue scaffolds

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#### **Abstract**

In the area of regenerative medicine, alternatives are continually being sought for the regeneration of different body tissues. Regarding the bone tissue, efforts have been redoubled due to the fact that the bones can suffer damages due to various causes such as aggravated infections, congenital damage, accidents and traumas. Evaluating the differentiation potential of stem cells to different cell lines, this study used dental pulp stem cells embedded in a culture medium containing dexamethasone, ascorbic acid and betaglycerol phosphate, substances known to induce osteoinduction. A polymer structure was used to act as a support, however, this polymer structure does not have the appropriate mechanical characteristics to resemble the strength of a bone, so it reinforced with carbon nanotubes which is a nanomaterial that has great mechanical resistance. According to the results of the mechanical characterization tests, they showed an increase in the elastic modulus. The biological tests show that when carbon nanotubes are functionalized, their cytotoxic effects are eliminated when living cells are observed and in constant proliferation. The osteogenic assay could demonstrate that calcium deposits formed, suggesting that they can be used as tissue scaffolds to regenerate bone.

Tissue scaffolds, Stem cells, Osteo differentiation, Carbon nanotubes, Bone regeneration

# Parámetros bioquímicos, antropométricos y burnout como factores de riesgo para el desarrollo de Síndrome Metabólico

# Biochemical, anthropometric and burnout parameters as risk factors for the development of Metabolic Syndrome

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#### **Abstract**

The MS constitutes the disease to overcome in the 21st century. The increase in sedentary lifestyle, poor eating habits and stress contribute significantly to the appearance of the components of MS. If not treated, the patient with MS represents a significant economic burden for the health, business and family sectors, due to the incapacitating consequences of the disease. **Objective.** Analyze factors associated with the development of MS in an economically active population. **Methodology.** Forty-six workers from the education sector (35 women and 11 men) were included, who were determined Glucose, Cholesterol, Triglycerides, Blood pressure, BMI and Abdominal Perimeter; in addition, the Maslach Burnout Inventory was applied as a measure of Burnout. **Results.** 36% of the population has hypertriglyceridemia, without the presence of hyperglycemia or hypercholesterolemia. 30% (14 subjects) of the population have hypertriglyceridemia and central obesity. Of these, 13 are perceived with a health status of good to excellent. **Conclusions**. The early diagnosis of MS components in the population of productive age is not enough if a sensitization process is not included that leads to a change in the patient's lifestyle.

### Dyslipidemias, Obesity, Hypertriglyceridemia

# Evaluación de *L-Carnitina* como tratamiento profiláctico en la intoxicación por compuestos organofosforados

# Evaluation of L-Carnitine as a prophylactic treatment in organophosphorus compound poisoning

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#### **Abstract**

Evaluation of L-Carnitine as prophylactic treatment in the intoxication by organophosphorus compounds. In Mexico, the first cause of pesticide poisoning is due to the use of organophosphorus compounds (OPs). Methyl parathion (MP) is an OPs pesticide, considered dangerous because it can lead to death. The safety measures are based on avoiding direct exposure of these, since there are no prophylactic treatments. Therefore, the objective of this work was to evaluate the protective effect of L-carnitine in MP-induced intoxication (4 mg/kg, intragastric route) in Wistar rats. Our results show that after 4 h of MP exposition, the activity of the acetylcholinesterase (AChE) was reduced, while serum levels of ALT, AST and ALP were increased. The liver, brain and cerebellum micrographs with H&E staining showed the damage generated by the MP. On the other hand, the administration of L-carnitine (250 mg/kg, intragastric route, 2 hours before the MP), protects significantly the hemodynamic and histological alterations induced by the MP. The present work suggests that L-carnitine may be a new strategy to prevent the damage induced by OPs.

Methyl parathion, *L-carnitine*, Organophosphorus

# Actividad antimicrobiana del veneno del pez escorpión (Scorpaena mystes) de Chamela, Jalisco, México

# Antimicrobial activity of the venom of the Scorpionfish (Scorpaena mystes) from Chamela, Jalisco, Mexico

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#### **Abstract**

This study was realized from January 21th, to June 11th, 2014. In that term the scorpion fish (*Scorpaena mystes*) was captured, from the Chamela Bay, Jalisco, Mexico, and it was transferred to the Antimicrobial Natural Peptides Laboratory, in the University Center of Biological and Agricultural Sciences (CUCBA). The objective of this work was to study the antimicrobial activity and the chromatographic composition of the extract of scorpion fish spines containing the poison, by means of microbiological bioassays and polyacrylamide gels. The above mentioned is relevant to make known the pharmaceutical potential of this natural resources. Currently it is a global priority to find new alternative medicines to conventional ones, due to the increasing observed resistance of microorganisms that cause infections. The results showed that the extract of S. mystes inhibited *Staphylococcus aureus* (G +), and the yeast *Candida albicans*. In contrast *Escherichia coli* (G-) was not inhibited. In addition, the presence of low molecular weight chromatographic bands observed using polyacrylamide gels, may be due to molecules own to natural antimicrobial peptides, which must be probed, by isolation and sequencing.

