Editor In Chief
Dr. Shiv K Sahu
Ph.D. (CSE), M.Tech. (IT, Honors), B.Tech. (IT)
Director, Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal (M.P.), India

Dr. Shachi Sahu
Ph.D. (Chemistry), M.Sc. (Organic Chemistry)
Additional Director, Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal (M.P.), India

Vice Editor In Chief
Dr. Vahid Nourani
Professor, Faculty of Civil Engineering, University of Tabriz, Iran

Prof. (Dr.) Anuranjan Misra
Professor & Head, Computer Science & Engineering and Information Technology & Engineering, Noida International University, Noida (U.P.), India

Advisory Chair
Prof. (Dr.) Hamid Saremi
Vice Chancellor of Islamic Azad University of Iran, Quchan Branch, Quchan-Iran

Dr. Uma Shanker
Professor & Head, Department of Mathematics, CEC, Bilaspur (C.G.), India

Dr. Rama Shanker
Professor & Head, Department of Statistics, Eritrea Institute of Technology, Asmara, Eritrea

Dr. Vinita Kumari
Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., India

Dr. Kapil Kumar Bansal
Head (Research and Publication), SRM University, Gaziabad (U.P.), India

Technical Chair
Dr. Mohd. Husain
Director. MG Institute of Management & Technology, Banthara, Lucknow (U.P.), India

Dr. T. Jayanthy
Principal. Panimalar Institute of Technology, Chennai (TN), India

Dr. Umesh A.S.
Director, Technocrats Institute of Technology & Science, Bhopal(M.P.), India

Dr. B. Kanagasabapathi
Infosys Labs, Infosys Limited, Center for Advance Modeling and Simulation, Infosys Labs, Infosys Limited, Electronics City, Bangalore, India

Dr. C.B. Gupta
Professor, Department of Mathematics, Birla Institute of Technology & Sciences, Pilani (Rajasthan), India

Dr. Sunandan Bhunia
Associate Professor & Head., Dept. of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Jaydeb Bhaumik
Associate Professor, Dept. of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Rajesh Das
Associate Professor, School of Applied Sciences, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Mrutyunjaya Panda
Professor & Head, Department of EEE, Gandhi Institute for Technological Development, Bhubaneswar, Odisha, India

Dr. Mohd. Nazri Ismail
Associate Professor, Department of System and Networking, University of Kuala (UniKL), Kuala Lumpur, Malaysia
Managing Chair
Mr. Jitendra Kumar Sen
International Journal of Engineering and Advanced Technology (IJEAT)

Reviewer Chair
Dr. Saeed Balochian
Associate Professor, Gonaabad Branch, Islamic Azad University, Gonabad, Iran

Dr. Mongey Ram
Associate Professor, Department of Mathematics, Graphics Era University, Dehradun, India

Dr. Arupratan Santra
Sr. Project Manager, Infosys Technologies Ltd, Hyderabad (A.P.)-500005, India

Dr. Ashish Jolly
Dean, Department of Computer Applications, Guru Nanak Khalsa Institute & Management Studies, Yamuna Nagar (Haryana), India

Dr. Israel Gonzalez Carrasco
Associate Professor, Department of Computer Science, Universidad Carlos III de Madrid, Leganes, Madrid, Spain

Dr. Guoxiang Liu
Member of IEEE, University of North Dakota, Grand Forks, N.D., USA

Dr. Khushali Menaria
Associate Professor, Department of Bio-Informatics, Maulana Azad National Institute of Technology (MANIT), Bhopal(M.P.), India

Dr. R. Sukumar
Professor, Sethu Institute of Technology, Pulloor, Kariapatti, Virudhunagar, Tamilnadu, India

Dr. Cherout Abell
Professor, University of Technology of Troyes, France

Dr. Rinkle Aggrawal
Associate Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India

Dr. Parteek Bhatia
Associate Professor, Department of Computer Science & Engineering, Thapar University, Patiala (Punjab), India

Dr. Manish Srivastava
Professor & Head, Computer Science and Engineering, Guru Ghasidas Central University, Bilaspur(C.G.), India

Dr. Pratosh Bansal
Associate Professor, Department of Information Technology, Institute of Engineering and Technology, Devi Ahilya Vishwavidyalaya, Indore(M.P.), India

Dr. Pouya Derakhshan Barjoei
Associate Professor, Department of Electrical and Computer Engineering, Islamic Azad University, Naein Branch, (Iran)

Dr. Subrata Bhowmik
Technical University of Denmark, Lyngby, Denmark

Dr. Ashraf Hossain
Associate Professor, Department of Electronics & Communication Engineering, Aliah University, Kolkata (WB), India

Dr. A. Subramanani
Professor, Department of MCA, K.S.R. College of Engineering, Trichengode, Namakkal, India

Dr. K. Rameshkumar
Associate Professor, Department of Information Technology, Hindustan University, Chennai (TamilNadu), India

Dr. JatinderKumar R. Saini
Associate Professor & Head, Department of Computer Science, Sankalchand Patel College of Engineering, Visnagar, Mehsana (Gujrat), India

Dr. Sanchayan Mukherjee
Associate Professor, Department of Mechanical Engineering, Kalyani Government Engineering College, Kalyani University, Kalyani, Nadia (West Bengal), India
Dr. Tapanendu Kamilya  
Associate Professor, Department of Physics, Narajole Raj College, Narajole, Paschim Medinipur, West Bengal, India

Dr. A.K. Malik  
Associate Professor, Department of Mathematics, B K Birla Institute of Engineering & Technology, Pilani (Rajasthan), India

Dr. P. Sandhya Joshi  
Assoc. Professor, Department of Computer Science, Amrita Vishwa Vidyapeetham University, Mysore, India

Dr. Jayashri Vajpai  
Assoc. Professor, Department of Electrical Engineering, J.N.V. University, Jodhpur (Rajasthan), India

