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Professor and Head, Department of Electronics and Tele Communication, Indira College of Engineering and Management Pune, India

Dr. Smolarek Małgorzata
Associate Professor, Department of Institute of Management and Economics, High School of Humanitas in Sosnowiec, Wyższa Szkoła Humanitas Instytut Zarządzania i Ekonomii ul. Kilińskiego Sosnowiec Poland, India
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<th>Volume-5 Issue-1, March 2015, ISSN: 2231-2307 (Online)</th>
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<td>Authors:</td>
<td>Vasudeva G, Cyril Prassana Raj P</td>
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<td>Paper Title:</td>
<td>Study of 8 Bits Fast Multipliers for Low Power Applications</td>
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**Abstract:** High-speed multiplication has always been a fundamental requirement of high performance processors and systems. With MOS scaling and technological advances there is a need for design and development of high speed data path operators such as adders and multipliers to perform signal processing operations at very high speed supporting higher data rates. In Digital signal Processing applications, multiplication is one of the most utilized arithmetic operations as part of filters, convolves and transforms processors. It is found in the literature that improving multipliers design directly benefits the high performance embedded processors used in consumer and industrial electronic products. Also significant increase in the bit length increases the critical path affecting the frequency of operations. It is also found that the regular structure required for each processing elements also increases and hence consumes area and power. Hence there is a need for design and development of high-speed architectures for N-bit multipliers supporting high speed and power. In this paper we review the architecture reported in the literature for multipliers and critical issues degrading the speed and power. Based on the literature review suitable modifications are suggested in the design for high speed and low power multipliers. The multipliers Booth, Wallace tree and Dadda are implemented and the constraints Area, Power and Timing are optimized using software resources NC SIM and VC SIM.

**Keywords:** DSP, microprocessor, NC SIM, VC SIM

| Authors: | Nandan Makaranand Deval |
| Paper Title: | Secure Steganography Algorithm Based on Cellular Automata using Fibonacci Representation and Reverse Circle Cipher Application for Steganography |

**Abstract:** Steganography is the act of hiding a message inside another message in such a way that can only be detected by its intended recipient. The process of hiding information inside another media is called steganography. In this technique the basic idea of steganography based on cellular automata using Fibonacci representation. The pixels color component is decompose into Fibonacci domain to extent more available bit-planes which can be used for data hiding for encryption we use reverse circle Cipher. This uses circular substitution and reversal transposition to exploit the benefits of both confusion and diffusion. With the help of these techniques we enhance the capacity of data hiding within image and security.

**Keywords:** Steganography, cellular automata, Fibonacci Representation, encryption, Cipher

**References:**

3. A secure steganographic algorithm based on Cellular Automata using Fibonacci representation Tuan Duc Nguyen Department of Computer Science Faculty of Science, Khon Kaen University Khon Kaen, Thailand
4. Somjit Arch-Int Department of Computer Science Faculty of Science, Khon Kaen University Khon Kaen, Thailand june 2013
8. Reverse Circle Cipher for Personal and Network Security Ebenezer R.H.P. Isaac, Joseph H.R. Isaac and J. Visumathileppiaar Engineering College Chennai, Tamil Nadu, India

Authors: Alyaa Hussein Ali, Shahad Imad Abdulsalam, Ihsan Subhi Nema

Paper Title: Detection and Segmentation of Hemorrhage Stroke using Textural Analysis on Brain CT Images

Abstract: The detection of brain strokes from Computed Tomography (CT) images needs convenient processing techniques starting from image enhancement to qualify the brain image by isolation process, region growing and logical operators (OR and AND). These methods with the help of the simplest segmentation process, which is the thresholding process, are used to extract a stroke region from the CT image of the brain. The median filter is applied to remove the noise from the image. The statistical features calculated using first-order histogram were utilized in the detection of the stroke region.

Keywords: Hemorrhage stroke; CT scan image; Brain segmentation; statistical features.