Peptides, Antimicrobial activity, Scorpaena mystes

### Análisis de la citotoxicidad de la Annona muricata en células HeLa

### Analysis of the cytotoxicity of Annona muricata in HeLa cells

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### **Abstract**

The guanabano (Annona muricata L.) is a fruit plant of the family Anonáceas [1]. The presence of cytotoxic acetogeninas has been reported. The present work analyzes the effect of the aqueous and ethanolic extract of A. muricata on HeLa cells (CCL-2, human cervical adenocarcinoma) .Materials: protein marker (BIOLINE), cameraAxioCamERc5 (ZEISS) and microscope (LABOMED). Method: Nayarit México was ground with mortar. A 10 g aqueous extract was obtained with 50 ml of boiling distilled water. The ethanolic extract used 10 g of ground material, an extraction was made with 50 ml of 95% ethanol, filtered and evaporated to 25 ml. Cells were cultured in DMEM medium with SFB10% at 37 ° C in a 5% CO2 HealForce incubator. Mitochondrial metabolic activity was determined by XTT assay, biomass by crystal method violet and total protein pattern by 10% SDS-PAGE. The results show that both extracts have effect on the HeLa cancer cells, since the morphological analysis by staining with methylene blue indicates alterations. There is no degradation of total proteins. In conclusion, it is observed that *A.muricata* leaves do cause damage to the cell structure and a significant effect on the cellular metabolic activity depending on the concentration.

Cytotoxicity, Cancer, HeLa

# Determinación de microcistinas LR y RR en agua del Lago de Chapala y su potencial efecto a la salud

# Determination of microcystins LR and RR in the water of Lake Chapala and its potential health effect

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#### **Abstract**

Microcystins (MCs) are hepatotoxins produced by certain types of cyanobacteria, capable of causing short and long-term damage to the health, they are considered as an important water pollutant overtaking heavy metals and pesticides in importance. A provisional limit concentration of  $1.0\,\mu g/L$  is suggested by World Health Organization (WHO), and renal-dialysis patients are declared as a vulnerable group. Therefore, MC determination of water samples of Lake Chapala was carried out (Agua Caliente, Poncitlán, Jalisco, México). MC-LR and MC-RR concentrations between 0.60 and  $0.013\,\mu g/L$  were obtained by SPE and UPLC-MS/MS methods. The recreational use of the lake and the consumption of animals and food crops contaminated by the water could affect the health of exposed people due to the genotoxic, mutagenic and teratogenic potential of MC. The first methodological proposal for MC standardization is highlight, and is suggested to be included in the updates of the Official Mexican Standarts (NOM).

Microcystins, Risk, Health

# Predicción de pacientes con diabetes a través de un modelo de aprendizaje supervisado de Minería de Datos

# Prediction of patients with diabetes through a supervised learning model of Data Mining

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### **Abstract**

Today there is a large amount of data related to medical systems and efficient methods are available to find the appropriate information, which helps to relate this information, in the preparation of a prediagnosis or medical diagnosis of different types of diseases. Data mining is one of the best solutions for this purpose. This paper presents a study on the application of a supervised learning model of data mining, for the prediction of patients with diabetes, considering several variables that represent risk factors for the suffering of said disease. The model was built with the best known classification methods, such as Bayesian networks, support vector machines, Ada Boost methods among others. These methods were calibrated with the parameters allowed by the model in the R development platform, through the technique called cross-validation.

Data mining, Supervised learning, Diabetes

Prevalencia de la variante alélica de la enzima UDP-Glucuronosil transferasa UGT1A6 552A>C (Arg184Ser) en población mestiza mexicana del estado de Puebla

Prevalence of the allelic variant of the UDP-Glucuronyl transferase enzyme UGT1A6 552A>C (Arg184Ser) in Mexican mestizo population of the state of Puebla

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#### **Abstract**

UGT1A6 is a phase II metabolism enzyme that catalyzes the glucuronidation of widely used drugs. Interethnic differences in genetic polymorphisms of UGT1A6 have been reported; however, there are no reports of their frequencies in mexican population. The aim of this work was to determine the frequencies of UGT1A6 552A>C (Arg184Ser) in a mexican mestizo population of the state of Puebla and compare them with the frequencies observed in other populations. Peripheral blood was obtained from 40 healthy adults to extract DNA and identify UGT1A6 alleles by PCR-RFLP assay. When comparing the results of our research with those observed in other ethnic groups, we observed that the UGT1A6 mutant allele frequencies were higher than those reported in the Portuguese population and lower than those reported in Japanese, Hindu, Chinese and Greek populations. These results must be considered to make decisions when choosing the drugs administered to different ethnic groups.

