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34th World Conference on Applied Science, Engineering & Technology

WCASET-2021

23rd – 24th March 2021

ORGANIZED BY

INSTITUTE FOR ENGINEERING RESEARCH AND PUBLICATION (IFERP)

34th World Conference on Applied Science, Engineering and Technology

(WCASET – 2021)

Dubai, UAE

23rd- 24th March 2021

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Editorial:

We cordially invite you to attend the ***34th World Conference on Applied Science, Engineering and Technology (34th WCASET)*** which will be held **Dubai, UAE** on ***23rd-24th March 2021*** - Virtual conference. The main objective of ***34th WCASET-2021*** is to provide a platform for Researchers, Engineers, Academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Science, Engineering and Technology. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in there view process, and to the authors for contributing their research result to the conference.

Since January 2021, the Organizing Committees have received more than 120 manuscript papers, and the papers cover all the aspects in Electronics, Computer Science, Information Technology, Science Engineering and Technology. Finally, after review, about 41 papers were included to the proceedings of ***34th WCASET***.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of ***34th WCASET***. We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.

Acknowledgement

IFERP is hosting the ***34th World Conference on Applied Science, Engineering and Technology*** this year in month of March. The main objective of 34th WCASET- 2021 is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points, and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my hearty gratitude to all my Colleagues, staffs, Professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to make this conference successful.

Mr. Siddth Kumar Chhajer
Managing Director
Institute for Engineering Research and Publication (IFERP)

Message from Keynote Speaker

Professor (Dr.) Amitabh Upadhya

Provost and Vice President

American College of Dubai

Dubai (UAE)

The WCASET Conference 2021 brings together a variety of academics and practitioners on an interactive platform for meaningful deliberations; this interaction has the potential to bring forth ideas that can be implemented and applied in their respective professional areas. I am happy to be invited to the Conference to deliver a keynote, however I am not physical scientist as the name of the conference may suggest, but believe in systematic knowledge creation that adds value both to the body of existing knowledge and its application. I wish the organizers all the success for arranging this conference and feel that the online mode, because of the pandemic conditions, is actually an opportunity for larger participation and that too conveniently.

Professor (Dr.) Amitabh Upadhya

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ABSTRACTS

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Effect of Different Solvent System on Oil Extraction from Immobilized Microalgae Cells Of Chlorella Vulgaris: Kinetic and Thermodynamic Studies

Nagaarasan Ramesh, Faculty of Chemical and Process Engineering Technology, Universiti Malaysia Pahang
Dr. Nur Hidayah Mat Yasin, Faculty of Chemical and Process Engineering Technology, Universiti Malaysia Pahang

Abstract:--

The implementation of immobilization method on microalgae *Chlorella vulgaris* had facilitated the recovery process of the cells. Solvent extraction method had been used to extract the oil from dried immobilized *C. vulgaris*. However, the understanding on the extraction process of immobilized *C. vulgaris* is still scattered although it is important for a higher oil yield production. Thus, in this work, the effect of different time and temperature of the extraction process were investigated to determine the kinetic and thermodynamic properties of oil extraction process using immobilized *C. vulgaris*. Solvents consist of chloroform and methanol (1:1, v/v) were utilized to extract the oil from immobilized *C. vulgaris* at 30, 40, 50 and 60 °C for 30 – 150 min extraction time. Results obtained revealed that the percentage of the lipid yield and rate constant increased as the time and temperature of the extraction increased. The activation energy and enthalpy change (ΔH) values were 16584 J/mol and 409.27 J/mol, respectively. The process is endothermic, irreversible and spontaneous by referring to the positive value of ΔH, entropy change (ΔS) and the negative value of Gibbs free energy (ΔG) at 60 °C. Besides, the fatty acid methyl ester profile revealed the potential for biodiesel production.

Consumers' Perception about Sustainable Fashion: A Case Study of Pakistan

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Faiza Azeem, M.Phil student, Department of Economics, University of Karachi (UOK), Pakistan, Karachi.

Abstract:--

Sustainability is the most pressing issue of our time, and it is particularly relevant in the textile industry especially; when it comes to Fashion. The fundamental change that is needed to go down the path of a circular economy, the best strategy is using textiles the timeless way. Circular economies is a very radical substitute to a traditional economy, which is to say, start from scratch, redesign, reuse, and fully remodel an item of clothing. This is the proper use of available resources by preserving the value for a period while reprocessing the fabric after it has completed its life cycle. Wasting textiles causes major climate change, and recycling is a step in the right direction for the fashion industry. Based on the current situation, we can infer that sustainable fashion is a much-needed item in today's world. As a result, this research is attempted to determine the degree of awareness of the consumers in Pakistan about sustainable clothing. The collected data showed that consumers were conscious but to some degree and needed further growth, as in their view, sustainability is described as the definition of longevity, recycling, and less use of chemicals. Additionally, it is also observed that while consumers are concerned about the negative impacts of fashion industry and aware customers are willing to pay extra, but still for disposing of clothes they throw away their apparel, which is worrying and a major barrier to sustainability.

Index Terms

Sustainability, Fast Fashion, Circular economy, Sustainable Fashion, Consumer awareness, Conscious consumers, Perception.

Assessment of eLearning Tools Utilized by IT Faculty of Programming Course in the New Normal

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Mark C. Lagleva, DIT, University of the Cordilleras, Faculty, PSU Lingayen Campus

Abstract:--

Students' knowledge relies on the hand of their teacher. The use of different learning modalities like utilization of hand-outs, visual aids using paper or presentation, and the internet helps to impart knowledge to the learners. Learning process is not limited in school alone, rather it continues even at home. With the current setting where face-to-face classes are prohibited due to pandemic, teachers need to be more innovative which helps not to disrupt the continuous learning of the students. This study will present discussions on the assessment of eLearning teaching tools utilized by IT faculty of programming course. The researcher conducted a descriptive research and used survey questionnaire for data collection. Teachers used different eLearning tools in instruction delivery. The technological factors greatly help on the success of eLearning tool implementation in the new normal. The learning management system tools used in distance learning has valuable effect on students when interacting with the instructor. Faculty members of programming course used Microsoft Teams as the Learning Management System with Google Classroom, Schoology, Facebook Page, or Messenger as the secondary medium for interaction. The assessment results showed that majority of the students are highly satisfied with the features, functions, and support provided by the tools. Further studies must be conducted to address the performance of the students and teachers during the implementation of these eLearning tools in the new normal.

Keywords

Assessment, tools utilized, programming course

Work Attitudes and Motivation of the Faculty of College Of Education: Basis to Enhance Taeching -Learning Proces

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Abstract:--

The role or emerging work attitude and the exigency of motivation in the workplace are variables worth looking into it desire for work productivity is highly, desired. Results can serve as benchmark to enhance teaching-learning process and to ensure student's success in school work. Two null hypotheses were tested at the .05 level: "no significant relationship exists between the work attitudes and the two measures of motivations of those faculty in the Nueva Ecija University of Science and Technology - College of Education" and "male and female faculty do not differ in three job measures; work attitude, extrinsic and intrinsic motivation". The participants were universally drawn from the different Campus like Sumacab, San Isidro and Gabaldon. The study focused on faculty's work attitude and their motivations along extrinsic and intrinsic motivations. Profile variable was limited gender. Statistical treatment of data was confined to the weighted mean, Pearson Product Moment Correlation, Kramer's V, and Chi square test. Findings drawn were; Majority of the faculty of were found to be favorable in their work attitude; majority asses their work environment to be high in terms of existence of extrinsic and intrinsic work motivations: the three job measures were found to be interrelated; and male and female faculty of NEUST College of Education do not differ in the three job measures.