Dr. Sam Emmanuel W R  
Assoc. Professor, Department of Computer Science, Nesamony Memorial Christian College, Marthandam (TN), India
Abstract: In recent Thailand energy business, solar power plants have high potential due to a clean and renewable energy of solar power. However, the information about solar energy business opportunity is also essential for private sector investment. Since 2013, Feed-in Tariff (FiT) has been announced to replace the Adder measure that also results in the difference of electricity cost structures. This study presents the review of solar energy business opportunity contributed by FiT focusing on Very Small Power Producer (VSPP) sector. The analysis of Adder and FiT measures in terms of business promotion was performed. Also, an 8 MW VSPP solar farm project was selected as a case study for investment analysis contributed by FiT. From analysis, it can be noted that the benefit from electricity purchase rate contributed by FiT would be lower than that of the Adder due to the high costs of PV system recently which is also included in the initial investment. However, if the technology and other related costs of PV system decrease, the solar power projects subsidized by the FiT would be more worthwhile for investment in the future.

Keywords: Solar Energy, Policy, Subsidy, Measure, Investment

References:

Abstract: Game Theory approaches and their application in improving the performance of Wireless sensor networks (WSNs) are discussed in this paper. The mathematical modeling and analysis of WSNs may have low success rate due to the complexity of topology, modeling, link quality and etc, however Game Theory is a field, which can efficiently used to analyze the WSNs. Game theory is related to applied mathematics that describes and analyzes interactive decision situations. Game theory has the ability to model independent, individual decision makers whose actions affect the surrounding decision makers. The outcome of Complex interactions among rational entities can be predicted by a set of analytical tools, however the rationality demands a stringent observance to a strategy based on measured of perceived results. Researchers are adopting game theory approaches to model and analyze leading wireless communication networking issues, which includes QoS, power control, resource sharing and etc.

Keywords: Wireless sensor network; Game Theory; Cooperative game theory; Non-cooperative game theory; Wireless communications.

References:
composting system which ultimately accelerate the composting process. Experimentally it was found that the composting of normal vegetable residues take about 60 days with the help of a bacterial composter, like any biochemical reaction time duration required for the completion of composting was contributed by many factors which includes particle size, water content, temperature, air circulation. The device fabricated was fully functional in controlling the major factors among the above stated and can accelerate the overall process by 50%.

**Keywords:** Food waste, composting system, accelerating process technology

**References:**

**Authors:** Amiya Ranjan Malik, Bibhuti Bhusan Pani, Sushant Kumar Badjena

**Paper Title:** Powder Metallurgy Processed Ferrous Composites: A Review

**Abstract:** This paper reviews processing and synthesis of particulate reinforced ferrous based Metal Matrix Composites (MMC) and Nanocomposites through Powder Metallurgy (P/M) method. By this route it is possible to manufacture MMCs with wide range of compositions and density. As a result there is improvement of wear resistance, abrasion resistance, corrosion resistance, mechanical properties and high temperature friction properties. The reinforcing particles commonly adopted were carbides, oxides, borides, nitrides, carbonitrides, complex carbides, intermetallics, synthetic materials etc. Apart from this it also reviews how several factors affect properties of MMCs.

**Keywords:** Ferrous Matrix Composites, Nanocomposites, Particle reinforcement, Powder Metallurgy

**References:**

4. 12-15
Concrete’s Odyssey Through Heat: A Review

Abstract: Fire is a catastrophic event to which any building can fall victim during its lifetime. Not only does it pose a direct threat to the occupants through the release of harmful gases and devastating heat, but the elevated temperatures themselves also have seriously adverse effects on the structural integrity of entire building. Though undesired, fire is an exigency that cannot be avoided altogether. Therefore, impact of fire on concrete/ RCC deserves minute scrutiny. In this study, a review is carried out based on the experimental studies on the performance of concrete/RCC when exposed to FIRE/ higher temperatures. The compiled test data revealed distinct difference in mechanical properties of normal, high strength, self compacting & improvised concrete. Shape & size of specimens, concrete grade, admixtures, temperature level, applied load, exposure time to heat, rate of heating, rate of cooling, specimen type (stressed/unstressed member), type of cooling etc were the parameters that influenced the test results. Exposure time, exposure temperature & concrete cover were observed to be the principal factors. The outcome of the review helped in identifying the main problem areas, dubious claims & gaps/ lacunae in the research works.

Keywords: Concrete, Fire, RCC, Spalling

References:


Abstract: Rate of production and tool material cost plays a significant role other than the material cost of the part to be made in a production run from economic point of view. The maximum production rate can be achieved if the total time required per piece is reduced to a minimum [1]. The paper presents an optimization technique to achieve minimum tool wear which would lead to reduced tool changing time and tooling cost. The experimental layout is designed based on the Taguchi’s L9 orthogonal array technique and analysis of variance (ANOVA) is performed to identify the effect of the cutting parameters on the response variables. Two different set of response variables are used, first, variation of cutting speed with feed and depth of cut, second, variation of rake angle with feed and depth of cut. The calculation is performed using Minitab-17 software.

Keywords: Optimization Technique, Taguchi’s L9 orthogonal array, analysis of variance (ANOVA), Minitab-17

References:
1. A. Ghosh, A K Mallik, Manufacturing Science
2. https://www.ee.ntub.ac.in/~upto/CV_PRA_TAGUCHI_L9MAN.htm

Authors: Muhammad Abdus Samad
Paper Title: Ergonomics and the Prevention of Musculoskeletal Strain and Back Injuries

Abstract: As technology becomes more complex, so ergonomics is undoubtedly destined to play an increasingly important role in industrial production and industrial health and safety. At the workplace, ergonomics places equal emphasis upon greater system efficiency and improved health of the individual. Ergonomics must be involved in fitting the tool and machine to the worker by design, fitting the worker to the machine by selection and training, and the optimization of the ambient environment to suit the man or the adaptation of the man to tough environmental conditions. Ergonomics aims to promote efficiency, safety and comfort at work situation in industry through better relationship between man, his tools and the work environment. This paper deals about the injuries such as backaches, neck aches, and other muscular strains due to bad seating and incorrect working posture and how to prevent them by designing of workstation that will be very comfortable and convenient to work at. This paper also discusses the optimal conditions for the workers, reduction of physical workload, improvement of working postures and facilitating psycho-sensorial functions in instrument handling, and so on.