### **UGT1A6, Glucuronidation, Polymorphisms**

# Propuesta de intervención de la Disfagia Orofaríngea: Un modelo de trabajo hacia la transdisciplinariedad

# Oropharyngeal Dysphagia intervention proposal: A work model towards transdisciplinarity

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### **Abstract**

Objective. To propose a model of multidisciplinary attention of the oropharyngeal dysphagia (DO) with a transdisciplinary vision. *Introduction*. The DO is a disorder of the mechanisms of swallowing that affects the upper digestive tract, presenting difficulty in the passage of liquids, semisolids or solids from the oral cavity to the stomach. It occurs in all ages in a wide variety of pathologies. It requires several specialists for your attention; however, multidisciplinary and transdisciplinary care is given in a few cases. *Methodology*. The different populations with DO were evaluated by different methodologies, with an approach by the areas of Deglution, Neuropsychology, Language, Nutrition, Psychology, Audiology and Phoniatrics. *Results*. The most frequent cause of DO was Cerebral Vascular Disease in the adult population (59.9%). Co-morbidity was 46.6% due to systemic arterial hypertension and 26.6% due to diabetes mellitus type II. Of the children population the most frequent cause of DO was associated with genetic syndrome (60%). *Discussion and Conclusion*. Based on the results, a multidisciplinary intervention model with a transdisciplinary approach is proposed, for a better adherence to the treatment with greater probability of success, avoiding attrition.

Oropharyngeal dysphagia (DO), Intervention, Multidisciplinary / Transdisciplinary

Calidad de aire de interior en viviendas y salud en mujeres de Agua Caliente, Poncitlán, Jalisco (2018)

# Indoor air quality in homes and health in women of Agua Caliente, Poncitlán, Jalisco (2018)

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### **Abstract**

The results of an indoor air quality study are presented in dwellings located in the town of Agua Caliente, Poncitlán, Jalisco, with the purpose to characterize the levels of particulate material in indoor air in the kitchens of residents' homes and estimate the thermal comfort index to which women in the home are exposed, as well as to identify the perceived symptoms. The amount of particulate material / ft3 (per cubic foot, in attention to the record of the apparatus used, VP300 Extech particle counter), registered caution and danger levels in all sizes studied in relation to human exposure, in more than 60 % of the houses. The emissions of PM0.3, PM0.5, PM2.5 come from non-traditional stoves and in more than 80% come from the consumption of traditional firewood; the thermal comfort index considered in caution, extreme caution and dangerous levels showed a tendency to appear in a higher percentage in homes with traditional hearths> 65% compared to 36% of homes with non-traditional stoves. 84% of the women surveyed indicated that they had no symptoms associated with the use of the wood stove. Monitoring is used to identify pollutants in indoor air as well as for diagnosing air quality in homes. It is a fundamental part of assessing environmental issues both individually and at community level and thus contribute for the appropriate intervention of the authorities.

Indoor air quality, Health, Women, Housing, Poncitlán Jalisco

Calidad del aire por  $PM_{10}$  Y  $PM_{2.5}$ , en puntos críticos de la Zona Centro de Guadalajara, Jalisco. México

Air quality by PM10 and PM2.5, in critical points of the Central Zone of Guadalajara, Jalisco. Mexico

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#### **Abstract**

Studies conducted in various parts of the world and in the metropolitan area of Guadalajara (ZMG) have documented that the presence of atmospheric pollutants of particles equal to or smaller than 10 µm and 2.5 µm are one of the main pollutants within urban areas. With the present study, environmental conditions are evaluated in terms of concentration of particles that exist in the downtown area of Guadalajara, given its importance as a place of concentration of commercial and recreational activities. Some representative points of the zone were studied, which allowed to identify the current state of the concentration of suspended particles. The evaluation shows mostly concentration levels of 70 to 300 particles/ft³ of PM<sub>10</sub> and 500 to 1900 particles/ft³ of PM<sub>2.5</sub> that are in the range of precaution. These indicators allow to generate bases for the study of the contamination and to value their possible effects in the exposed population.