Keywords:

work attitude, motivations, faculty

New Enhanced Whale Optimization Algorithm for Reactive Power Optimization

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Abstract:--

The standard Whale Optimization Algorithm (WOA) involves exploitation and exploration operations which require to be balanced for improved performance. Limitations of Fish-inspired optimization methods have been found to be slow convergence speed and premature convergence. This paper suggests a new enhanced WOA to improve the convergence speed and enhance the global optimum by balancing exploitation and exploration processes. New stages have been suggested at the hunting stages of the Whale Optimization Algorithm to increase the overall exploitation capability. The performance of the modified algorithm has been analyzed on few commonly used multimodal test functions and Reactive Power Optimization (RPO) problem. The numerical studies have shown that the proposed WOA variant has outperformed other compared optimization algorithms in terms of global optimum and convergence speeds. Upon analyzing them, their advantages and limitations can be discovered which then motivate future studies towards power system optimization focusing mainly on Economic Load Dispatch (ELD).

The Relevance of Culture Affecting Gen-Y Consumers on Brand Equity in Dubai: The Integration of Social Media Advertising

Dr. Majed Alkindi, Aldar University College
Dr. Hiba Hilal, Aldar University College
Dr. Akino, Ajman University
Dr. Raed, Canadian University in Dubai
Dr. Tan, Malaysia

Abstract:--

The world has been moved towards the 4th industrial revolution. It has brought a big impact to the Gen-Y adaptation into bid data informative era. Indeed, Gen-Y has gone through a digital technology era in the 80s and now needs to keep in track with new revolution. this research examine and explore culture as a moderator on Gen-Y and social media advertising on brand equity, and Gen-Y: Mediator among culture and social media advertising with brand equity, data collects and analyzes from Dubai by using Structural Equation Model AMOS and SPSS software version 22®, the sample size used in this study is 429, The Goodness-of-Fit indices for the Unconstrained Model for both groups (less-culturally inclined and culturally inclined) are; Chi – Square χ^2 (CMIN) = 334.033 (df = 142), Relative χ^2 (CMIN/df) = 2.352, AGFI = .850, GFI = .899, CFI = .978, IFI = .978, NFI = .963, TLI = .972, RMSEA = .058. This Finding shown significant differences between the respondent's culture based on their regional background, the study discovers that Gen-Y attitude towards brand equity increases among respondents who are less-culturally inclined to those with more cultural inclination. This leads that culture and social media technology in a little while will appear a new consumption of digital culture.

Parental stress and children's Self-regulation problems in families with nonverbal children with Developmental Disabilities (ASD)

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Abstract:--

Aim: The present study investigated the relationship between self-regulation skills and parenting stress in parents of nonverbal children with ASD (Autism Spectrum Disorder). **Method:** The Parenting Stress Index – Short Form (PSI-SF; Abidin, 1995) was administered to 75 families, and self-regulation scores on Motor Behaviour Checklist for children (MBC; Efstratopoulou, Janssen, & Simons, 2012) were recorded by students' class teachers (level of functioning-behavioural problems). In addition, interviews were contacted with a focus group of parents to explore more in depth the underline factors of parental stress. **Results:** Correlation analyses revealed that parenting stress was positively correlated with elevated scores on MBC children's self-regulation subscale. On the other hand, parenting stress was negatively correlated with the level of social functional support reported. Qualitative data were analysed using transcripts and revealed additional stressors for families and parents' recommendations to overcome. **Discussion:** Aiming at developing strategies to improve self-regulation skills in nonverbal children with ASD may be particularly important in reducing parental stress for families having nonverbal children with autism and other developmental disabilities. Parents' stressors and suggestions are also discussed.

Optical properties of MgO thin films deposited on GeO_2 and SiO_2 substrates

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Farid Flitti, Higher Colleges of Technology

Abstract:--

In this study, optical properties of magnesium oxide (MgO) thin film deposited on germania (GeO_2) and silica (SiO_2) were studied as a function of wavelength in the range 0.3 – 1.1 µm using Matlab. Refractive indices, extinction coefficients, and absorption coefficients were investigated. The transmittance spectra of MgO thin films of different thicknesses deposited on the different substrates were also examined. The films were found to show high transmittance and low absorbance in the visible and near infrared region. However, the absorbance of the film was found to be high in the ultraviolet. The effects of interference on transmission spectra were also considered. The results give good reason for the applications of MgO thin films in optoelectronic devices.

Keyword: -

Matlab, MgO, Optical properties, Substrate, Thin film.

ASFA-WOA Variants for Enhanced Global Optimization

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Abstract:--

Imbalanced exploitation and exploration in metaheuristic Artificial Fish Swarm Algorithm (AFSA) inhibits it from producing good optimization performance. Therefore, this paper presents the proposal of simple, yet improved AFSA variant for optimization, inspired by combining it with the Whale Optimization (WOA) algorithm. Originally, the standard AFSA algorithm imitates the hunting behavior of fish swarm, while the standard WOA algorithm imitates the whale hunting behavior in a natural environment. In this work, the spiral updating position technique of WOA is incorporated into the swarming and following behaviors of AFSA, creating three new variant algorithms referred to as AFSA-WOA-S, AFSA-WOA-F and AFSA-WOA-SF. The performances of the proposed variants are evaluated based on fifteen benchmark functions. The results have proven that the variants are able to improve the global optimization outputs compared to the standard AFSA and WOA. The best-performed variant among the proposed ones, is AFSA-WOA-F.

Keywords

Artificial Fish Swarm Algorithm (AFSA), Whale Optimization Algorithm (WOA), Optimization, Benchmark Function.

Effect of Fiber Type and Content on Fresh and Some Hardened State Properties of Cementitious Systems

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Abstract:--

It is known that some mechanical properties of concrete mixtures such as flexural, tensile strengths and energy absorption capacity improve with the use of fibers. The presence of fiber in concrete mixtures positively affects dimensional stability and durability properties such as, abrasion and freeze-thaw resistance. Steel, polypropylene, carbon fibers as well as glass fiber having high resistance to alkali, are widely used in concrete production. In this study, the effect of fiber type and content on the fresh and hardened state properties of cementitous systems was investigated. For this purpose, 9 different fibrous mortar mixtures were prepared by addition of 0.25%, 0.50 and 0.75% (by volume) polypropylene (PP), polyamide (PA) and basalt (B) fibers having a length of 12 mm to the mixture. CEM I 42.5R type portland cement and crushed limestone sand having 0-4 mm size fraction were used for preparing mortar mixtures. In all mixtures, water/binder ratio and flow value were kept constant as 0.485 and 200 ± 20 mm, respectively. A polycarboxylate ether-based high range water-reducing admixture was used in different dosages to achieve the desired flow values. The samples were exposed to the standard water-curing until the testing day. As the fresh state properties, the flow and unit weight values of the mixtures were determined. As hardened state properties, ultrasonic pulse velocity (UPV), compressive and flexural strengths of the 90-day samples were obtained. In the case the mixtures containing 0.75% polyamide and basalt fibers, the target flow value of 200 ± 20 mm could not be achieved due to observation of segregation. For this reason, the mentioned mixtures could not be produced. It was observed that the water-reducing admixture demand for providing the desired flow value increased with the addition of fiber to the mixtures and the increase in the utilization ratio. In this regard, the basalt fiber-containing mixtures showed the lowest performance. The highest and lowest unit weight values were determined in basalt fiber and polypropylene fiber-containing mixtures, respectively. UPV values decreased with the addition of polypropylene fiber to the mixture. However, the opposite behavior was observed in the case of the presence of either polyamide and basalt fiber in the system. Irrespective of the fiber type, the increase in fiber content in the mixtures caused a decrease in compressive strength while an increase the flexural strength. It was determined that the decrease is the most in mixtures containing PP and least in mixtures containing basalt fiber.