References:

Authors: Chathuri Gunathunga, K. P. Hewagamage

Paper Title: Implementation of Integrated Virtual Learning Environment Model for Schools with Limited Resources for Online Learning

Abstract: With the advancement of Information Communication Technology in Sri Lanka teachers should take advantage there to upgrade their teaching technique. Students should be allowed to learn any time anywhere and at their own place. Learning Management System (LMS) plays an important role in ICT enabled learning environment in academic institutes. In K12 education, schoolnet is used to connect all secondary educational institutes and learning communities in a country since they follow the national curriculum. However, a single LMS hosted in the schoolnet network cannot integrate all similar learning communities identified with respect to each school, according to our evaluation of schoolnet LMS in Sri Lanka. After gathering and analyzing different requirements of stakeholders, we propose a suitable hierarchical model to integrate school level LMSs to create a loosely coupled distributed learning environment. This model facilitates learners to explore the learning space starting from the classroom based interaction and it promotes the collaborative learning of other teachers and students irrespective of their physical location. In a prototype development, we have implemented suitable software architecture for the proposed model using Moodle LMS. It was designed considering the real world K12 educational administration in Sri Lanka. We also present a methodology to extend a LMS to a Virtual Learning Environment (VLE) which contains learning resources and activities using the model which implemented.

Keywords: Learning Management System (LMS), e-Learning, K12 education, blended learning, ICT enabled learning, Moodle, Virtual Learning Environment

References:

Authors: Satveer Kaur, Jagpal Singh Ubhi

Paper Title: A Simplified Approach to Analyze Routing Protocols in Dynamic MANET Environment

Abstract: The fundamental characteristic which differentiates MANETs from other wireless or wired network is mobility and node density. Mobile Wireless Ad Hoc Networks (MANET) is a network without infrastructure, where every node functions as transmitter, router and data sink. Therefore, MANET routing protocols are designed to adaptively cater for dynamic changes in topology while maximizing throughput and packet delivery ratio, and minimizing delay, aggregate good put, average jitter and minimum packet loss. In this paper, the MANET is implemented by using Ad Hoc Demand Vector (AODV), Dynamic Source Routing (DSR), and Dynamic MANET on Demand (DYMO), Optimized Link State Routing (OLSR) and Zone Routing Protocol (ZRP) and simulated on...
QualNet 5.0 simulator. The effect of mobility and density of nodes changing in MANET is investigated and compared a number of reactive, hybrid and proactive routing protocols including AODV, DSR, DYMO, OLSR and ZRP. The simulative study on MANET routing protocols aims to determine the performance of current MANET routing protocols with respect to mobility and node density factors. Results vary when we change the node density. The results of this network are tabulated along with a comprehensive analysis which compares throughput, packet delivery ratio, end to end delay, aggregate good put, average jitter value and packet dropping with node density.

**Keywords:** MANET, QualNet5.0, AODV, DSR, DYMO, OLSR and ZRP.

**References:**


Authors: B. Sankara Babu, K. Rajasekhar Rao, P. Satheesh

**Paper Title:** An Advanced Precision based Approach to String Transformation

**Abstract:** Distinct obstacles occur in Natural language processing, Knowledge Engineering, Information Retrieval, Genetics Informatics, Computational molecular biology and Data Mining concerned to String Transformation. Consider an input string, the system automatically produces top k output strings referring to input string. Generally people perform various kinds of spelling errors such as misspell words accidentally while surfing the web. To circumvent such errors, this Paper propounds an advanced Precision based approach to string transformation which is very accurate. The proposed system comprises unique precision value allocated to each alphabet and these are aggregated to give the Total Precision of the particular word. Data sets are trained with the precision based approach by validating them to dictionary called the database. Misspell word precision is compared with the data sets precision and retrieves the top k nearest neighbour output strings relevant to input string. This is one of the best accurate Misspell word and sentence correction approach and experimentally proven on large data sets.

**Keywords:** String Transformation, Precision based Approach, Misspell words, Total Precision.

**References:**

Abstract: Infrastructure Development is regarded as a prerequisite for rapid transformation of an economy. Some regions on account of their location disadvantages face some inherent problems regarding development. The present study is an effort to compare the infrastructure development in the border and non-border districts of Punjab. The study compares the infrastructural development in terms of health, education, economic, physical and social sector parameters. The study covers time period from 2002 to 2012. The study revealed that the with the passage of time, the gulf between border and non-border districts with respect to infrastructural development instead of narrowing down, appears to have widened further.

Keywords: Infrastructure Development, rapid transformation, border and non-border.