Air Pollution, exposition, health, PM10, PM2.5

## Nivel de Salud en Trabajadores de la Industria Automotriz, en la ciudad de Saltillo, Coahuila

## Level of Health in Workers of an Automotive Industry, in the city of Saltillo, Coahuila

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#### **Abstract**

Objetive: Identify the level of health of the workers of an automotive company in the city of Saltillo, Coahuila. *Methodology*: transversal descriptive study, 46 workers of the automotive industry. Instruments: socio-demographic and health data card, assessment of work risks, ergonomic conditions, risk factors for endocrine-metabolic and cardiovascular diseases and anthropometric assessment. *Results*: average age ( $\overline{X} = 35.74$  years, SD = 8.38); male sex (93.5% f = 43), female (6.5% f = 3); marital status (78.3% f = 36) married, schooling, professional (58.7% f = 27), (26.1% f = 12) high school / technical, (10.9% f = 5) master's degree, (4.3% f = 2) secondary. Immunization 65.2% have application of a vaccine; Tetanus toxoid (43.5% f = 20) and influenza (15.2% f = 7). Good general health status (76.1% f = 35). Work risks: tolerable physicists (37% f = 17); light chemical (63% f = 29); light biological (63% f = 29); ergonomic light (54.3% f = 25) and tolerable psychosocial (34.8% f = 16). Ergonomic conditions remain standing during your work day (52.2% f = 24). Suffering endocrine and cardiovascular diseases (78.3% f = 36). Biophysical conditions; (39.1% f = 18) arterial hypertension. *Contribution*: It is important to carry out health promotion and prevention programs to favor the reduction of risks at work.

### Health level, Automotive industry

### Calidad microbiológica del pan tradicional de Tejupilco, Estado de México

### Microbiological quality of the traditional bread of Tejupilco, State of Mexico

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### Abstract

The high demand of the bread generates the need to evaluate the safety of the product by means of microbiological testing, having as indicator the presence of total coliform bacteria; considering a sample of 62 % of the bakeries in the municipality. Samples of conchas (Mexican shell bread), cupcakes, ciciriscos, plomos and pelucas were collected following the NOM-109-SSA1-1994. The samples were prepared according to what is stated in the NOM-110-SSA1-1994 and the planting was done with violet red bile lactose agar medium as indicated in the NOM-113-SSA1-1994, the results were reported taking into consideration the limits stablished by the NOM-247-SSA1-2008 in colony forming units per gram (CFU/g). It is concluded that microbiological quality of the bread made in Tejupilco is poor and measures must be implemented to assure the safety of the product. These data represent a first approach to the research of this regional product. With this collected information, the intention is to provide guidance to the local bakers in order to contribute to the improvement of processes, since the analysis enables to assess the microbiological load pointing out possible microbial contamination risk levels, and therefore the product is innocuous for the consumer.

Traditional bread, Coliforms, Microbiological quality

## Estudio preliminar de la parasitosis en cuyes de una granja familiar

### Preliminary study of the parasitism in guinea pigs of a family farm

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#### **Abstract**

Preliminary study of the parasitism in guinea pigs of a family farm. The objective of this work was to determine the presence and identification of gastrointestinal parasites in guinea pigs (*Cavia porcellus*) of a family farm during its breeding as a preliminary study. POOL sampling was carried out by pool of guinea pigs: nursery pool (20), weaning pool (50) and adult pool (150). The POOL samples were collected from the poses of the animals every week for a period of three months, to which they were subjected to coprological examinations using the Modified Willis Flotation technique protocol and the Mc Master technique. The presence of gastrointestinal parasites was *Hymenoleptis nana* with 50%, followed by *Paraspidodera uncinata* with 27.27%, *Eimeria caviae* with 15.91% and *Passalurus sp* with 6.82%.

Presence, Guinea Pigs, Gastrointestinal Parasites

## Perfil de salud en trabajadores de una empresa automotriz, en la ciudad de Saltillo, Coahuila

# Profile of Health in Workers of an Automotive Company, in the city of Saltillo, Coahuila

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### **Abstract**

Methodology: Cross-sectional descriptive study, 66 workers in the automotive industry. Instruments: Personal data and health certificate, assessment of work risks, evaluation of ergonomic conditions, risk factors of endocrine-metabolic and cardiovascular diseases, anthropometric and biophysical measurements. Results: average of age 33.76 years (SD 9.9), 53% (fr 35) men, 47% (fr.31) women, 80.3% (fr.53) do not present any disease, 77% (fr.51) consider your health status good. Risk factors endocrine metabolic and cardiovascular diseases; low risk 43.9% (cold 29), moderate risk 3% (cold 2) and 53% (cold 35) high risk. Contribution: The health conditions of workers in industries depend on factors not only labor but also aspects of the lifestyles of individuals and their risk factors so it is important to make periodic assessments to help maintain welfare of people with healthy lifestyles and strengthen occupational health in companies.