Keywords:
Polypropylene fiber, polyamide fiber, basalt fiber, compressive strength, flow value

Framework for Diffusion of Clean Energy Products in Rural Areas of India

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Abstract:--

In the world there are about Globally, 1.3 billion folks live in poverty, under $2 dollars a day (UNDP, 2018; Das, 2020). Many of these people do not have access to clean, modern energy. Not having access to modern energy leads to deficiency in development indicators such as livelihood security, education, sanitation and health. It clogs in accomplishing socio-economic development in the particular region. In 2015, UN General Assembly adopted the agenda for Sustainable Development Goals. Sustainable Development Goals aimed to ensure "access to affordable, reliable, sustainable and modern energy for all" (Chetan et al. 2016). Energy access is multidimensional which consists of household for lighting needs, fulfilling cooking and productive use for livelihood needs. In the above context access to affordable, reliable, sustainable and modern energy through the diffusion of clean energy products has been focused to urban areas, whose benefits do not scroll down to the rural areas of the society. Hence, there is a need to understand how these clean energy products can reach people residing in rural areas. For achieving the same, there is a need to develop a conceptual framework for diffusion of clean energy products in rural areas (Das, 2020). The conceptual framework consist of several actors which can help in the diffusion of clean energy products in rural areas of India. Design/Methodology/ approach- In the current research paper, literature review was carried out for understanding the theoretical concepts of actors. Findings- Conceptual framework was developed. Originality/value- A novel approach of developing the framework was carried out, an attempt was made to develop the supply chain for last mile delivery of the clean energy products and services can take place.

Keywords:

Actor, Clean energy products, Rural areas

Effect of Curing Condition on Strength of High-Volume Fly Ash Roller Compacted Concrete

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Abstract:--

Roller compacted concrete (RCC), consists of cement, water, fine and coarse aggregates similar to conventional concrete. It is a special type of concrete with a generally lower binder compared to that of the conventional concrete. The RCC, which is laid and compacted with soil and rock fill equipment, has zero slump value in the fresh state. RCC was developed as a result of studies carried out for the designs of dams to be built faster and more economically. The most important parameters affecting RCC properties are the compaction degree, aggregate gradation and type, binder type and amount as well as curing conditions. In this study, the effect of curing conditions on compressive and splitting-tensile strength of high-volume fly ash roller compacted concrete designed by the maximum density method was investigated. For this purpose, in addition to the control mixture containing no fly ash, two different SSB mixtures were prepared by replacing 60 wt. % of either cement or aggregate with Type F fly ash. CEM 1 42.5 R type Portland cement and three different size fractions (0-4, 4-12, 12-22 mm) of a crushed limestone aggregate was used in the mixtures. The mixtures were subjected to two different curing conditions. In the first method, RCC mixtures were compacted in 2 different layers in accordance with ASTM C1435 standard using vibratory mallet and steel pressure plate. The produced samples were removed from the mold 24 hours after casting and exposed to water curing at the temperature of 20 ± 2 0C for 28 days. In the second method, an RCC platform of 300 cm length, 80 cm width, and 25 cm depth was cast in open-air conditions. The platform was compacted into two layers by using a 70x50 cm steel pressure plate with the same process. The strength was determined by taking 10x20 cm core from the platform, which was exposed to air curing for 28 days. The average ambient temperature during this period was 15 0C. According to the results, the compressive and splitting tensile strengths of the water cured control mixture having no fly ash were 26% and 25% higher than their air-cured counterparts, respectively. This ratio was measured as 29% in the mixture where 60% of cement was substituted with fly ash. The compressive and splitting tensile strengths of the core specimens drilled from the mixtures where 60% of aggregate was replaced with fly ash was found to be 24% and 21% % lower than those of similar water cured samples, respectively.

Keywords:

Roller compacted concrete, fly ash, curing condition, compressive strength, splitting tensile strength.

Proposal of a load balancing for a company based on Open daylight

Samba DIOUF, Cheikh Anta DIOP University/Polytechnic High School

Abstract:--

The emergence and development of Software Defined Networking (SDN) has given rise to innovative ideas in the design and management of networks. In just a few years, SDN has become a must in datacenters, WANs and enterprise networks. In this context, the SDN offers service providers a requirement for scalability and availability. This is why, faced with the problem of increasing loads and the solicitation of different servers in enterprise networks, in this context of IoT, big data and 5G, the SDN reacts, through a perfectly adapted controller such as OpenDayLight (ODL), by maintaining and or improving the quality of service. In this article, we propose a load balancing solution in a big data network thanks to the SDN. We also present experimental results of load balancing as well as the calculation of costs for a path using the Dijkstra algorithm using an Opendaylight platform.

Keywords:

Big data, 5G, Load balancing, Opendaylight, SDN.

Proposal for an Intelligent Digital Teacher's Textbook Solution Adapted to the Bachelor Master Doctorate System

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Bessan Melckior DEGBOE, Laboratory LIRT, Higher Polytechnic School, University Cheikh Anta Diop
Samuel OUYA, Laboratory LIRT, Higher Polytechnic School, University Cheikh Anta Diop
Gervais MENDY, Laboratory LIRT, Higher Polytechnic School, University Cheikh Anta Diop

Abstract:--

This paper proposes an intelligent solution for course monitoring based on the use of a digital textbook coupled with an algorithm for verifying the conformity of the teaching content. The proposed solution allows to follow in real time the evolution of the courses and to alert the pedagogical managers in case of non-compliance with the syllabus.

In most sub-Saharan African countries engaged in the Bachelor-Master-Doctorate (BMD) reform, incessant strikes prevent teachers from completing the program. Also, there is no way for the teacher to know whether students have the necessary prerequisites. In addition, constraints related to agendas sometimes prevent the holding of pedagogical animation meetings.

To solve these problems, we propose the implementation of an intelligent digital teacher's textbook. The tool helps in the follow-up and the respect of the pedagogical objectives. It implements an algorithm to evaluate in real time the concordance between the courses given and the requirements of the syllabus. An SMS and e-mail alert system has also been set up to inform training actors in case of non-compliance with the syllabus.

The proposed solution contributes to the overall improvement of the quality of higher education in Saharan Africa.

Index Terms:-

BMD reform, course monitoring, pedagogical animation, quality of education.

Design of Successive Approximation Register Architecture in VHDL Language for Simultaneous Dual Channel 10-Bit ADC Based on FPGA

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Abstract:--

Precision and accuracy of the AC power measurement results can be improved by sampling the voltage and current signals simultaneously using a simultaneous multi-channel ADC device. Currently, many FPGAs are implemented to design various digital circuits architectures in single chip IC that can work simultaneously. The VHDL programming language is generally used to configure FPGA ICs to be digital circuits. This paper describes the SAR logic circuit architecture design for simultaneous dual channel 10-bit ADC in VHDL programming language. Active-HDL software is used to write and simulate VHDL code. Timing diagrams from the simulation results of VHDL code show that the designed system can work simultaneously. 10 bit output resolution need 11 clock cycles to determine binary code for each bit. The synthesis result of VHDL code can be used to configure the FPGA IC to be a simultaneous dual channel SAR ADC module.