Keywords: Back injury, Workstation design, Human factor, Productivity and Anthropometry.

References:

Authors: Pakinam Ashraf, Hany Ayad, Dina Saadallah
Paper Title: Sense of Community and Built Environment: How Can Built Environment, Social Economic Conditions and History of Place Shape Our Sense of Community?

Abstract: Sense of community is a concept in community and social psychology and has been investigated in several researches. The sense of community level changes towards many independent variables and it is related to the quality of the built form. This research aims at investigating the relationship between the sense of community and some determinants such as; the physical environment, the historical background and the socio economic conditions in selected neighborhoods. Furthermore, this research examines the social interaction as it has an important role in measuring the sense of community. To achieve that, the authors propose a methodology composed mainly of two major tools; the first, a survey formed of sense of community indices, as well as other social and psychological factors according to Kim and Kaplan theory. The second tool is based on observation of physical features of the neighborhood. The adopted methodology is applied on two neighborhoods in Alexandria city, Egypt. By analyzing the survey results and the researcher’s observation of physical attributes in the selected neighborhood, it was found that there is a strong correlation between the sense of community and several independent variables such as the built environment, the socio economic conditions, some demographic factors like age, monthly income, length of residence and the importance of pedestrian factors on measuring sense of community.

Keywords: Sense of community, Built environment, Statistical analysis, Social Interaction, Alexandria neighborhoods.

References:
1. Abdo, M. M., 2013. The “Open Cities” Approach: A Prospect for Improving the Quality of Life in the City of Alexandria, Egypt, Alexandria,
16. The members of the City of Austin Design Commission, 2009. Urban Design Guidelines for Austin, City of Austin: City of Austin PECSD.

Authors: Sarah M. Sabry, Hany M. Ayad, Dina M. Saadallah

Paper Title: Assessing the Factors Associated with Urban Mobility Behaviour: Case studies from Alexandrian Neighborhoods, Egypt

Abstract: With the rapid spread of urbanization, cities started to witness challenges related to its streets. It is becoming imperative that the mobility should be managed appropriately to minimize its negative impacts on urban areas. Unfortunately, city leaders in many developing countries like Egypt are following the same Car-Oriented development patterns made by cities in developed countries. Ironically, the developed countries are trying to recover from a car dominated development era by re-allocating road space for public and non-motorized transport. In this respect, this research aims at exploring the key aspects and factors that affect individuals' mobility choices in Egypt. It focuses on the socio-demographic, attitudinal and physical factors that are associated with commuters’ mobility behaviour and their choice of mode for daily trips. Two neighborhoods in Alexandria are selected for comparative and analytical analyses. First, a survey is carried out in the two selected areas. Second, Pearson’s Chi-square χ² test is performed to explore the significant differences of commuter’s attitudinal, personal and built environment factors between the two areas. Finally, cross-tabulation distribution of categorical variables are presented in terms of absolute frequencies, p-values from Pearson’s Chi-square χ² test and t-test so as to look for the association of the urban form and non-urban form factors to mobility choices.

Keywords: Sustainable Urban Mobility (SUM) – Travel Behaviour - Mode choice –Non-urban form factors – Built environment factors – TOD development – Sustainable neighborhoods.

References:
This paper presents the design of a fuzzy PD controller for laboratory DC motor (MS 150 Kit) to minimize the tracking error in applications. The Fuzzy PD controller was simulated and the responses obtained when compared with a conventional PD controller revealed better performance.

**Keywords:** Control, Direct-Current, Fuzzy, Motor

**References:**

Abstract: A huge potential for power generation from waste fuels exists within the sugar cane industry. This paper presents the findings of the energy and exergy analysis of cogeneration i.e. CHP cycle in sugar industry. The study was aimed at assessing the operational performance of the bagasse based cogeneration power plant in sugar industry by evaluating both the energy and exergy efficiency.

12. Keywords: Energy, Exergy, Entropy, CHP.

References:

Abstract: Nowa days, the image processing algorithms are being used widely in medical systems for detection of lung cancer. It is observed that the life span rate of lung cancer patients increases from 15 to 50% if they were detected at early stages. Detection of cancer cells is the most important issue for medical researchers as it becomes more complex in the treatment process. The detection steps of presence of cancerous cells include image pre-processing, segmentation, feature extraction and classification. In this paper, algorithms for enhancement, segmentation and feature extraction to detect the cancerous tumors which are small and large in size from the lung CT scan images are reviewed. Finally the algorithms are compared with one another using three parameters called accuracy, sensitivity and specificity.

Keywords: CT Images, Image Preprocessing, Segmentation, Enhancement, Feature Extraction and Classification.

References:

Abstract: The home and Society are surrounded by “things” which are connected to each other, either directly or indirectly via the internet of things. To have access to controlling these devices remotely with precision within the network when required is a key factor in the process of home automation. There are numerous aspects in this automation that needs to be developed so as to enhance it. This research gives a solution to having a precise and direct control and automatic detection of current state of devices with the use of android application. It also gives a practical implementation of home automation using LoRa in comparison to other technologies.