References:

Authors: D. Y. Patil

Paper Title: Infrastructure Development in the Border and Non-Border Districts of Punjab

Abstract: The purpose of this study was to identify the key issues surrounding electronic commerce information security management. A descriptive survey research design was conducted to gather primary data. Information about the current status of e-commerce information security practices and the impediments of these approaches was also collected. A structured questionnaire was used to collect secondary data. Once all the instruments were collected, they were validated edited and then coded. In the validation process, the collected instruments were checked to determine whether an acceptable sample was obtained in terms of proportion of the issued instrument. Descriptive statistics such as frequency distribution, percentages, means and standard deviations were calculated. This was facilitated by use of the statistical package for social science (S.P.S.S). The observations made from this study are that In Kenya, ecommerce faces numerous information security challenges. Confidentiality and Privacy issues was the top security issue of concern to the respondent’s with 60.7% of the respondents admitting to it. Respondents further considered viruses and malicious software at 46.4%, human errors at 28.6% and also system or software errors at 17.9% as the top three main causes of confidential threat their organizations. Further the study revealed 85.7% of the respondents admitted that their organisation did not use any framework in managing information security.

Keywords: electronic commerce, information security ecommerce security

References:

Authors: Simon Nderitu Watuthu, Michael Kimwele, George Okeyo

Paper Title: The Key Issues Surrounding Electronic Commerce Information Security Management

Abstract: Cloud computing is a computational model in which interconnected computers over the Internet work together toward offering greater processing power and storage capabilities than stand-alone solutions. The use of the cloud has found application in a diversity of fields including robotics and mobile computing. This has resulted in the emergence of areas like cloud robotics, a paradigm where robots rely on the cloud to perform their heavy computations and for their storage needs while focusing on simpler computation tasks. The mix of mobile devices and the cloud has created the field of mobile cloud computing (MCC) where mobile devices like smartphones and tablets focus on data gathering and simple processing tasks while using the cloud for complex computations and greater storage. In this paper we review several mobile cloud robotics architectures that combine these concepts. We provide a background of the different technologies used to develop these solutions. We present a prototype implementation of one of the architectural models and also show some practical applications of it using a Smart Home environment as an example.
Keywords: Cloud computing, cloud robotics, mobile cloud, smart home.

References:

Authors: Vikal R. Ingle, V. T. Ingle

Paper Title: Performance Test of Power Transformer Prior to Maintenance Using DGA and Grey Relational Analysis

Abstract: The insulation of power transformer i.e. oil and paper decomposition recognized by means of dissolved gas-in-oil analysis (DGA). To detect incipient faults in a transformer, standard key gas method of DGA is employed on the basis of quantity of gases released from the oil. This primary information also reflects the overall condition of a transformer. In this paper, condition assessment of power transformer using relative scaling is discussed. Grey relational analysis is identified as best option for relative scaling, wherein the data of fleet connected transformers is compared and accordingly scales them on the strength of score. Grey relational analysis on key gas sample determines the Target Heart Degrees (THD) of a specific transformer. However, THD represent the average estimation of bull’s eye coefficients, calculated by means of attributes with equal weight condition. Subsections linearity relations are utilized to decide seven intervals for ranking purpose. Linear regression demonstrated on subsection linearity relations for different sets of key gas samples. Result shows the dominance model of proposed method in deciding the maintenance priorities.

Keywords: DGA, Key gas method, Grey Relational Analysis, Target Heart Degree, Rank Approaching Degree, subsections linearity relation.

References:

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48-51

Authors: Vinip Kumar, Anupama Sharma, C.B. Gupta

Paper Title: A Deterministic Inventory Model For Weibull Deteriorating Items with Selling Price Dependent Demand And Parabolic Time Varying Holding Cost

Abstract: This paper with development of an inventory model when deterioration rate follows Weibull two way parameter distributions. It is assumed that demand rate is function of selling price and holding cost is parabolic in terms of time. In this models both the cases with shortage and without shortage are taken into consideration. Whenever shortage allowed is completely backlogged. To illustrate the result numerical examples are given .the sensitive analysis for the model has been performed to study the effect of changes the value of parameters associated with the model. Mathematics Subject Classification: - 90B05

Keywords: EOQ model, deteriorating items, Weibull distribution, shortage, price dependent demand, parabolic holding cost.