Index Terms—

ADC, dual-channel simultaneous, FPGA, SAR, VHDL

Outcome-Based Education (OBE) Approach in Teaching and Learning Biological Sciences

Emerita S. Caymo, Nueva Ecija University of Science and Technology – San Isidro Campus/Instructor 1

Abstract:

This study was an attempt to determine what extent Biological Sciences students and teachers are accepting or resisting the envisioned education approach (outcome-based) and to assess the status of the implementation and the level of usefulness of OBE approach in teaching and learning Biological Sciences. It also sought to investigate if there is an existing relationship and significant difference between the assessment of the status of the implementation with contributory factors such as formulating appropriate lesson objectives, designing appropriate learning tasks, choosing appropriate teaching methodologies, and designing appropriate assessment tasks and the level of usefulness of OBE Approach with contributory factors such as the knowledge of OBE implementation through instruction and practice of OBE implementation through instruction as perceived by the Science teachers and Biological Science students in teaching and learning Biological Sciences. A total of 14 Science teachers and 400 student-respondents from NEUST were the respondents of the study. Descriptive research and correlation method of research were used with the questionnaire as the main tool in data gathering and was supplemented by interview to verify their answers.

The results showed that both respondents, teachers and students, had great extent of awareness in the implementation and level of usefulness of OBE approach.

The results also revealed that there is no significant relationship between the profile variables of teacher-respondents and the status in the implementation and usefulness of OBE approach in teaching and learning biological sciences but there is a significant difference between the descriptions of teachers and students on the OBE implementation and its usefulness in teaching and learning Biological Sciences.

Advanced Expansion in Kernel Principle Component Approach for Face Recognition

Ashish Nagila, Assistant Professor, IFTM University, India
Ritu Nagila, Assistant Professor, IFTM University, India

Abstract:

Face recognition has existed for quite a long time considered to be the defender among the most basic contrary to other biometric based frameworks. Facial recognition cycle can be communicated as a pursuit. Database of many known facial photographs Personal, one of the wellsprings of facial photographs, and program is designed to identify or determine Personal information picture. In situations where facial details may not be available, everything establishes an identity. Be that as it may, the face is the most characteristic, widely utilized key for an individual's identity. The issue of automatic facial recognition [1] involves three important advances: 1. Discovery rough standardization of faces 2. Extraction of highlights and precise standardization of faces 3.Identification or confirmation.

Keywords :

Advanced kernel, Principal components Analysis, PCA, AKPCA, Face recognition.

Growth Performance Of Rhode Island Red Chicken Fed With Nami (Dioscorea hispida) and Wild Ubi (Dioscorea villosa) Fermented Using Three Fungal Species

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M.B.Atinyao, Professor V, Benguet State University, La Trinidad, Benguet, Philippines

Abstract:

Nami and wild ubi, are indigenous feed resources for free range chicken keeper in Tarlac. The nami and wild ubi were fermented three species of mushroom fungi Pleorotus ostreatus, Volvarealla volvacea and Ganoderma lucidum. The fermented nami and wild ubi were subjected to proximate analysis and test-fed to Rhode Island Red chicken to determine acceptability, palatability and feeding trials.

The study used 36 heads of 6 weeks old non-descript chicken for acceptability and palatability trials. The birds were randomly distributed to six treatments with two replications and three birds per replication.

For the growth trial, 240, 21 day old Rhode Island Red chicken were randomly distributed using 2 x 3 factorial. Each treatment was replicated 4 times with 10 birds per replication with the Completely Randomized Design.

Results of the analysis revealed that there was an increases of crude protein content of nami and wild ubi after fermentation from 9.48 to 16.44 and 4.73 to 16.10 respectively. P. ostreatus was found to be the most appropriate fungal species to ferment nami and wild ubi. P. ostreatus-fermented wild ubi contained 16.62%, nami contained 18.80% compared to the 16.52%, 16.02%, 16.19% and 13.31% crude protein content when wild ubi and nami were fermeted by V. volvacea and G.lucidum respectively.

Results of the study revealed that the two fermented products gave comparable level of acceptance as nutrient enriched feed resources. The used of fermented pure cultures white rot fungi (P. ostreatus) consistently performed good level of acceptance as to compare with the two inoculant.

Experimental birds adjudged promising utilization on the acceptability of fermented product with the used fungal cultures. P. ostreatus, V. volvacea and G. lucidum equally hurdle set of parameters to the high level of medium range in the preference ranking of palatability index in terms of Statistical Tool for Agricultural Research evaluation .

Fermented products with its 10% inclusion with the commercial ration fed during the starter – grower phases significantly influence live weight, live weight gain, feed consumption and feed conversion ratio in the production of Rhode Island Red chicken. Interaction of fermented fungi failed to manifest significant advancement in the total production of experimental birds and at the end of the two growth periods. External manifestation of impairment that may affect the physiological growth of experimental birds was not observed.

Economic performance of producing rhode island red chicken D.villosa fermented with V.vulvacea,, D.hispida with P.ostreatus, D.villosa with G.lucidum and P.ostreatus, D.hispida with G.lucidum and V.vulvacea were gave 73.06%, 72.68%,72.60%, 72.19%71.50% and 71.41% ROI and rank first, second, third, fourth, fifth and six respectively.

These suggest the provision of fermented products can be started at day 22 from then. Zero mortality during the two growth periods are factors that the fermented products did not impair the nutritive value of the commercial ration.

The Role of Utilizing Social Media in Teaching English Language to Young Learners. Teachers' Views A Case Study of Omani Upper Primary Schools (2019-2020)

Sara Ahmed, Oman College of Management & Technology, Oman

Abstract:

This study reviews the role of utilizing social media in teaching the English language to young learners. Focusing on the teachers' views, a case study has been conducted in one of the Omani upper primary schools. The study aims to assist students and teachers by offering modern ideas that can be implemented on social media for learning the English language. It also aims in identifying the role of social media in reducing the gap between learners and educators. Moreover, it aims to investigate the perception of upper primary school teachers on the supportive hand of social media for students to learn English and other modern languages.

The study is quantitative in its design. It is based on the numeric data set gathered with the help of a questionnaire. It follows a deductive approach while random sampling technique is used. Furthermore, the study follows positivism philosophy and also used statistical tool including SPSS to analyse the results accurately.

The study found that:

1. Almost all the teachers are engaged with the social media and interlinked with students irrelevant to their level.
2. Teachers are trying to let students learn the English language online with the support of social media.
3. The majority of respondents agreed on the pivotal and significant role of social media in the learning process, especially for teaching and learning English as a foreign language.

For further research, the researcher suggests that:

1. Students and their parents should take an interest in the social media learning program offered by the primary teachers of schools in Oman to enhance students' capabilities and abilities.
2. Students should be punctual on decided time without any excuse to get what their teachers demand for.
3. Extra marks should be assigned for online social media classes for students, which weighted on the final exams.

Profitability Evaluation of Commercial Banks in Sultanate of Oman

Dr. Balamurugan Muthuraman, Assistant Professor, Oman College of Management & Technology, Oman

Abstract:

The purpose of the study was to investigate whether capital ratio, size and loans of a commercial bank evaluation its profitability in Oman and to evaluate which measure between returns on assets and equity is the better indicator that reflects bank profitability. The secondary data was obtained from the annual reports of selected commercial banks in Oman and analyzed with Multiple regression models and financial ratios for the period 2009 to 2019 using SPSS and excel was used to evaluate the profitability. The findings of the study revelated that the capital ratio, size, and loans show insignificant influence on Return of Assets (ROA), but not on Return of Equity (ROE) except bank size. Regarding ROE, significant negative and positive influence for capital ratio and loans respectively are concluded. The study proved that the bank's profitability evaluation can be measured through the ROA and ROE with its capital ratios, size and loans using ratio and regression analysis which can be a high measure to profitability of the banks. The study helps the stakeholders of the banks to understand the factors and the banking activities that might help to enhance the profitability of the banks and to take necessary action and suitable decisions accordingly. The study was restricted to five selected commercial banks in Oman and the study based on quantitative techniques.