Keywords: Home Automation; Internet of Things; LoRa; Android; Smart

References:
10. Tseng SP, Li BR, Pan JL, Lin CJ. “An application of Internet of things with motion sensing on smart house”. InOrange Technologies (ICOT), 2014 IEEE International Conference on 2014 Sep 20 pp. 65-68
Abstract: Wireless Technology has seen a tremendous advancement in recent times. There has been a huge growth in multimedia applications over the wireless networks. The requirement of significant bandwidth for multimedia services has increased the demand for radio spectrum. The scarcity of radio spectrum has become a challenge for the conventional fixed spectrum assignment policy. Thus, Cognitive Radio (CR) has emerged as a new exclusive choice to address the spectrum underutilization problem by enabling users to opportunistically access unused spectrum bands. It offers a promising solution to meet this demand by fully utilizing available spectrum resources. It improves the utilization of the wireless spectrum by allowing the secondary users to access the primary channels in an opportunistic manner. Efficient utilization of frequency spectrum is possible using dynamic spectrum allocation. Optimization techniques like Genetic Algorithm (GA), Ant Colony Optimization (ACO) and Mutated Ant Colony Optimization (MACO) are discussed here to meet the users QoS needs in the Cognitive Radio. The transmission and environmental parameters along with performance objectives of cognitive radio are studied and compared in the paper using different optimization techniques. In this paper, the results of various optimization techniques in Cognitive Radio System along with CR objectives are analysed to meet users QoS.

Keywords: Cognitive Radio Genetic Algorithm, Ant Colony Optimization, Mutated Ant Colony Optimization, QoS Provisioning.

References:

Authors: Francis Yao Anyan

Paper Title: Assessment of Indigenous Knowledge usage Among Small Scale Farmers in Kpando Municipality, Ghana

Abstract: The study assessed the indigenous knowledge (IK) usage among small scale farmers. The study was conducted in the Kpando Municipality with a sample size of 140 respondents. Simple random sampling technique was used to collect data from respondents. Data collected were analyzed using descriptive tools such as frequencies, percentages, mean and standard deviation. The study reveal that majority of small scale farmers in the municipality are female. Also farmers in the municipality frequently use indigenous knowledge such as Organic manure, Mulching, Bush fallowing, Harvesting with hand and Rain water harvesting.

Keywords: Mulching, Harvesting, Indigenous, Knowledge, Bush fallowing, standard deviation.

References:


Authors: N. Nachamnai, R. Kayalvizhi

Paper Title: Moth Flame Optimisation Algorithm for Control of LUO Converter

Abstract: Because of the effects of the parasitic elements, the output voltage and power transfer efficiency of all DC-DC converters are restricted. In order to eliminate the limitations caused by parasitic elements, the voltage lift technique is successfully applied to DC-DC converters resulting in a new series called Luo converters. Linear control methods ensure stability and good control only in small vicinity around the operating point. These classical controllers are designed using mathematical models by linearising non-linearities around the nominal operating point. Since these controllers are also sensitive to the operating points and parameters variations, a high degree of accuracy cannot be guaranteed from them. To ensure that the controllers work well in large signal conditions and to enhance their dynamic responses, intelligent method using fuzzy technique is suggested. The performance of a fuzzy logic controller depends on its control rules and membership functions. Hence, it is very important to adjust these parameters to the process to be controlled. A method is presented for tuning fuzzy control rules by Moth Flame Optimization (MFO) algorithm to make the fuzzy logic control systems behave as closely as possible to the operator or expert behavior in a control process. The tuning method fits the membership functions of the fuzzy rules given by the experts with the inference system and the defuzzification strategy selected, obtaining high-performance membership functions by minimizing an error function. Moth-flame Optimization (MFO) algorithm is one of the latest bio-inspired optimization techniques in which the main inspiration of this optimizer is the navigation method of moths in nature called transverse orientation. MFO has a fast convergence rate due to use of roulette wheel selection method. Moth-Flame Optimizer (MFO) is used to control the LUO converter. MFO-Fuzzy is used to search the fuzzy rules and membership values to achieve minimum ISE, ITAE, settling time and peak overshoot. The proposed method is compared with fuzzy controller. Simulation results prove that the MFO algorithm is very competitive and achieves a high accuracy.

Keywords: Moth Flame Optimisation Algorithm, Fuzzy Logic Controller, Positive Output Elementary LUO Converter.

References:
agent base load balancing algorithm for task reallocation and reduced fault detection time in cloud architecture.

**Keywords:** Cloud computing, deployment models, load balancing, fault tolerance

**References:**

**Authors:** Sathyah Jose. S. L., K. Sivaraman

**Paper Title:** Modified SDROM Filter

**Abstract:** Noise is any unwanted component in an image. It is important to eliminate noise in the images before subsequent processing, such as edge detection, image segmentation and object recognition. This work mainly concentrates on automatic detection of impulse noise (salt and pepper) in an image. For automatic detection of impulse noise, a method based on probability density function is proposed. The basic idea of automatic detection is that the difference between the probabilities of black and white pixels will be small. After detecting the presence of impulse noise in an image, we have to remove that noise. For the removal of impulse noise a new efficient impulse noise removal method (Modified SDROM filter) is proposed. The Modified SDROM consists of two parts 1) Impulse detector and 2) Filter. The results show that this method has higher performance than other methods in terms of PSNR values and SSIM-Index values.

**Keywords:** impulse noise, probability density function, PSM Filter, SDROM Filter, PWMAD Filter, Modified SDROM, PSNR, SSIM Index

**References:**

**Authors:** Jeena R S, Sukesh Kumar A

**Paper Title:** GUI Based Model for Stroke Prediction

**Abstract:** The innovations in the field of artificial intelligence have paved way to the development of tools for assisting physicians in disease diagnosis and prognosis. Stroke is a leading cause of disability in developing countries like India. Early diagnosis of stroke is required for reducing the mortality rate. Research shows that various physiological parameters carry vital information for the prediction of stroke. This research work focuses on the design of a graphical user interface (GUI) for the prediction of stroke using risk parameters. Data collected from International Stroke Trial database was successfully trained and tested using Support vector machine (SVM). The linear kernel of SVM gave an accuracy of 90 %. This work has been implemented in MATLAB which can be used to predict the probability of occurrence of stroke.