### Health profile, Automotive industry

## Hábitos de higiene buco-dental de los estudiantes de la Universidad Tecnológica Fidel Velázquez: Estudio descriptivo

# Habits of oral-dental hygiene of the students of the Universidad Tecnológica Fidel Velázquez: Descriptive study

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### **Abstract**

The objective of this study was to know the oral hygiene habits of the students of the Fidel Velázquez Technological University. This belongs to the health research line of the UTFV. The research was conducted in a non-probabilistic sample of quotas of 100 students, 63% said they know the characteristics of an adequate oral hygiene, however 49% have some disease associated with the oral cavity (43% caries, 10% Gingivitis, 1% mouth cancer, 5% Halitosis, 10% Sarro, 2% Periontoditis). The university students wash their teeth on average 1.6 times a day, less than recommended by the OMS. 46% use products of oral aesthetics and associate oral health to: 15% social acceptance, 25% get a partner, 15% academic success, 31% social success, 55% attractive appearance, 13% fashionable and 92% healthy. Concluding that the data are not consistent, because qualitatively they may not know the information that health agencies consider optimal for oral care. The above favors to know the different problems of oral health and thus develop and know the real problems in the students of the Universidad Tecnológica Fidel Velázquez.

Oral hygiene, Oral diseases, Health, Health problems

## El embarazo en jóvenes de nivel medio superior: Prevención a partir de la docencia

### Pregnancy in young people of upper secondary level: Prevention from teaching

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#### **Abstract**

Adolescent pregnancy is a problem so present that it deserves multidisciplinary research, since this problem can be studied from different perspectives. The objective of this research is the causes of pregnancy in young people of upper secondary level and its prevention from teaching. The methods used in this research are of the inductive-deductive type in a very general way as the main findings in women from 10 to 19 years old, which constitute more than a third 38% of the population classified as fertile women of 10 years at 49 years of age. That is, the age of their first sexual relationship determines fertility, resulting in unwanted pregnancies, children of single mothers, among other aspects. In this reality can not be avoided, since age is a factor that determines the sex life, therefore, there is the challenge of avoiding unplanned pregnancies with the timely delivery of information on the different contraceptive methods available, that would undoubtedly help to avoid them. For this reason, a workshop proposal for adolescents of upper secondary level is made.

Pregnancy, Junior high level, Prevention and teaching

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# Relación entre el consumo de bebidas alcohólicas y estrés académico en estudiantes de la UTFV en el periodo de Mayo-Agosto 2018

# Relationship between the consumption of alcoholic beverages and academic stress in students of the UTFV in the period of May-August 2018

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### Resumen

El objetivo de este articulo fue explicar la relación entre el consumo de bebidas alcohólicas y estrés académico en universitarios de la UTFV en el periodo mayo-agosto 2018. Este trabajo pertenece a la línea de investigación en salud de la UTFV. Los resultados mostraron que el 90.9% de la muestra consume bebidas alcoholicas de manera regular, provocado por un estresor denominado Descanso (Tiempo Libre). El síntoma mas común el estado de Mal Humor con un 72.7%. Concluyendo que el consumo de alcohol se potencializa por la falta de actividades cada fin de cuatrimestre causando un golpe mayor de estrés ya que no saben en que ocupar su tiempo libre obteniendo

Bebidas Alcohólicas, Estrés Académico, Universitarios, Estresores, Enfermedad

# Relación entre el consumo del tabaco e imagen social favorable en estudiantes de la Universidad Tecnológica Fidel Velázquez

## Relationship between tobacco consumption and favorable social image in students of thet Universidad Tecnológica Fidel Velázquez

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### **Abstract**

The objective of this present research work was to evaluate the prevalence of tobacco consumption in the university population of the Fidel Velázquez Technological University. This work belongs to the research line of evaluation of tobacco consumption which is a qualitative study with methodological referential. The results showed that the average age for the beginning of tobacco consumption is 15.6 years of age. A sample of 100 students from different careers, of both sexes, smokers and non-smokers was taken. Among the reasons for tobacco consumption were factors such as the influence of friends and colleagues. Family members and personal commitments were attributed as factors not favorable to the use of snuff, information was collected during the period May-June 2018. Tobacco in the youth population is currently a major public health problem.

Tobacco consumption, Daily cigarettes, Smokers, University students

## Prácticas sexuales de los estudiantes de la Universidad Tecnológica Fidel Velázquez: Estudio exploratorio

# Sexual practices of the students of the Universidad Tecnológica Fidel Velázquez: Exploratory study

ANTONIO-CRUZ, Kevin Enmanuel, GRANDE-LUNA, Litzy Lizette, LOPEZ-BERMUDEZ, Yara Yamili, MORALES-MARTINEZ, Claudia Berenice, NOLASCO-REZA, Jennifer Paola y HERNÁNDEZ-CRUZ María Guadalupe

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#### **Abstract**

The objective of this work was to know what and how are the sexual practices of the university students of the Fidel Velázquez Technological University. This work belongs to the health research line of the UTFV. The results showed that 70% of the students who have sexual practices carry them out without the use of barrier contraceptive methods. The age of onset of sexual life of the surveyed sample is 16.63 years and have had on average 4.19 sexual partners so far. Concluding that the sexual practices of university students are a risk to health.