Index Terms

Commercial banks, ROA, ROE, Capital ratio, Size, Profitability

INVESTIGATION OF THE DYNAMIC STABILITY ENERGY SYSTEM OF SOUTHERN BAGHDAD

Dr Emad Al-Mahdawi, Department of Electrical Engineering, MidKent College – Chatham – England

Abstract:

In the Modelica software environment, a mathematical model of the Iraqi power system region has been developed. This work aims to study the dynamic stability and develop proposals for the application to improve the reliability and sustainability of southern Baghdad region electrical power transmitting. Due to the frequent terrorism action, some of the transmission lines` supports are damaged. Therefore, some of the lines work as single circuits. This drastic change creates stability problems on these lines. It is shown that under the prevailing conditions, the parallel operation's stability is not secured without additional measures. The application of modernised automatic excitation regulators implementing a "strong" excitation control regulation, quick automatic deactivation of a part of the load and a short-term artificial voltage drop at one of the district's primary substations are considered in this study. The results of dynamic stability showed that the short-term artificial voltage drop has the most remarkable effectiveness. This measure's usefulness is maintained even in the operating conditions of existing (not modernised) generators' excitation systems.

Keywords:

Power system, Dynamic stability, Modelica, South Baghdad.

Facts and challenges involved in teaching and evaluation of the Project Based Learnings (PBL)

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Abstract:
Current pandemic situation made a remarkable transformation in the education system at every level. Complete phase shift has taken place from offline to online no matter the level of education. Technical education has spread its wings and is utilizing every available technology for efficient teaching and learning processes. Most of the Traditional engineering subjects were taught through online and with appreciable resources in every discipline to reach out to every student. Few new practises like Project Based Learnings (PBL), Service Based Learning (SBL) or community based learnings have been introduced to enhance the quality of engineering education has greater impact on delivery to students as it includes community/people interaction , teamwork and working on open platforms, which are plenty in the market. Experience of the Stakeholders of the institution is the major essence of this paper.
This paper is about analysis of the facts and challenges involved in teaching and evaluation of the Project Based Learnings(PBL) at CMR College of Engineering & Technology (CMRCET) in this pandemic situation. Introduction part of the paper discusses the impact of the current pandemic situation and the scenario the education institution is following to meet these challenges with respect to engineering education. The results and opinions of the 25 faculty and 500 students on this learning & evaluation challenges are recorded. Next sections include: The major challenges from the student end include the issues like team work, collaborative learning and working on hardware modules of the projects, working with various simulators online.
The faculty challenges include guiding the team of students of different locations, monitoring their progress and managing the resources by retention of students' focus and interest throughout the semester. Educating the students on usage of several hardware and software tools about its availability, integrity and adaptability factors to be considered before choosing these simulators for the project. Periodical reviews, framing the rubrics, assessment and evaluation of students' work at various levels are the most important challenges to be addressed. Service based learning practice includes interaction with various community partners for searching and formation of problem statements, which is an essential element in human centric design, Provision of such user/community /NGOs interaction online has several issues. The paper depicts the overall experience of CMR College of Engineering & Technology (CMRCET) stakeholders experiences in practicing PBL and SBL online..

Grid Connected Solar power Conditioning Unit Based on Active Damping

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Naarisetti Srinivasa Rao, Lecturer, University of Technology and Applied Sciences-Ibri, Sultanate of Oman

Abstract:

The dimension of power generation in the world is going in the new direction with the addition of renewable energy, solar photovoltaic (PV) generation in particular. This situation demands design and development of efficient power conditioning systems to extract maximum power from available sun radiation in the vicinity of solar grid. The international standards of grid connected solar systems force the developers to build conversion systems that deliver power with Total Harmonic Distortion (THD) < 3% at inverter. In this work the Perturb and Observe Maximum Power Point Tracking method is used to extract maximum power from solar PV array. And a filter with L-C-L configuration has been designed to reduce the current harmonics injected into the grid. However, to overcome stability problems and to damp out the resonance frequency components, an active damping (AD) technique has been proposed. This paper presents the analysis and simulation results of a grid connected solar power conditioning system with active damping.

Index Terms

Active Damping, Conditioning Unit, Grid, L-C-L Filter, Solar Photovoltaic Generation.

Computer Numerical Controller of a Hydroponic Coco Peat Planting System

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Karl Angel M, Philippines
Salvador, Philippines
Geoffrey T, Philippines

Abstract:

Automatic Planting Machine is an essential part of the Electronics industry as it uses a Computer Numerical Control (CNC) machine to make the seeds direct in planting on the net pots, with an equal depth to minimize the declination of the health of plant by transplanting. This project will provide and develop a cost-effective controlling system for CNC machine that is responsible in checking the moisture of the Coco peat in each plant. Hydroponic irrigation technique is implemented in the study, wherein the pechay seeds are embedded on a Nutrient Film Technique (NFT) system composed of 40 holes.

The method used to achieve the following goals of the system is Experiment Method and Descriptive Method. First is analyzing the needs in improving the current traditional method of planting seeds. By observing the traditional method, different problems have been encountered such as the method of embedding seeds through the soil, monitoring of the growth of seeds and the soil medium being used. After observing the following problems, an assumption has been made to answer the needs of the problems.

The device planted seeds in which out of 24 testing (8 net pots per NFT) the average depth of each seeds implanted using the machine is 3.00 mm which has a speed of 2 seconds in planting each seeds through the net pots. An average speed of 2 seconds out of 20 trials has been made thru testing of the system, thus, allowing the user to plant more seeds time efficiently.

Keywords:

Computer Numerical Control, Coco Peat, embedded, traditional method, transplanting, Planting Machine

Using Car Navigation Systems in Jordan by Combining Technological Acceptance Model and End-User Computing Satisfaction

Malik Mustafa, Gulf College
Asst. prof. Dr. Malik, Gulf College

Abstract:

The goal of this study is to explore the factors affecting Jordan's use of car navigation systems by incorporating the paradigm of technical acceptance and end-user computing satisfaction. This study uses PLS structural equation modeling to evaluate the 230 appropriate questionnaires in order to evaluate the suggested model using the acceptance model of TAM technology and end-user computing satisfaction theories to identify factors that affect the use of car navigation systems among private licensed drivers in Jordan. The research will describe the relationships between accuracy, content, format and timeliness, simplicity of use, perceived usefulness, and intention to continue to use car navigation systems. Our endeavors have improved our understanding of the use of satellite navigation technology. The findings showed that all seven theories were endorsed. The suggested model also clarified 20 percent of the difference in the use of car navigation systems. This research provides an overview of current trends in the field, along with considerations of the challenges of significance and compatibility with this particular learner community. Implications are discussed for further study.

A Review on Mammographic Mass Segmentation Techniques

Rajalakshmi P, PG Scholar, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, Perundurai, Erode, Tamil Nadu.

Yuvaraj K, Assistant Professor, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, Perundurai, Erode, Tamil Nadu.

Dr.Ragupathy U S, Professor, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, Perundurai, Erode, Tamil Nadu

Abstract:
Breast cancer is the second leading cause of cancer worldwide near to lung cancer. It is stated that by 2022 almost 4million cases will be affected by breast cancer and almost 20 percent results in death. Mammogram is a effective tool to diagnose breast cancer. Mass should be identified from mammogram at very early stage, thereby increasing the survival rate. Many researchers have done analysis on Mammogram. They have used various methods and resulted in various findings. These researchers acted as a second opinion for physicians. Many literatures have been surveyed and their methodology, merits and demerits were observed. Hence this paper aims to compare various image processing segmentation techniques handled by different authors. 64 Papers were thoroughly reviewed and this paper will be an eye opening survey for the future researchers.