**Keywords:** Stroke, Graphical User Interface (GUI), Support Vector machine (SVM)

**References:**
Inferring the role of cigarette smoking and atrial fibrillation in a population-based cohort: the Framingham Heart Study. JAMA. 1994;271:840-844


Authors: Neha Mahakalkar, Vaishali Sahare

Paper Title: Survey on Privacy Preserving Authentication Protocol in Cloud Computing

Abstract: Cloud computing provides facilities of shared computer processing resources and data to computers and other device on demand. System environment will develop by using three key entities trusted third party, data owner and user. The concept of shared authority based privacy preserving authentication protocol i.e., SAPA used to develop system to perform shared access in multiple user. Security and privacy issue as well as shared access authority will be achieve by using access request matching mechanism e.g. authentication, user privacy, user can only access its own data fields. The multiple users want to share data so that purpose re-encryption is used to provide high security for user private data. Universal Composability (UC) model use to prove that design of SAPA correctness. Develop a system with high security and attack free by analysing different attack related to the system. Privacy preserving data access authority sharing is attractive for multi user collaborative cloud applications

References:


---

Authors: Jerrin Thomas Panachakel

Paper Title: Automatic Eigen Face Method

Abstract: Muzzle print recognition is the process of finding any muzzle in the image. It is a two-dimension procedure used for detecting muzzles and analyzing the information contained in the muzzle image. Here the muzzle images are projected to a feature space or face space to encode the variation between the known muzzle images. In this paper Principal Component Analysis (PCA) is used for dimension reduction and the projected feature space is formed using fuzzy algorithm. The above method can be used to recognize a new muzzle in unsupervised manner.

References:


---

Authors: Komati Sathish

Paper Title: A Study on Check Pointing Protocols for Mobile Distributed Systems

Abstract: A large number of distributed checkpointing protocols have appeared in the literature.a distributed
checkpointing protocol could be the best in a specific environment, but not in another environment. Distributed snapshots are an important building block for distributed systems and are useful for constructing checkpointing protocols among other users. Communication-Induced Checkpointing protocols are classified into two categories in the literature: Index-based and Model-based. Recently, more attention has been paid to providing checkpointing protocols for mobile systems. Checkpointing is defined as a designated place in a program at which normal processing is interrupted specifically to preserve the status information necessary to allow resumption of processing at a later time. This paper surveys the protocols which have been appeared in the literature for checkpointing in mobile distributed systems.

**Keywords:** Checkpoint/restart, checkpointing protocols, Distributed systems, rollback recovery, fault tolerant computing

**References:**


**Authors:** Babak Mehravaran, Hossein Ansari, Ali Asghar Beheshiti

**Paper Title:** Nozzle Filter Modification for Water Pre-Treatment Technology In Water Treatment Plants (Case Study: Toroq Water Treatment Plant)

**Abstract:** Nozzle filtration can be considered as a major pre-treatment process for water and waste water, since they efficiency separate fine solids particles over prolonged periods without addition of chemicals. Proper nozzle performance can reduce operating costs, reduce maintenance costs, and improve cleaning quality. This review article summarized and evaluates modification to nozzle filtration technology. Achieved results in this study shows that nozzle filtration may be considered as efficient pre-treatment process incase surface water is used as water supply. With pass of muddy water sample due to current rainfall in stilling basin of Toroq water treatment plant from nozzle filters in laboratory pilot, Turbidity Removal efficiency and also Suspended solids equal 9.6% and 86% respectively was obtained. And the results of Additional tests represent that Turbidity Removal and also solid suspensions efficiency by nozzle filters due to algae making inlet water to Toroq water treatment plant in warm seasons is 4/6% and 47% respectively The obtained results of the study indicate that use nozzle filters caused Increase the efficiency of the process water treatment, and it is prevents from emergency exits the Toroq water treatment plant.

**Keywords:** Nozzle filter, Muddy water, Algae water, Suspended solids, turbidity

**References:**

Abstract: This paper presents the design of the finite time sliding mode controller based on reduced order observer (ROO) to estimate the unmeasurable state variables, a finite time sliding mode controller (FTSMC) is designed by employing the estimated variables, and (3) by the application of the Lyapunov stability theory and the linear matrix inequality (LMI) technique, the stability of the overall closed-loop mismatched uncertain systems with a time delay is guaranteed in sliding mode under sufficient condition. Finally, the design procedure is given to summarize the proposed method.

Keywords: Variable Structure Control (VSC), reduced-order observer (ROO), finite-time convergence, mismatched uncertainty, time-varying delay.

References:
Abstract: The way that computing concepts gives the cloud computing, which permits once needed and low maintenance usage of resources, but the information is shared to some cloud servers and numerous privacy connected considerations emerge from it. Various schemes like primary based on the attribute based encoding are developed to secure the cloud storage. Most of the work looking at the information privacy and therefore the access management, while less attention is given to the privilege management and the privacy. An economical scientific discipline approach for information sharing wherever information is shared among a bunch of users as information. How to firmly and with efficiency share a group of information associated with any subject areas with others in cloud storage. Development of new novel concept of Key Aggregate Searchable cryptography (KASE). This concept is enforced through development of a concrete key-aggregate searchable cryptography framework theme. This scheme is delineate as wherever knowledge an information owner solely has to generate and distribute one mixture key to a data user for sharing an outsized variety of documents and on the opposite aspect user solely has to submit one mixture trapdoor to the cloud server, so that he/she will question over the shared documents by the assistance of generated single mixture trapdoor. Advanced Key sharing system based on hint text methodology is created to share the information safely. Once the data sharing is completed then the key combination differs from its actual kind. So the user cannot guess the key combination cryptosystem and this method provides economical answer than the prevailing ones.

Keywords: Data Security, Cloud, Integrity, Bulk Request, Bulk Response, Dynamic Keys.