References:
1. Harris FW (1915) Operations and cost. A. W, Shaw Company, Chicago

Authors: D. J. Evanjeline, P. Rajakumar, N. Kalpana

Paper Title: Two Tier Security Enhancement for Wireless Protocol WEP (Wired Equivalent Privacy)

Abstract: A Wireless Local Area Network (WLAN) is a flexible data communication system implemented as an extension to or as an alternative for a wired Local Area Network (LAN). However, anyone can eavesdrop on information so that WLAN has the hidden security trouble such as leaking of electromagnetic wave or eavesdropping of data because WLAN adopts common electromagnetic wave as media to transmit data. Therefore, the security of WLAN is very important and outstanding. In IEEE 802.11, there are three security technologies used to ensure the data security in WLAN—SSID (Service Set Identifier), MAC (Media Access Control), WEP (Wired Equivalent Privacy). The proposed work falls on the third technology namely the WEP protocol. WEP suffered threats of attacks from hackers owing to certain security shortcomings in the WEP protocol. The proposed schemes implemented in two different layers of WLAN network architecture to strengthen the security of WLAN against the key stream reuse attacks and weak IV attacks.

Keywords: WLAN, WEP, Initialization Vector.
Abstract: In the ECG signals P, QRS and T waves play an essential role. Various features of these waves provide significant information to diagnose most of the cardiac diseases after preprocessing of the ECG signal. In various features, RR-interval, QRS Duration, and QRS sample Characteristic are the feature, which reveals significant information about the physiological conditions of the patient. In the previous work to find the RR-interval Discrete Wavelet Transform (DWT) technique and by applying a thresholding to peak detection method has been used. The proposed work is totally digital system based to for detection of consecutive Rpeaks in time domain and in the form of sample index finally the RR-interval has been calculated with the help of Waveform Min Max VI and Search Waveform VI of LabVIEW. In the previous work to detect QRS characteristics LabVIEW mathscript tool and simple moving average filter etc. method has been used. This paper deals with a resourceful composite system which has been proposed for detection of Rpeak Index and QRS Duration. In the proposed work QRS characteristics has been extracted from Extract Portion of the Signal VI of LabVIEW for the standard MIT-BIH arrhythmia database. LabVIEW 2013 version provided by National Instruments has been used here to design the feature extractor.

Keywords: Biomedical Signal, Detrending, Denoising, ECG, Feature extraction, LabVIEW, MIT-BIH arrhythmia database, RR-interval, Wavelet Analysis.

References:

Authors: Chandan Tamrakar, Chinmay Chandrakar, Monisha Sharma

Paper Title: Detection of Rpeak Index and Characterization of QRS Complex of the ECG Signal using Virtual Instruments of Lab VIEW

Abstract: A Neuro-Fuzzy controller is applied to control the power of a high temperature pebble bed reactor (HTPBR). A simplified model of the reactor and lumped model of heat transfer is developed and used. Xenon feedback with Xenon and Iodine balance equations and feedback with power coefficient of reactivity are included. The inputs to controller are represented using seven fuzzy sets. The output is obtained as linear combinations of the inputs. Simulations were conducted for the case of reducing the reactor power from rated value at 100% to 20% and for the case of raising reactor power from 20% to 100% linearly. In these simulations, the proposed design for controller exhibits faster and more accurate response than conventional controller.

Keywords: ANFIS controller, Fuzzy logic, GEN IV reactors, Reactor power control.

References:
Authors: Sujatha K, Gunasekaran M

Paper Title: Qualitative and Quantitative Approaches in Dynamics of Two Different Prey-Predator Systems

Abstract: This paper describes the dynamical behavior of two different systems consisting of two preys and a predator. It also deals with the stability of tri-species community in the systems by means of both qualitative and quantitative approaches. The existence and local stability of the equilibrium points of the systems were analyzed. Harvesting activity in both prey and predator populations plays a significant role in controlling the spread of disease.

Keywords: Prey-predator system, Qualitative stability, Iteration matrix, Quantitative stability, Harvesting Activity.