Keywords
Mammogram images, Breast Mass Detection, Image Processing, Mass Segmentation,Breast Cancer.

Fake News Detection using Support Vector Machine

Maryam Alzaabi, Abu Dhabi Polytechnic
Anwar Alhashemi, Abu Dhabi Polytechnic
Nouf Aljahoori, Abu Dhabi Polytechnic
Safa Alseiari, Abu Dhabi Polytechnic

Abstract:

Technology has evolved in such a way that led to increased phenomenon, especially cybercrimes; discussing this matter, the most common cybercrime is the propagation of fake news. Fake news negatively affects society by allowing adversaries to conduct disinformation campaigns to destabilize nations and subvert societies. So, the need to implement systems for detecting fake news is imperative. There are a variety of fake news detections have been applied in real life, but the question is, what fake news detection approach is effective to combat fake news? We did experiments and comparisons of several models that classify a piece of news as either fake or real and the results proved that Support Vector Machine model is the best choice for characterizing and analyzing fake news because it was the most accurate model in classifying the fake news. This model will reduce the spread of fake news, minimize the impact on society and advance national security.

Keywords:

Fake news, Detection, Machine learning, Classification, Support Vector Machine.

The Relationship between Rock Fatigue and Tunnel Boring Technologies

Nazife Erarslan, Izmir Democracy University, Civil Engineering Department, İzmir, Turkey and
The University of Queensland, School of Civil Engineering, Geotechnical Engineering Centre, Australia

Abstract:

It has been investigated in this study that the effect of rock fatigue on rock strength and the feasibility of rock fatigue damage into the tunnel boring technologies by reducing the rock cutting forces and spesific energy. The opening and closing of macro-scale fatigue cracks behave like a spring without causing failure in rock specimens, which is a highly brittle material, has been recorded for hours by video for the first time in the literature. The results obtained from this study are outstanding findings that challenge the fatigue damage theories of brittle geological materials. The fracture process zone (FPZ) has been studied in detail by using experimental and XFEM numerical analyses. Scanning electron microscope and computed tomography (CT) images clearly showed the developement of FPZ in front of the crack tip and this zone was the reason of the macro-scale fatigue crack behaves like a spring in a brittle rock material without result in failure. Further, size of FPZ was found maximum when the crack inclination angle is 60°.

The dynamic rock cutting technology DCD is presented with this study. Cutting test results showed both cutting forces Fn and Fc and specific energy were found decrasing by the effect of rock fatigue. It is concluded that dynamic hard rock cuting is more effective with higher frequencies. Sieve analyses results obtained from the excavated rock fragments after oscillating disc cutting and conventional disc (zero oscillation) cutting tests show that there is no significant difference between the amount of dust size material when the sieve analysis results between -4.12 + 2.0 mm are compared.

Rock Fatigue and a New Dynamic Hard Rock Cutting Technology

Nazife Erarslan, Izmir Democracy University, Civil Engineering, Geotechnical Department, Izmir, Turkey And The University of Queensland, Geotechnical Engineering Centre, School of Civil Engineering, Brisbane, Australia

Abstract:

This paper describes a novel hard rock cutting technology Dynamic Cuttting Disc (DCD) in which the cutting forces acting on the disc cutter is reduced and the amount of rock excavated is increased. The importance of this novel method is that it allows hard and abbrasive rocks to be excavated with lover cutting forces and specific energy without using high cutting forces that are experienced by conventional disc cutters used to cut these types of rock. The controlled rock cutting tests with both relieved and unrelieved cutting modes were carried out on two different rock types by using a 144mm diameter mini disc cutter. Comparative tests and results clearly showed that rock fatigue is effective damage mechanism on reducing the cutting forces and producing more excavated material by using DCD technology compared with the conventional non-dynamic disc cutting. The ratio of the enery supplied to the tools to the volume of rock removed is termed specific energy (SE) and SE is one of the most important parameters to determine the rock cutting efficiency. One of the most significant results obtained with this study is to achieve the decrease in specific energy with significant increase in the amount of excavated material with DCD technology instead of decreased cutting forces. The results of this study are believed to affect the future of mechanical cutting technologies.

Mining Social Media Data for Security

Sultan Albloushi, Abu Dhabi Polytechnic
Mohamed Alnuaimi, Abu Dhabi Polytechnic
Omran Alhosani, Abu Dhabi Polytechnic
Hassan Alali, Abu Dhabi Polytechnic
Khalid Almarshda, Abu Dhabi Polytechnic
Dr. Sanaa Elyassami, Abu Dhabi Polytechnic

Abstract:

Social media produces enormous amounts of unutilized data. Through machine learning and text analytics techniques, Organizations and individuals alike can use such data to extract a great deal of information. The type of information can be used in a plethora of ways; With techniques such as sentiment analysis allowing organizations to determine public reception to their products or finding trendy topics through the application of topic extraction. This paper outlines the process taken to develop a machine learning model that analyzes social media posts and extracts the post's sentiment and topic. A Multinomial naïve bayes model and a random forest model were trained for each objective to gauge which learning algorithm performs better with accuracy and F-Score being performance metrics. The results showcased that even with relatively simple implementations, the analysis results on unseen social media posts produced promising accuracy results with short training time, with the multinomial naïve bayes model outperforming the random forest model.

Speech Emotion Recognition Using Speech Signal Analysis

Indra J, Associate Professor, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, Perundurai, Erode, Tamil Nadu.

Vinitha T, PG Scholar, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, Perundurai, Erode, Tamil Nadu.

Abstract:

Speech is the most popular method of communication. Recognizing human emotions from speech signals emerged as a challenging research topic known as Speech Emotion Recognition (SER).Capturing the emotion from only speech is a difficult challenge. The proper selection of features in relation with both the time and frequency domains together is necessary to produce optimized results. In this paper, four emotional states: Happy, Sad, Anger and Neutral from speech are recognized by using two classifiers. The speech utterances are taken from the Poland Corpus (Database of Polish Emotional Speech). The explored features include Energy, Pitch, Zero-crossing rate and Mel-Frequency Cepstrum Coefficients (MFCC). Performance is compared by employing two different classification algorithms namely, Support vector machine (SVMs) and Linear Discriminant Analysis (LDA). The overall experimental results reveal that SVM classifier offers better accuracy compared to LDA based on the recognition rates.

Keywords:

Speech Emotion Recognition, Feature Extraction, MFCC, Support Vector Machine, Linear Discriminant Analysis

Automatic Segmentation of Brain Tumor in MR Images Using Deep Network

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N. Indhu, PG Scholar, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, Perundurai, Erode, Tamilnadu, India.

Abstract:

Automatic segmentation of brain tumor in medical image is significant for clinical assessment and treatment planning of brain tumors. Image Segmentation is the most common challenging factor in the medical science field. Over a decade, many segmentation methods were developed and employed to segment the tumor region in medical images and still it remains as a challenging task in the healthcare sector. Currently, deep networks are rapidly growing in computational related works like classification, inspection, medical diagnosis, etc. Based on the various studies from literature, it is proposed to work with a deep network for tumor detection in the brain image captured using Magnetic Resonance Imaging (MRI). MRI is the most important and common device to diagnose the brain tumor. The normal MR images are not much suited for elegant analysis, so segmentation is the most important process required for precisely analysing the tumor images. In this work, Convolution Neural Network is used for segmenting the tumor region from the MR images and Dice Similarity Coefficient (DSC) is used to evaluate the same. The proposed work obtains the DSC 0.86 for a set of 50 images.