Sexual practices, Use of contraceptives, Risky practices, TSI

### Comparación de la grasa corporal a través de dos métodos de medición en futbolistas

### Comparison of body fat through two measurement methods in footballers

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#### **Abstract**

The objective of this study was to compare the fat mass obtained using different anthropometric equations with dual absorptiometry with x-rays (DEXA) in youth soccer players from a team of first division in Mexico. 34 players were measured (age  $18.32 \pm 1.34$ ; height  $177.23 \pm 6.21$ ), where the percentage fat was evaluated using seven anthropometric equations through skinfold measurements and DEXA. Bland and Altman's method was used where there was shown a bias - 0.01% - 7.6% between DEXA and anthropometric equations, being the Durnin & Womserley equation the one that improved the individual precision of the estimates of the fat percentage (-5.0 5.0) with respect to other equations. All equations showed a significant difference (p < 0.05) regarding the DEXA, less with Durnin & Womersley's formula, where there were no significant differences found (p > 0.05). The equation of Durnin & Womersley estimated fat mass very similar to the DEXA, despite that this equation is not specific for athletes and that also it does not take into account any skinfold lower body limb, a primary area in the soccer player for his physical work, it can be that this equation turn to be good for approximation of the fat mass in youth soccer players.

DEXA, Anthropometry, Body density, Body fat, Soccer players

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# Densidad mineral ósea en beisbolistas y voleibolistas universitarios durante un macrociclo de entrenamiento

# Bone mineral density in baseball players and college volleyball players during a training macrocycle

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### **Abstract**

Some studies mention that Bone Mineral Density (BMD) is an important indicator to be able to determine bone resistance, so the purpose of this study was to investigate the changes in BMD in baseball and volleyball players in a cycle. The sample was comprised of 12 baseball players, 11 volleyball players and 15 of a control group, which evaluated the BMD of the upper and lower extremities, as well as the lumbar region (L1-L4) and femur neck, carrying out two measurements, an initial take (TI) and, after 7 months a final take (TF), using the equipment of the "X-Ray" Densitometry by Dual Energy (DEXA). Measurements of protein and calcium intake were also performed with 24-hour reminder. For statistical analysis, the SPPS (v.23) program was used. The results showed a significant increase in BMD in the lumbar spine (L1-L4) at the end of a training cycle in volleyball. Given the foregoing, it was concluded that the sport of volleyball and activities involving jumps favor the increase of BMD in the lumbar spine (L1-L4) during a seven-month training cycle.

DEXA, Bone Mineral Density, Baseball and Volleyball Players, Bone Resistance, Training Cycle

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# Vigilancia y promoción de la lactancia materna exclusiva en un centro de salud rural de Yucatán

# Surveillance and promotion of exclusive breastfeeding in a rural health center in Yucatán

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### **Abstract**

Exclusive breastfeeding is recommended by the World Health Organization during the first six months of life and then as a supplement to the diet during ablation until two years of age. Although the Official Mexican Norm points out the actions that must be carried out, there are still gaps in information on the promotion of surveillance actions that must be developed by health personal so that mothers can be motivated to put in practice this activity has benefits both in the health of the child and that of the mother. The aim of this study was determine the actions of breastfeeding carried out by health personnel and mothers of a Maya community of Yucatan. Interviews were carried out and clinical files and health control cards for healthy children were reviewed. Descriptive statistic was calculated to obtain frequencies of main promotion actions of exclusive breastfeeding. Its practice needs permanent surveillance and monitoring to promote it and contribute to the improvement of children's health in Mexico.

Surveillance and monitoring, Breastfeeding, Promotion

## Responsabilidad social del sector empresarial, con enfermos de insuficiencia renal Social responsibility of the business sector, with patients with renal failure

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#### **Abstract**

Chronic diseases that some people may end up suffering complications not only in health, but also in the economic and even in finding work to be able to cover the expenses caused by these diseases. This research presents information about entrepreneurs who have workers who have chronic diseases, mainly kidney failure and, where appropriate, the reasons why they do not hire employees of these characteristics. It also allows to know the availability that organizations have to help people with kidney failure and the way in which they could perform them.