References:

Authors: Ratul Chakraborty

Paper Title: Web Browser Based Statistical Software - The Next Generation of Statistical Computing

Abstract: There are essentially two ways to deliver an application on PC/Laptop/tablet/smartphone: as a client-side/native application (developed using the appropriate platform-dependent development kit and installed on user devices) or as a web application (developed using web standards and accessed through a web browser-theres nothing to install on user devices). Traditionally, we are familiar with the native applications. But the recent trend shows that, in near future web applications will become more competitive with native applications due to the ubiquity of web browsers and platform independent programming features. HTML5, Java Script and WebGL will...
bring a new level of computing to the web. At present we have a bunch of native Statistical Computing applications (for PCs and Laptops only) but there is a scarcity of good web application of such type which can run on any computing device (from PC to smartphone) without any hazard.

Keywords: Native applications, Web applications, Graphical User Interfaces, Programming Language, Statistical Software.

References:

Authors: Narinder Singh Rana, S. N. Panda

Paper Title: Green Concrete using Agro Industrial Waste(Sugarcane Bagasse ASH)

Abstract: Today researches all over the world are focusing on ways of utilizing either industrial or agricultural wastes as a source of raw materials for the construction industry. These wastes utilization would not only be economical, but may also help to create a sustainable and pollution free environment. The utilization of industrial and agricultural waste produced by industrial processes has been the focus of waste reduction research for economic, environmental and technical reasons. Sugar-cane bagasse is a fibrous waste-product of the sugar refining industry, along with ethanol vapor. This waste product (Sugar-cane Bagasse Ash) is already causing serious environmental pollution, which calls for urgent ways of handling the waste. Bagasse has mainly contained silica and aluminum ion. In this project, the Bagasse ash has been chemically and physically characterized, and partially replaced in the ratio of 0%, 5%, 10%, 15% and 25% by the weight of cement in concrete. The bagasse ash was then ground until the particles passing the 90 μm sieve size reach about 85% and the specific surface area about 4716 cm²/gm. Ordinary Portland cement was replaced by ground bagasse ash at different percentage ratios. The compressive strengths of different mortars with bagasse ash addition were also investigated. M25 concrete mixes with bagasse ash replacements of 0%, 5%, 10%, 15%, 20% and 25% of the Ordinary Portland cement were prepared with water-cement ratio of 0.42 and cement content of 378 kg/m³ for the control mix. I will test fresh concrete tests like slump cone test where under taken as well as hardened concrete test like compressive strength, split tensile strength, flexural strength at the age of 7days, 28 days and 90 days was obtained. The test results indicated that up to 10% replacement of cement by bagasse ash results in better or similar concrete properties and further environmental and economic advantages can also be exploited by using bagasse ash as a partial cement replacement material.

Keywords: Bagasse ash, Fibrous waste product.

References:
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**Abstract:** With the growth of Internet in the country the dependence of the Indian economy on ICT (Information and Communication Technology) has increased tremendously in last couple of decades, and corresponding has been growth of cyber incidents in the country. In the wake of increasing cyber incidents in India, Indian Computer Emergency Response Team (CERT-In) was constituted by government of India in 2004. In this paper the authors have studied the scope and scale of cyber incidents happening in the country. Website defacement being the most visible part of a cyber incident, have been used to study the trend of cyber attacks in India. Analysis has also been done regarding the various types of domain that have been attacked and the motivation behind these attacks, other common attacks and their growth trends have also been studied with the help of CERT-In data.

**Keywords:** CERT-In, Cyber Incident, Security, Website Defacement.

**References:**
4. Indian Computer Emergency Response Team CERT-In, Annual reports 2006-13

**Paper Title:** Automatic Breast Boundary Segmentation of Mammograms

**Abstract:** Accurate breast boundary estimation and segmentation of breast tissue region from the background of the mammogram image is an important pre-processing task in computer-aided diagnosis of breast cancer. This paper presents an automated system to estimate skin-line and breast segmentation. The proposed method is based on automatic seed region selection, modified fast marching algorithm to propagate the seed region and automatic boundary point selection with intensity gradient information to initial boundary estimation and morphological operators to final boundary estimation and breast tissue region segmentation. Performance of the proposed method was tested by using 136 mammogram images with all types of breast tissues taken from mini-MIAS database. The results obtained from the experimental evaluation indicate that the sensitivity of this algorithm is 99.2% of the ground truth breast region and accuracy of the segmentation is 99.0%. By analyzing the results we can conclude that this system is capable of estimate the breast boundary and segment the breast area from background for all three types of breast tissues with high accuracy level.