Keywords:

Segmentation, Brain tumor, Deep network, MRI

Artificial Intelligence-Based Digital Financial Fraud Detection

Sanaa Elyassami, Abu Dhabi Polytechnic, Abu Dhabi, UAE
Abdulrahman Ali Alhosani, Abu Dhabi Polytechnic, Abu Dhabi, UAE
Hamda Nasir Humaid, Abu Dhabi Polytechnic, Abu Dhabi, UAE
Hamed Taher Alawadhi, Abu Dhabi Polytechnic, Abu Dhabi, UAE

Abstract:

Digital frauds get a dramatic increase over the years and lead to considerable losses. Detecting fraudulent attempts is valuable to many industries and especially to the banking and financial sectors. To help in anticipating and accurately identifying whether a transaction is fraudulent, machine learning-based models are the key solution for banking and financial institutions. In this paper, an efficient deep learning-based model was developed and trained with stochastic gradient descent using feedforward neural networks. The dropout regularization has been incorporated into the model to enhance the generalization capabilities of the digital transaction classification model. Different activation functions were used and explored such as the max-out, the hyperbolic tangent, the rectifier linear unit, and the exponential rectifier linear unit. The impact of the learning rate on the model performance was analyzed. The performance of the proposed model was evaluated using accuracy, precision, and recall. The obtained results are promising, and the developed model can be used effectively to defend the banking sector against digital frauds.

Keywords:

Machine Learning, Activation Function, Classification, Fraud, Banking

Characterization of Facies Distribution with Simultaneous Seismic Inversion and Bayesian Theorem Method

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Prof. Dr. rer. nat. Abdul Haris, Indonesia University, Indonesia

Abstract:

Successful Hydrocarbon exploration and reservoir characterization always related with good understanding of geology and geophysics aspect. Seismic is one of powerful tool to be used in reservoir characterization. There are three steps to get property estimation based on seismic: accurate seismic inversion in 3D to obtain relevant reservoir parameter, rock physics analysis to obtain relationship between reservoir parameter and seismic parameter and distribute these parameters in 3D. One of the fundamental issues is to get reliable parameter distribution and quantify confidence level of the parameter model in 3D. The common method that being used is stochastic method which reliability depends on quantity of available data and there is no distribution of confidence level in 3D. The case study in this paper will be applied in Volve field that has complete stack angle seismic data sets and well logs data, the result will be distribution model in 3D of facies and hydrocarbon fluid.

The workflow that will be introduced in this paper is combination between rock physics analysis, simultaneous seismic inversion and Bayesian estimation theorem. Rock physics analysis includes well log conditioning and correlation analysis between reservoir parameter (porosity, saturation, Vshale, etc) with seismic parameter (acoustic impedance, vp/vs, shear impedance, etc) to obtain facies classification in well log scale. Simultaneous seismic inversion method is used to obtain seismic parameter cube to be correlated with rock physics result to drive facies distribution. Bayesian estimation theorem assemble initial knowledge about a model before observing the inversion attributes. The estimation result will be conditional probability of each facies related with reservoir parameter (porosity, saturation, Vshale etc) and seismic parameter (acoustic impedance, shear impedance, Vp/Vs ratio etc) that will be displayed with probability density function (PDF). The probability density function later will be used to drive the facies distribution combined with well log data and seismic data; and also estimate the confidence level distribution in 3D.

The integrated workflow in this paper will show the distribution of the classified facies, hydrocarbon distribution and probability confidence level distribution in 3D. The result can be used to identify new play in the Volve field, extract geobody to calculate gross volume of the hydrocarbon bearing facies and plan of field development.

Design & CFD Analysis of HVAC System

Muhammad Yousuf, University of Engineering & Technology Taxila Pakistan, Pakistan
Muddassir Ali, University of Engineering & Technology Taxila Pakistan, Pakistan

Abstract:

The objective of the project was to design HVAC system for Hall by using cooling load temperature difference method and to optimize the designed system by using Computational Fluid Dynamics (CFD) technique. Using this approach enables to imagine the temperature division and velocity division throughout the Auditorium and to remove flaws, if any. The geometry was drawn with the help of CREO 3.0 according to Hall geometric dimensions. For designing an HVAC system, cooling load calculations were done by conventional method of load calculations available in HVAC books, the cooling load of Auditorium was calculated to be 85 tonnes. After calculating the cooling load, the air-duct system of Hall was designed. The duct system contains two main ducts consisting of 12 Diffusers. After designing the HVAC system, CFD analysis of Hall was performed on ANSYS-FLUENT. The analysis' results were well within our demands of providing the temperature division throughout the hall without actually installing the HVAC system thus saving time, money and resources. Then, velocity division analysis was also performed on ANSYS-CFX. Velocity division showed that without HVAC system the velocity division throughout Hall was not enough to achieve desired comfort zone. But with HVAC system it was.

Keywords:

HVAC, CFD, Comfort Zone, Steady state conditions

Project Resource Optimization Considering Labor Productivity Factors

Kamal Jaafar, University of Wollongong in Dubai, United Arab Emirates
Roman Shylo, University of Wollongong in Dubai, United Arab Emirates

Abstract:

A cost and time effective planning is one of the highest priority tasks in a construction project management field. Conventional methods for a good planning in a project management field are Critical path method and Review technique (PERT). Both of these tools are very effective for any planning activities. The most effective project construction schemes are being completed in a time-limited cost-limited critical analysis way of different scenarios for a project start time and time span of works. Meanwhile, there are many doubts as to a project schedule is optimal or not. Many diverse optimization methods in construction have been suggested for the cost or resources optimization planning

Labor cost takes a central place during the operation of a company's activities due to its high monetary value and importance on its production. This is one of the priority questions on how to minimize labor costs and improve efficiency of workers.

Timeframe, quality and works delivery on time are the most significant factors for project development. It is highly dependable on the efficiency of resources, factors related to its performance. When it comes to actual work and execution on site, work which executed by less qualified technicians or managers with irrelevant or not sufficient enough knowledge and experience may result in a low quality of work, mistakes which may need to be recovered on a later stages creating delays in a project schedule, additional cost, resources, project failure.

This research we will be emphasizing on optimization of activities related to a construction field and on how to measure, execute, and allocate available or proposed resources to a specific task to achieve a required level of performance.

Keywords:

Multi-objective optimization; Allocation of resources; Construction Projects; Genetic Algorithms

The Role of Utilizing Social Media in Teaching the English Language to Young Learners. Teachers' Views (A Case Study of Upper Primary Schools 2019-2020)

Sara Ahmed, Oman College of Management & Technology, Oman
Roman Shylo, Oman College of Management & Technology, Oman

Abstract:

This study reviews the role of utilizing social media in teaching the English language to young learners. Focusing on the teachers' views, a case study has been conducted in one of the Omani upper primary schools. The study aims to assist students and teachers by offering modern ideas that can be implemented on social media for learning the English language. It also aims in identifying the role of social media in reducing the gap between learners and educators. Moreover, it aims to investigate the perception of upper primary school teachers on the supportive hand of social media for students to learn English and other modern languages.

The study is quantitative in its design. It based on the numeric data set gathered with the help of a questionnaire. It follows a deductive approach while random sampling technique is used. Furthermore, the study follows positivism philosophy and also used statistical tool including SPSS to analyse the results accurately.

The study found that almost all the teachers are engaged with the social media and interlinked with students irrelevant to their level. Teachers are trying to let students learn the English language online with the support of social media. The majority of respondents agreed on the pivotal and significant role of social media in the learning process, especially for teaching and learning English as a foreign language.