Social Responsability, Employers, Renal Failure

# Mejoramiento de la salud integral de los estudiantes universitarios a partir de la educación y atención de la salud oral

# Improvement of the integral health of the university students from the education and attention of the oral health

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### **Abstract**

Objective: To improve the comprehensive health of university students through education and oral health care. Methodology: Clinical-Epidemiological Study with active, analytical, and longitudinal observation. An intervention was developed with the students of the Universidad Veracruzana, to study caries index, periodontal disease, malocclusions, bruxism, ectopic eruption of third molars, fear of dental treatment, level of knowledge about oral health, the importance of academic tutoring in the health of the students, age, sex. Contribution: An important work team was constituted by students who received economic and academic scholarship members and collaborators of the CA, to strengthen academic production. It impacted on the improvement of the integral health of the university students, involving them in the care of their own health. Work on Receptional Experience was completed in a timely manner, promoting the publication of the results. The culture of prevention and intervention allows our society to have professionals with better overall health and better quality of life, economically productive. The publication of research results in quality journals will give an opportunity to strengthen the LGCA of CA and CA in collaboration and therefore improve the degree of Consolidation.

### Integral health, Oral health, Education

## Uso clínico de la Toxina Botulínica para la corrección de Sonrisa Gingival: Investigación clínica

# Clinical use of Botulinum Toxin for the correction of Gingival Smile: Clinical research

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### **Abstract**

Objective: to evaluate the effectiveness of the clinical use of the botulimun toxin as a corrective treatment for gummy smile. Methodology: 16 feminine patients between 18 and 30 years old who present gummy smile at the clinical evaluation (<3mm) were selected. During the clinical phase, it was performed the Botulinum Toxin infiltration to the rigth and left Lip Elevator Muscles. It was measured the gingival display during the first, second, third and fourth weeks after treatment. Contribution: it was demonstrated the effectiveness of the clinical use of the botulimun toxin as a corrective treatment for gummy smile; with an average of gingival display reduction of 3.75mm. So that it was concluded that it is a non-invasive, temporal and effectiveness treatment for this clinical situation.

Gummy smile, Aesthetics, Botulinum toxin, High smile, Smile harmony, Analysis of the smile

# Prevalencia de maloclusiones dentales relacionada con género y edad en estudiantes universitarios

## Dental Malocclusion prevalence related with gender and age in University students

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#### **Abstract**

Objectives: To determine based on Angle Dental Malocclusion Classification, the prevalence of dental malocclusion related with gender and age in University of Veracruz students. Methodology: A transversal, descriptive and correlational study was carried out between February 2016 and July 2016. Clinical procedures were done in order to determine the prevalence of Angle Dental Malocclusion (I, II, II div. 1, II div. 2 and III). The sample included 200 students of two disciplines of the University of Veracruz. Then it was established the correlation between dental malocclusion and the variables gender and age. It was obtained a significant statistic relationship between gender and dental Angle malocclusion, being more frequently the Clase I in female with a prevalence of 81.45%. However, there was not relationship between the age and Dental Angle Malocclusion. Contribution. This study reinforced the global health of the university students, it is important to carry out preventive and therapeutic actions in order to improve the life quality of the students.

Dental malocclusion, Occlusion, Orthodontics, functional occlusion, Prevalence

El sociodrama como estrategia de educación en salud para mejorar los hábitos de higiene en dos comunidades de Yucatán, México

The sociodrama as a health education strategy to improve hygiene habits in two communities of Yucatan, Mexico

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### **Abstract**

Currently, the presence and increase of cases of infectious, bacterial, parasitic and viral diseases due to certain habits and hygiene habits in rural areas continues to be observed. Its appearance can be reduced and even avoided with changes in lifestyle and acquisition of healthy habits; in every lifestyle you see the influence of customs, fashion, values of the community and even the occupation of people; most of these factors have in common that they are learned and therefore can be modified. It is important to know these aspects to promote the implementation of preventive measures and the maintenance of health through educational policies to promote health and hygiene. Learning in the sphere of human relationships requires intelligent understanding of the subject and the theory, as well as maturity in attitudes and feelings. In recent years, much has been done to discover means and ways to achieve more effective learning. Many of the old and generalized techniques require a lot of time and lack dynamic force to produce some reeducation. Recently the resource of the "sociodrama," has shown more possibilities to provide that reeducation.

Sociodrama, Health education strategies, Hygiene habits

# Factores de riesgo y enfermedades diarreicas agudas en niños de dos a cinco años en una comunidad de Yucatan, México

# Risk factors and acute diarrheal diseases in children from two to five years in a community of Yucatan, Mexico

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#### **Abstract**

The World Health Organization (WHO), estimated that 160 million children suffered from moderate or severe malnutrition worldwide which places Mexico as a country where the development of diseases such as diarrhea is a consequence of factors such as poor diet, lack of sanitation in the water and hygiene personal; and that, despite the prevention programs to reduce statistics mainly in children under 5 years of age, the objective seems distant since the epidemiological characteristics, etiological agents and clinical presentation of diarrheas are highly variable depending on the country, region and community, so that their knowledge is essential for the design of prevention and control programs. In Mexico 43.29% of the population lives in poverty conditions and 13.94% do not have the economic resources to feed themselves adequately. Malnutrition is recognized as a major risk factor for death in children with common infections such as pneumonia, diarrhea and sepsis. The purpose of this study is to determine the risk factors that are associated with the development of acute diarrheal diseases in children between the ages of two and five years in a community in Yucatan, Mexico.