**Keywords:** Breast Cancer, Mathematical Morphology, Modified Fast Marching Algorithm

**References:**


Authors: S. M. Rajbhjoi, P. B. Mane

Paper Title: An Approach of Combining Iris and Fingerprint Biometric At Image Level in Multimodal Biometrics System

Abstract: Biometric systems depending on single source of information has many limitations. These are noisy input data, inability to enroll, unacceptable error rates, universality of traits and spoofing. Multimodal biometric system overcomes these limitations by combining information from multiple sensors. In Image fusion usually images are extracted from single trait using different sensors. This type of fusion is generally used when set feature are homogenous. In this paper a multimodal system using image level fusion of two most used biometric traits, fingerprint and iris is proposed. The feature set obtained from iris and fingerprint images are incompatible, non-homogenous and relationship between them is not known. Here the pixel information is fused at image or feature level. A unique feature vector is constructed from the textural information of fused image of fingerprint and iris. Feature vector is stored as template and used for matching. Matching is carried using Hamming distance. The proposed framework is evaluated using standard database and database created by us. The system overcomes limitation of unimodal biometric system and equal error rate of 0.4573 has been achieved.

Keywords: biometric, fingerprint, iris; wavelet transform, texture, feature level, fusion, hamming distance.

References:
12. L. Marcialis and F. Roli, “Fingerprint verification by fusion of optical and capacitive sensors,” Pattern Recognition Letters, vol. 20,

102-106


Authors: D.V. Biradar, Praful P. Maktedar

Paper Title: Performance Exploration of QoS parameters in MANET

Abstract: Nowadays there are large applications expanding for the reliable transport of data packets from source node to the sink node amongst them Mobile Ad hoc network (MANET) has very vast extent of study. Different mobile sensor nodes are arbitrarily positioned in given network without having much loss of data packets in the network. It encompasses number of sensor nodes having inadequate processing power, communicating over a network. These sensors are scattered in specified network environment so that they gathers data, process that data and send it back to the destination. Various factors are affecting on data transmission process like reporting rate, packet size. Here by changing reporting rate, we calculate packet Delivery Ratio, Packet loss Ratio as well as throughput, control overheads and Energy consumption of a system.

Keywords: Mobile Ad hoc Network; Reliability; Reporting Rate; Packet Delivery ratio; Congestion Control.

References:


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5. Seungjin Park, Seong-Moo Yoo,”An Efficient Reliable one-hop broadcast in Mobile Ad hoc Networks”, vol. 11, pp 19-28, April 2012.


Authors: V.S. Malunjkar, M.G. Shinde, R.D. Bansod, A.A. Atre

Paper Title: Development of a Soft Tool for Estimating Direct Runoff From Watersheds

Abstract: Natural Resources Conservation Services-Curve Number (NRCS-CN) model is the most commonly used hydrological model for runoff estimation. This paper introduces about the interface developed to estimate curve number and runoff depth for hydrologic evaluations. The programming syntax was developed in Visual Basic 10.0 for its simplicity. The developed tool is easy to handle and can be useful for academicians, scientists and decision makes involved in watershed planning and development.

Keywords: Antecedent moisture condition, curve number NRCS-CN method, runoff, watershed.

References:


Development of Framework for Wireless Intelligent Landmines Tracking System Based on Fuzzy Logic

Abstract
The losses of developing countries from landmines accidents are very large. Thus, the need for new techniques to improve the efficiency of Landmines tracking systems is evident. In the recent years, many of research efforts have been directed to develop new and improved landmine detection methods. However, the increased costs of improving these methods led to drive up their prices. Thus they will not be available to the general public. The aim of this paper is to find a cheap and an effective method to help people for protecting and warning them from landmines risk during practiced their daily lives. In this context, this paper presents the design and development of framework for a Wireless Intelligent Landmines Tracking System (WILTS) using mobile phone based on GPS and fuzzy logic. Proposed framework is really very helpful for the users who living near mine affected areas to track their children and themselves through Smart phones from landmines risk.

Keywords: Landmines, Fuzzy logic, Fuzzy set, MATLAB.