References:
Abstract: A compact microstrip patch antenna became a very useful in communication systems. Properties like compactness, light weight, high bandwidth make it a good candidate of communication system. This paper reviews the performance analysis of Compact Dual-Band Microstrip Antenna for IEEE 802.11a WLAN Application (2014), comparative analysis of s-shaped Multiband microstrip patch Antenna (2013), Dual-Band Antenna with Compact Radiator for 2.4/5.2/5.8 GHz WLAN Applications (2012), A Slot-Monopole Antenna for Dual-Band WLAN Applications (2011) and Compact Broadband Slotted Rectangular Microstrip Antenna (2009). The paper also discusses the technology used in order to bring the required changes in terms of improved performance characteristics.

Keywords: WLAN (Wireless local area network), Dual band, Transmission line, Microstrip antenna, Monopole antenna, Dual band antenna, RMSA, Water Patch, L-probe.

References:

Authors: Poonam Rajput, Prateek Wankhade

Paper Title: A Review Paper on Microstrip Patch Antenna Used in Wlan Systems

Abstract: One of the main current problems facing Global Positioning System (GPS) is to get the positions with high accuracy and low cost, effort and time. Two techniques are used in GPS positioning, which are the relative and point positioning. In common, the first technique provides the higher accuracy, but with higher cost and effort. Another kind of point positioning is the Precise Point Positioning (PPP) which counts on GNSS precise products. It is adequate for many applications that requires the decimeter level accuracy using one receiver, but requires scientific software or online services for data processing. The main challenge here is to raise the accuracy of PPP to add other applications suited to the gained accuracy. The main objective of the current study is to test different mathematical models producing positional corrections to select the best set depending on synchronized data and validate the selected model in synchronized and non-synchronized cases depending on data of two different campaigns. These corrections - produced from permanent stations- are added to the static PPP coordinates of the tested points near the permanent stations to reach the highest possible accuracy depending on GPS single frequency observations using a scientific package. The obtained results offered a synchronized average positional error reaching to 0.074m and RMSE of 0.023m in the first campaign and 0.146m with RMSE of 0.061m in the second campaign. It reaches 0.156m with RMSE of 0.074m in the best non-synchronized case. The user can raise the accuracy of single frequency static PPP when the data of four synchronized permanent stations are available in the same observational time or within 4 days.

Keywords: PV system, Cost analysis, Levelized cost of electricity (LCOE), Electric demand.

References:
1. Iraq Ministry of Electricity, electricity prices, 2015.

Authors: Ibrahim F. Shaker, Tamer F. Fath-Allah, Mohamed M. El-Habiby, Ahmed E. Ragheb, Alaa Al-Din I. Awad

Paper Title: Increasing PPP Accuracy using Permanent Stations Corrections

Abstract: One of the main current problems facing Global Positioning System (GPS) is to get the positions with high accuracy and low cost, effort and time. Two techniques are used in GPS positioning, which are the relative and point positioning. In common, the first technique provides the higher accuracy, but with higher cost and effort. Another kind of point positioning is the Precise Point Positioning (PPP) which counts on GNSS precise products. It is adequate for many applications that requires the decimeter level accuracy using one receiver, but requires scientific software or online services for data processing. The main challenge here is to raise the accuracy of PPP to add other applications suited to the gained accuracy. The main objective of the current study is to test different mathematical models producing positional corrections to select the best set depending on synchronized data and validate the selected model in synchronized and non-synchronized cases depending on data of two different campaigns. These corrections - produced from permanent stations- are added to the static PPP coordinates of the tested points near the permanent stations to reach the highest possible accuracy depending on GPS single frequency observations using a scientific package. The obtained results offered a synchronized average positional error reaching to 0.074m and RMSE of 0.023m in the first campaign and 0.146m with RMSE of 0.061m in the second campaign. It reaches 0.156m with RMSE of 0.074m in the best non-synchronized case. The user can raise the accuracy of single frequency static PPP when the data of four synchronized permanent stations are available in the same observational time or within 4 days.
before or after the observational time.

**Keywords:** GPS, Non-synchronized, Precise Point Positioning (PPP), Single frequency, Synchronized.

**References:**

**Authors:** M. Jeha Jeeva Rani, G. Allen Gnana Raj

**Paper Title:** Synthesis, Characterization and Photocatalytic Activity of Amino Acid Doped Metal Free g-C3N4 Composite Photocatalyst

**Abstract:** The g-C3N4-Amino acid (CNA-g-C3N4) composite photocatalyst was synthesized by simple copolymerization process. The photocatalyst was characterized by X-ray diffraction (XRD), Scanning electron microscopy (SEM) with EDAX and FT-IR analysis. Rhodamine-B (Rh-B) dye solution under visible light irradiation was used to determine the photocatalytic activity. The photocatalytic activity of CNA-g-C3N4 composite posses long term stability and visible light activity than bare g-C3N4.

**Keywords:** Amino acid, composite, metal free, g-C3N4, melamine

**References:**

**Authors:** Sumaira M.Hayat Khan, Ayyaz Hussain, Imad Fakhri Taha Alshaikhli

**Paper Title:** An Adequate Image Retrieval Technique Based on Global Level Feature Extraction

**Abstract:** Efficient and effective methods are required for the retrieval of relevant data from data stores. The two main approaches for retrieving a required image from a database are known as the local approach and the global approach. This paper presents the technique based on global approach of image feature extraction and comparison. Image features are calculated by taking into account image as a whole. All the three rudimentary image features like; color, texture and shape are utilized in the process of feature vector calculation. Besides these basic image features, Edge Histogram and Fourier Descriptors are also computed to extract edge information and shapes of the objects in the image respectively. Similarity between two images is determined by calculating Euclidean distance between their feature vectors. The experiments in this study were performed on natural images of diverse semantics from a Corel image database, and showed obvious improvement in results compared to several noble systems in the literature.