For further research, I suggest students and their parents should take an interest in the social media learning program offered by the primary teachers of schools in Oman to enhance students' capabilities and abilities. Also Students should be punctual on decided time without any excuse to get what their teachers demand for. And finally, extra marks should be assigned for online social media classes for students, which weighted on the final exams.

Smart Glasses for the Visually Disabled People with Face Recognition

K Sudhapriya, Kurukshetra University

Abstract:

There is a major technology in real time image processing with the advent in modern technology areas related to computer vision. So here, a new approach to capturing images from the Pi Camera in real time has been tried and processed as needed. This project depicts a face recognition machine learning approach to accomplish this process very rapidly with high detection rates using Open CV. Here in this project, Raspberry Pi, which is itself a low-cost minicomputer, depicts a basic and easy equipment execution of the face location system. The principle of identification was established here in this project by composing a distinguishable data matrix for the dataset generator, haptic feedback and indicator. The framework's efficacy is tested by assessing the rate of face recognition for each of the databases. The results show that even from low- quality photos and shots, the proposed structure can be used for face detection. The results show that, even from low-quality images, the proposed system can be used for face detection and demonstrates an impressive degree of execution. Finally, the details that will be used to warn people with impaired vision to avoid barriers and easily recognize people.

Edge Details Analysis of Wear Particles

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Ahmed Hassan, Associate Professor, United Arab Emirates University, Al Ain, UAE
Mubashir Noman, Ph.D. Student, United Arab Emirates University, Al Ain, UAE

Abstract:--

Tribology is the study of wear particles that are generated in all machines with interacting mechanical parts. Particles are separated from the surfaces due to friction and relative motion. These microscopic particles vary in certain characteristics of size, quantity, composition, and morphology. Wear particles or wear debris are categorized by six morphological attributes of shape, edge details, texture, color, size, and thickness ratio. Particles can be identified with the help of some or all of these attributes however, only edge details analysis is considered in this paper. The objective is to classify these particles in a coherent way based on these attributes and by using the acquired knowledge to predict wear failure modes in machinery. There are two procedures described in this work; one is the angle calculation between equidistance points on the particle boundary and the other the computation of centroids' distance from the boundary points. These procedures will classify particle edges as smooth, rough, straight, or spherical (curved).

Growth Performance of Rhode Island Red Chicken Fed with Nami (Dioscorea hispida) and Wild UBI (Dioscorea villosa) Fermented Using Three Fungal Species

Romeo Romeo, Tarlac Agricultural University, Camiling, Tarlac, Philippines
DR. Marlene B. Atinyao, Tarlac Agricultural University, Camiling, Tarlac, Philippines

Abstract:--

Nami and wild ubi, are indigenous feed resources for free range chicken. Dried nami and wild ubi were fermented using three species of fungi *Pleorotus ostreatus, Volvarealla volvacea* and *Ganoderma lucidum*. The fermented nami and wild ubi were subjected to proximate analysis and test-fed to Rhode Island Red chicken to determine acceptability, palatability and feeding trials.The study used 36 heads of 6 weeks old non-descripted chicken for acceptability and palatability trials. The birds were randomly distributed to six treatments with two replications and three birds per replication. For the growth trial, 240, 21 day old Rhode Island Red chicken were randomly distributed using 2 x 3 factorial. Each treatment was replicated 4 times with 10 birds per replication with the Completely Randomized Design. Results of the analysis revealed an increases of crude protein content of nami and wild ubi after fermentation from 9.48 to 16.44 and 4.73 to 16.10 respectively. *P. ostreatus* was found the most appropriate fungal species to ferment nami and wild ubi. *P. ostreatus*-fermented wild ubi contained 16.62%, nami contained 18.80% compared to the 16.52%, 16.02%, 16.19% and 13.31% crude protein content when wild ubi and nami were fermeted by *V. volvacea* and *G.lucidum* respectively.Results of the study revealed the two fermented products gave comparable level of acceptance as nutrient enriched feed resources. The used of fermented pure cultures white rot fungi (*P. ostreatus*) consistently performed good level of acceptance as to compare with the two inoculant. Experimental birds adjudged promising utilization on the acceptability of fermented products with the used of fungal cultures. *P. ostreatus, V. volvacea* and *G. lucidum* equally hurdle set of parameters to the high level of medium range in the preference ranking of palatability index in terms of Statistical Tool for Agricultural Research evaluation .Fermented products with its 10% inclusion to commercial ration fed during the starter – grower phases significantly influence live weight, live weight gain, feed consumption and feed conversion ratio in the production of Rhode Island Red Chicken. Interaction of fermented fungi failed to manifest significant advancement in the total production of experimental birds and at the end of the two growth periods. External manifestation of impairment that may affect the physiological growth of experimental birds was not observed.

Economic performance of producing Rhode Island Red Chicken *D.villosa* fermented with *V.vulvacea,, D.hispida* with *P.ostreatus, D.villosa* with *G.lucidum* and *P.ostreatus, D.hispida* with *G.lucidum* and *V.vulvacea* were gave 73.06%, 72.68%,72.60%, 72.19%71.50% and 71.41% ROI and rank first, second, third, fourth, fifth and six respectively.

These suggest the provision of fermented products can be started at day 22 from then. Zero mortality during the two growth periods are factors that fermented products did not impair nutritive value of commercial ration.

The Role of Corporate Governance in Predicting Firm's Financial Failure: A Conceptual Paper

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Abstract:--

Current researches on the prediction of a firm's financial failure have taken into account many factors, mostly corresponding to financial ratios derived from firms' annual accounts. Nevertheless, the current crisis and the consequent exponential increase in rates of insolvency have made it clear that the phenomenon of bankruptcy needs to be explained concerning different variables; thus, this conceptual paper proposes to predict the financial failure through corporate governance. Next, the conceptual paper is recommending future researchers for applying an empirical study in Algeria, more exactly at oil and gas field.

Keywords

Predicting Financial Failure, Corporate Governance, oil and gas, Algeria

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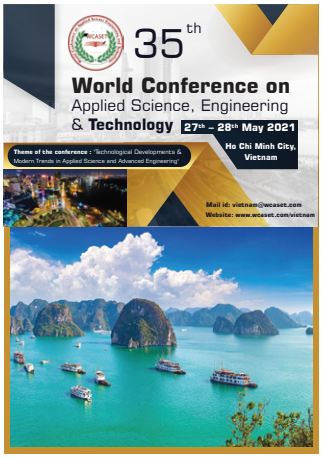

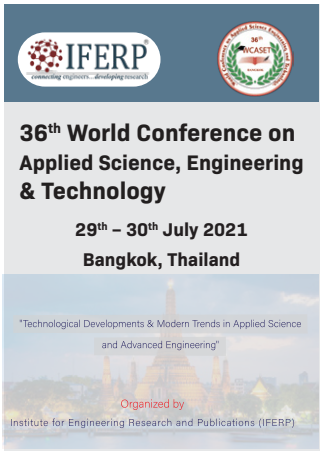

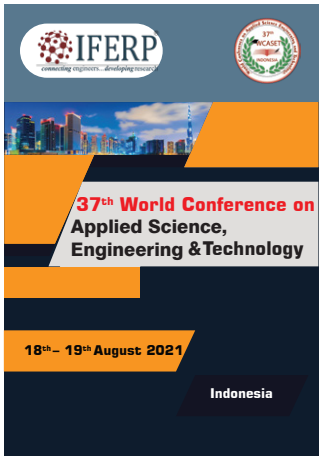

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