References:
Authors: Ram Naresh Mishra, Prabhat Kumar

Paper Title: Automatic Generation Control of Multi-Area Power Systems with Parallel EHVAC/ HVDC Inter-Ties

Abstract: This paper applies the modern control theory to design optimal AGC regulators using full state vector feedback for multi-area interconnected hydro-thermal power systems and implemented under considerations in the wake of 1% step load perturbation in thermal/hydro area. For the present study, power system model consists of one area with reheat thermal power plant and two area with hydro power plants having identical capacity. The system interconnection is considered namely (I) EHVAC inter-ties only (II) EHVAC in parallel with HVDC inter-ties. The dynamic model of incremental power flow through HVDC transmission link is derived based on frequency deviation at both rectifier and inverter ends. Moreover, the HVDC link is considered to be operating in constant current control mode. The system responses have been simulated in Mat lab. Responses of deviation in frequencies, deviation in tie line powers (EHVAC as well as HVDC) and integral of area control errors have been plotted for 3-area. Thus, on the basis of these responses, the dynamic performance of the system has been studied. Besides this, to study the closed loop system stability, the closed loop system eigen values are computed.

Keywords: Interconnected power systems; HVDC transmission links; System dynamic performance; EHVAC//HVDC transmission link; Optimal AGC regulator.

References:

Authors: Esther Njoki Gacheru, Stephen Onyango Diang’a

Paper Title: Regulating Building Contractors in Kenya and Challenges of Enforcing the National Construction Authority Mandate

Abstract: The construction industry in Kenya has not had a regulating body since the disbandment of the National Construction Cooperation in 1988. The National Construction Authority (NCA) was then established in 2012 to regulate the construction sector and was mandated to register and regulate the undertakings of contractors. This research deals with the regulation of building contractors in Kenya and challenges of enforcing the NCA mandates. The main objective of this study is to investigate and document the challenges faced by the NCA in regulating building contractors in Kenya. Data was obtained from building contractors by means of questionnaires. The findings of the research indicated that the major challenges to the effectiveness of the NCA in registering and regulating the practices of building contractors include: corruption, poor sensitization, lack of proper organization of the NCA contractor training programs and centralization of the NCA services.
Keywords: Contractors, Kenya, NCA, regulation, registration.

References:

Authors: H. Mohssine, H. Bouhouch, F. Debbagh

Paper Title: Calculated and Measured Dark Conductivity in P-Type Polycrystalline CdTe Thin Films

Abstract: In this study we describe a numerical procedure for modeling the dark conductivity in a p-type polycrystalline Cadmium Telluride (CdTe). We base our approach on the comparison between measured and computed conductivity. For this purpose, the Fermi-Dirac statistic combined with the numerical solution of the charge neutrality equation allows to calculate the exact dark conductivity as function of the temperature. The results are then used to fit the experimental conductivity. Measures have been undertaken on CdTe thin films produced by r-f sputtering on glass substrates at room temperatures. It is shown that the amount of the experimental conductivity can be modeled, Quito precisely, by suitably choosing parameters of localized states, without needing complicated approaches like Mott and seto’s models. However, from a point of view of experimental fitting, it is verified, in accordance with our previous general treatment that the model’s parameters are not unique and cannot be derived from Arrhenius diagram analyses.

Keywords: Thins films, CdTe, Sputtering, Conductivity.

References:

Authors: Usha Yadav, Nilmani Verma

Paper Title: A Survey on Text Recognition from Natural Scene Images and Videos

Abstract: Text recognition from any natural scenes images and videos is application of image processing technique. Basically text recognition is belongs to the pattern recognition which is part of image processing techniques. Now these days text recognition from natural scene images and videos is very difficult task. For make it easy four basic steps must be apply that approaches are (i) Text image pre processing (ii) character segmentation (iii) character recognition and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition. In the state of art methods, character recognition having two major approaches that is Segmentation and (iv) Text recognition.

Keywords: Neural based OCR, Character segmentation, character recognition, Back propagation neural network model, Unsupervised learning.

References:


association rule mining. This can be enhanced, if the time taken to generate association rules is minimized. So here in this work, artificial bee colony (ABC) algorithm with one additional operator, called crossover operator, is used for optimizing the association rules. Due to the better exploration property, crossover operator is used with artificial bee colony algorithm. Experimental results show that the proposed algorithm, for optimizing association rules from big datasets, efficiency is better than the other previously proposed algorithm like KNN and standard ABC algorithm.

**Keywords:** Artificial bee colony (ABC), Crossover, Association rule, Support, Confidence, Frequent item set, Data mining.

**References:**
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