**Keywords:** Content Based Image Retrieval, Feature Extraction, Feature Vector, Similarity Measure, Fourier descriptor, Edge Histogram Descriptor.

**References:**

Authors: Deshmukh Bhakti S., Gharte Sneha H., Nagare Shrutı R., H. R. Deshmhe

Paper Title: Agricultural Robot for Plant Health Indication

Abstract: It is difficult task for producing agricultural products, various micro-organisms, pests and bacterial diseases attack on plants. These diseases can occur through the leaves, stems or fruit inspection. This paper covers technique of image processing for early detection of plant disease through feature extraction of leaf and preprocessing of image from RGB (YCbCr) to different color space conversion, image enhancement; segment the region of interest. Minimum distance classifier is used to compare extracted features from original image and stored database. When plant disease is detected fertilizer motor gets ON. By using Graphical User Interface symptoms and fertilizer for better growth of the crop is detected fertilizer motor gets ON. By using Graphical User Interface symptoms and fertilizer for better growth of the crop.

Keywords: Plant Health, Open Agriculture, Bluetooth, Database.

References:
1. International Journal of Advanced Technology in Engineering and Science www.ijates.com Volume No.03, Issue No. 01, January 2015 ISSN (online): 2348 – 7550 ‘Autonomous Farming Robot with Plant Health Indication’, Prof. K.V. Fale 1, Bhure Amrit P 2, Mangnale Shivkumar 3 Pandharkar Suraj R 4Professor, RSCEOE, Pune, (India) 2, 3, 4 Student, RSCEOE, Pune, (India)
**Authors:** Dipali Wankhede, S. G. Tuppad  
**Paper Title:** Improvising of web Recommendation System by using K-Means and Bitap Algorithm  
**Abstract:** Increasing the amount of information over the Internet in recent years has led to the increased risk of flooding of information which in turn has created the problem of access to relevant data users. Also with the rise in the number of websites and web pages, webmasters find it difficult to make the content according to user need. Demand for information Users can imagine evaluating web user browsing behavior. Web Usage Mining (WUM) is used to extract knowledge from access logs Web user by using Data mining techniques. One of the applications is WUM recommendation system that is customized information filtering technique used to determine whether any of a user approved a particular article or to identify a list of items that it can be of great importance to the user. In this document architecture that integrates product information with the user access to log data and then generates a set of recommendations for it is presented that particular user. The application has registered encouraging in terms of precision, recall and F1 results metrics.  
**Keywords:** Web Usage mining, Online Web Recommendation System, Clustering, Pattern Matching, Boyer Moore, K-Means, Recommendation.

**References:**
15. Xavier Amatriain, Alejandro Jaimes, Nuria Oliver, and Josep M. Pujol, Data Mining Methods for Recommender Systems.  

**Authors:** Swagata S. Mawande, Hemlata Dakhore  
**Paper Title:** Review of Robust Video Watermarking Using DWT, SVD and DCT  
**Abstract:** Due to increase in growth of internet, users of networks are increasing rapidly. Owners of the digital products are concerned about illegal copying of their products. Security and copyright protection are becoming important issues in multimedia applications and services. Digital watermarking is a technology used for copyright protection of digital media. Here ownership information data is embedded into the digital media without affecting its perceptual quality. In case of any dispute, the watermark data can be detected or extracted from the media and used as a proof of ownership. Digital video watermarking scheme based on Discrete Wavelet Transform and Singular Value Decomposition. Design of this scheme using Matlab is proposed. Embedded watermark is robust against various attacks that can be carried out on the watermarked video.  
**Keywords:** Digital watermarking, Matlab, DWT,SVD,DCT

**References:**
1. Asna Furqan, Munish Kumar, Study and Analysis of Robust DWT-SVD Domain Based Digital Image Watermarking Technique Using MATLAB, 2015 IEEE International Conference on Computational Intelligence & Communication Technology © 2015 IEEE  
3. A.Umamaheshvari, Dr.K.Thanushkodi, Robust Image Watermarking Based on Block Based Error Correction Code International Conference on Current Trends in Engineering and Technology, ICCET’13  

**Authors:** Kanchan P. Borade, Shewale Pooja J, Tayade Dipika P  
**Paper Title:** “ATM Theft Monitoring and Security System using Raspberry Pi2”  
**Abstract:** Automated Teller Machines (ATMs) security is the field of Study that gives a solution that provides multiple points of protections against theft .This project deals with prevention of ATM theft from robberies overcome

189-192

193-194

195-197
the drawback found in existing technology in our society. ATM video surveillance cameras and ATM monitoring options, security specialists are ready to help the people get more out of the ATM security and ATM loss prevention systems. Most of the time it happens that theft enter in ATM, collect the money, start running police cannot capture theft so, to avoid such condition this project gives real time data of sensor, images of theft and mechanism of door and shutter lock. Here Raspberry pi2 is a series of small computer used, to interface the camera, vibration sensor, GSM, DC motor, Buzzer. There must be the installation of the raspbian operating system. The aim of using raspberry pi2 is its ease of portability, ease of connections, and ease of handling. The setup is proposed for ATM security, comprising of the modules namely, authentication of shutter lock, web enabled control, sensors and camera control.

**Keywords:** Raspberry pi2, Camera, Vibration Sensor, D Cmotor, GSM, Buzzer.

**References:**

**Authors:** Srujana Rongali, Radhika Yalavarthi

**Paper Title:** An Improved Ant Colony Optimization for Parameter Optimization using Support Vector Machine

**Abstract:** Support Vector Machine (SVM) is one of the significant classification technique and it can be applied in various areas like meteorology, financial data analysis etc. The performance of SVM is influenced by parameters like C, which is cost constant and kernel parameter. In this paper, an improved Ant Colony Optimization (IACO) technique is proposed to optimize the parameters of SVM. To evaluate the proposed approach, the experiment adopts five benchmark datasets. The developed approach was compared with the ACO-SVM algorithm proposed by Zhang et al. The experimental results of the simulation show that performance of the proposed method is encouraging.