Acute diarrheal diseases, Malnutrition, Pre-school children

Situaciones y factores asociados al desarrollo de enfermedades gastrointestinales en estudiantes de la Universidad Tecnológica Fidel Velázquez

# Situations and factors associated with the development of gastrointestinal diseases in students of the Universidad Tecnológica Fidel Velázquez

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#### **Abstract**

The objective of this work was know the situation and factors that are associates whit employed of gastrointestinales diseases of university students of the Fidel Velazquez Technological University. This work belongs to the line of investigation of evaluation of social climate of the UTFV. The results showed that 48% of the students surveyed presented some stomach upset with a duration of 1 day. The most common symptoms are inflammation and belching. In hygiene habits, it is clear that 36% of men wash their hands with soap and water before eating and after going to the bathroom. And only 28% of women perform this practice leaving them more likely to get gastrointestinal disease. In eating habits, it was found that only 30% of respondents bring food from home to consume at school and 70% buy food in cafeterias and stalls spending \$ 44.62 pesos on average in food factor that puts them at risk of acquiring a gastro intestinal disease.

Gastrointestinal diseases, Junk foods, Hygiene habits, Preventive measures, Inflammation, Belching, Hands

# Caracterización nutrimental de productos alimenticios a base de haría de calabaza "Cucurbita lundelliana"

# Nutritional characterization of food products based on "Cucurbita Lundelliana" pumpkin

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### **Abstract**

In the nutritional characterization of food products made from Cucurbita lundelliana pumpkin flour, the bromatological parameters of different snacks prepared with this fruit were determined and results were compared with the values indicated in different similar products on the market. This project was carried out at the Technological Institute of Villahermosa, Tabasco, Mexico. The activities were carried out in the Research Laboratory I, during the months of September to December 2017. Four different snacks (bread, biscuits, pancake flour and energy bars) were elaborated to which humidity, ashes, proteins, fats, and fiber were determined, this according to the Official Mexican Standards. Their respective nutritional tables were prepared and their results were compared with similar products in the market. It is intended to take advantage of the nutritional capacity of the pumpkin of this species in food products to provide human beings with the necessary nutrients and proteins in their daily intake and combat health problems such as anemia, obesity and diabetes.

Pumpkin, Cucurbita lundelliana, Nutrimental analyzes

## Hacia una concepción del Diseño Sonoro 4.1 para personas con discapacidad visual

## Towards a conception of sound design 4.1 for people with visual disabilities

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#### **Abstract**

Information for all, is one of the greatest premises that communication professionals - in charge of creating contents for the media, investigate and transform them - have regarding the adaptation of different expressive forms, to the biological / communicative demands with the that count the diverse current publics. The media, through the interaction of mediations, modify the narratives or discursive processes by considering the sensory and social capacities of all the subjects that make up the social body, enriching the methods of appropriation of cultural and scientific knowledge, not only people with visual impairment - who attend this study - but to all those individuals who have unflattering elements in the appropriation of materials of all kinds. From the concept of expressive democracy, the theoretical mechanisms that led researchers as creators of democratizing and inclusive forms and contents as the Sound Design 4.1 proposal aims to be explored

Communication, Visual Disability, Sound Design, Inclusion

# Reporte de tratamiento fisioterapéutico de paciente pediátrico con Genu Valgum Fisiológico. Caso clínico

# Report of physiotherapeutic treatment of the pediatric patient with Genu Valgo Physiological. Clinical case

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#### **Abstract**

It is known by the name of Genu-Valgum, a deformity consisting in the reduction of the angle formed by the femoral diaphysis with the tibial diaphysis in the frontal plane. Objectives: To verify if the application of the neuromuscular bandage allows to correct the physiological Genu-Valgum in a pediatric patient. Material and Methods: We report a clinical case that has been treated within the area of physical rehabilitation in pediatrics in the facilities of the UTSOE. It is a male pediatric patient born in the Municipality of Valle de Santiago, Guanajuato, Mexico. A postural assessment of the standing child was performed, where a description is displayed in X by bilateral physiological Genu-Valgum knees.Results: A minimal joint correction was evidenced. The configuration in X is not so noticeable, so now it presents a configuration in K.

Genu-Valgum Physiologic, Neuromuscular Bandage, Physiotherapeutic treatment

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