**Keywords:** Support vector machines, Ant colony optimization, parameter selection, SVM, feature selection, ACO, GA, PSO

**References:**

---

198-204
The continuous growth in Network attacks is being a serious problem in software industry. Intrusion detection framework is utilized to distinguish and break down system assaults so IDS should be upgraded that can screen the framework and can trigger the readiness in the framework. Numerous calculations have been proposed by various creators to enhance the execution of IDS yet at the same time they can't give appropriate or finish arrangement. In proposed framework creators perform probes distinctive blends of Bayesian system, Naïve Bayes, JRip, MLP, IBK, PART and J48 classifier. What's more for each mix two pre-processing procedures Normalization and discretization will be connected. The advantage of proposed approach is the combi-nation detecting majority will be ensemble with the re-spective pre-processing technique. Hence, any kind attack in the network can be detected with best accuracy.

Keywords: Bayesian network, Intrusion Detection System, IBK, JRip, J48, MLP, Naïve bayes, PART.

References:
In any system ALU is the most important part of a processor as it is required for calculating the address of each memory location. It performs a particular arithmetic and logic operations on each set of operands, based upon the instructions given by the processor. In some processors ALU is split into two units, an Arithmetic unit (AU) and logic unit (LU). Some processors possess a couple of Arithmetic units – one for the fixed point operations and another for the floating point operations. As AU operates at a very high speed and it is accessed by the system frequently, it contributes to one of the highest power-density locations on the processor. Because of this reason, there exist thermal hotspots and sharp temperature gradients inside the execution core, thereby reducing the reliability as well as the battery life of the system. Therefore, there is a great need for the development of a power optimized AU design. This encourages powerfully for the design of a power optimized AU that satisfies the superior needs along with the reduction of average power consumption. This paper presents the various power optimized techniques for 16bit ALU like input gating, power gating in 45nm using cadence. Finally, comparison among all proposed techniques are encouraged powerfully for the design of a power optimized AU.

Keywords: Arithmetic unit (AU), Power gating, Input Gating.

References:
2. akhila abba, k amarendar “improved power gating technique for leakage power reduction” international journal of engineering and science vol.4, issue 10 (october2014), pp 06-10.
3. “adder subtractor design” islamic university of gaza, faculty of engineering department of computer engineering fall 2011 ecom 4113: digital design lab eng. Ahmed abumareer
4. pramod kumar, M.p, a. S. Augustine fletcher “a survey on leakage power reduction techniques by using power gating methodology” international journal of engineering trends and technology (ijett) – volume 9 number 11- mar 2014.
5. ping huang, zuocheng xing, tianran wang, qiang wei, hongyan wang, guitao fu” a brief survey on power gating design” school of computer, national university of defense technology, changsha 410073, china.
6. Sreenivasa rao n, y. Vishnuvardhan reddy, g.shivamanikanta, b. Vijaysree “design the 2x1 mux with 2t logic and comparing the power usage of the

Authors: K. Bikshalu, Prathap Soma
Paper Title: Design and Simulation of 16 Bit Arithmetic Unit using Gating Techniques in Cadence 45nm Technology

Abstract: In any system ALU is the most important part of a processor as it is required for calculating the address of each memory location. It performs a particular arithmetic and logic operations on each set of operands, based upon the instructions given by the processor. In some processors ALU is split into two units, an Arithmetic unit (AU) and logic unit (LU). Some processors possess a couple of Arithmetic units – one for the fixed point operations and another for the floating point operations. As AU operates at a very high speed and it is accessed by the system frequently, it contributes to one of the highest power-density locations on the processor. Because of this reason, there exist thermal hotspots and sharp temperature gradients inside the execution core, thereby reducing the reliability as well as the battery life of the system. Therefore, there is a great need for the development of a power optimized AU design. This encourages powerfully for the design of a power optimized AU that satisfies the superior needs along with the reduction of average power consumption. This paper presents the various power optimized techniques for 16bit ALU like input gating, power gating in 45nm using cadence. Finally, comparison among all proposed techniques are represented.

Keywords: Arithmetic unit (AU), Power gating, Input Gating.
dissipation and area with different logics”, international journal of advanced research in electrical, electronics and instrumentation engineering, vol. 4, issue 3, march 2015.


16. T. Esther Rani, M. Asha Rani, Dr. Rameshwar Rao, Area optimized low power arithmetic logic unit”, 978-1-4244-8679-3/11/$26.00 ©2011 IEEE.

Authors: Loubna Berrich, Lahbib Zenkouar

Paper Title: The Adaptation of a Microstrip Dipole Antenna for RFID Applications

Abstract: Radio frequency identification (Radio Frequency Identification) is a technology used primarily to identify tagged objects or to track their locations. An RFID tag is composed of integrated circuit. To design the antennas, it is necessary that the antenna must have an impedance value equal to the conjugate of the impedance of the IC to have a good adaptation allowing the maximum transfer of power. For the implementation of the impedance matching, there are several techniques. In this work, we are interested in the technique of adaptation T-match and the technique of adaptation by coupling. The T-match technique is based on the insertion of a second folded dipole at the center of the first dipole. This technique is modeled by an equivalent circuit to be able to calculate the dimension of the folded dipole to have a new input impedance of the antenna equal to the conjugate of the impedance of the integrated circuit. The second technique is based on the supply of the dipole via a small loop with inductive coupling placed in close proximity to the radiating body. The software used in this work is the Ansoft HFSS software which is based on the finite element method (FEM). The results obtained are satisfactory with a reflection coefficient that exceeds -22 dB.

Keywords: Microstrip Dipole Antenna, RFID, Tag.

References:
2. A. Balanis, C. **“ANTENNA THEORY ANALYSIS AND DESIGN”**, 2005.