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Abstract: The present paper presents an overview of the main characteristics of a novel kind of solar thermal application called solar chimney power plant. It is a technology of electric power generation using solar energy by employing basic physics that when air is heated it rises. The created updraft can be used to turn a turbine placed at an appropriate position within a tall chimney to generate electricity. The paper discusses the principles and characteristics of such a system, its requirements, its construction and its operation. It also focuses on actual research and development of solar chimney projects.

Keywords: projects, power generation, solar chimney, solar energy.

References:
30. Bontelle D. Solar chimney, water spraying energy tower, and li...

Abstract: Power sector faces great troubles in the generation of power when the energy sources are renewable resources like wind power, hydro turbines etc. These resources may not be available at a constant rate continuously. Wind power generation is high only when the velocity of the wind is high, but this may not happen all the time. So the input will not be stable, in such situations in order to produce a stable, stepped up ac voltage with high reliability, high boost gain and efficiency, the use of single stage boost inverter with coupled inductor is suggested

Keywords: single stage; coupled inductor; boost gain.

References:

iterative vertex selection method. It was concluded that the vertexes selected by the proposed method preserved all feature points of the ECG signals. In addition, it was more efficient than the amplitude zone time epoch coding method.

**Keywords:** Electrocardiogram (ECG), Curvature, Feature Extraction, Vertex

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**Authors:** Sanjay Kumar Khadagade, N.K. Mittal

**Paper Title:** Comparison of BER of OFDM System using QPSK and 16QAM over Multipath Rayleigh Fading Channel using Pilot-Based Channel Estimation

**Abstract:** This paper investigate and compare the various channel estimation techniques based on pilot arrangement with the communication system that uses QPSK and 16-QAM to transmit information using OFDM over multipath Rayleigh fading channel. Bit Error Rate (BER) has been considered as the performance index in all analysis. In the block type pilot arrangement, the performance of channel estimation is analyzed with three different algorithms: LS, LMMSE and SVD algorithm. In comb type pilot arrangement, the paper introduces three method of interpolation: linear interpolation, second order interpolation and cubic spline interpolation for channel estimation. The analysis has been carried out with simulation studies under MATLAB environment.

**Keywords:** Channel Estimation, OFDM, Pilot Symbol, Rayleigh Fading channel

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**Authors:** Sanyam Agarwal, A.K.Gautam

**Paper Title:** Analysis of Delay Variation in ATM Network

**Abstract:** Asynchronous Transfer Mode(ATM). ATM was selected by the telecommunication (Carrier) industry as the technology to deliver the Broadband Integrated Services Digital Network (BISDN) carrier service. ATM is designed to handle different kinds of communication traffic (voice, audio, video and data) in an integrated manner. It is particularly important during periods of congestion that traffic flows with different requirements be treated differently and provided a different Quality of Service (QoS).

**Keywords:** BISDN, QoS, ABR, VBR, DS
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Fiyush M Asolkar, Vinayak M Umale

Paper Title: Analysis Of Microcirculation Videos Based on Adaptive Thresholding Technique

Abstract: The study of microcirculation is a key factor in the analysis of blood circulatory system. The blood flow distribution changes, based on the physiological effects of disorders. This study presents a method for analysis of microcirculation. The technique applied advances image processing methods to the images, micro vessels (capillaries and small blood vessels), and estimate the average Functional Capillary Density on 20 consecutive frames for each subject. The algorithm consists of four main parts: pre-processing, averaging, adaptive local thresholding segmentation and calculation of parameters. The key objective is to analyse the malfunctioning of the microcirculation in various organs. The designed system will help physicians and medical researchers in diagnostic and decision making to determine the functionality of organ sufficiency of resuscitation process and the effect of drug consumption in patients. Calculation of two parameters capillary flow density, functional capillary density and mass flow index allows analysing severity of malfunctioning.

Keywords: Capillary flow density, functional capillary density, Image processing microcirculation, Thresholding

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1. Daniel De Backer, Steven Hollenberg, Christiana Boerma, Peter Goedhart, ‘How to evaluate the microcirculation: report of a round table conference
2. H. Glenn Bohlen ’The Microcirculation and the Lymphatic System’, chapter 16

Authors: 
Zouhair A. Sadouq, Mourna Seraoui, Mohamed Essaaidi

Paper Title: Tanja: a framework to Conserve Energy in WSN

Abstract: Nowadays, Wireless Sensor Networks raise a growing interest among industries and civil organizations where monitoring and recognition of physical phenomena are a priority. Their possible applications are extremely versatile. WSN represent a significant technology that attracts more and more considerable research attention in recent years. It has emerged as a result of recent advances in low-power digital and analog circuitry, low-power RF design and sensor technology. In this paper we propose a new framework for modeling Wireless Sensor Networks that supports WSN to handle real-time network management by using a hierarchical framework based on general features identified through a careful analysis of existing sensor networks. Our framework is based on the GSM model. In fact, it’s an energy optimization approach based on cross-layer for wireless sensor networks, joining optimal design of the physical, medium access control, and routing layer. It can be considered as a special kind of clustering architecture that extends the network life by efficiently using every node’s energy and distributes management tasks to support the scalability of the management system in densely deployed sensor networks. However, it is more systematic, more robust and more scalable. In our solution we propose dynamic construction of clustering. The network is partitioned into clusters or cells. A cluster is composed with nodes, where every node can play
one of three roles: source or sensing role as a slave, router, or a master as a cluster head and a gateway to the external world. We address the energy-consumption efficiency as a major design challenge in succeeding the vision of self-organized WSN. This approach focuses on the computation of optimal transmission power, routing, and duty-cycle schedule that optimize the WSNs energy-efficiency and by the way, reduces node energy consumption and contributes to extending the lifetime of the entire network.

Keywords: Energy consumption-efficiency, GSM model, Self-configuration, WSN.

References:


Authors: Neeraja Narayanay, S. Paul Sathiyan

Paper Title: Electronic Ballast for High Intensity Discharge Lamp Based On AC-AC Sepic Converter

Abstract: This project work proposes SEPIC converter topology for developing electronic ballasts, supplying high-intensity discharge lamps fed by a pulse width-modulation ac–ac converter, implemented with bidirectional switches. The lamp operates directly from the ac mains; thus, the drawbacks of the low frequency square waveform operation get eliminated. The features of the proposed solution are high efficiency, high power factor, low cost, and the absence of electrolytic capacitors. This paper includes the design of passive elements.

Keywords: AC–AC conversion, acoustic resonance (AR) phenomenon, ballasts, current control, high-intensity discharge (HID), ignition, lamps.

References:

Diverse Sorting Algorithm Analysis for ACSFD in Wireless Sensor Networks

Authors: Jose Anand, K. Sivachandar

Paper Title: Diverse Sorting Algorithm Analysis for ACSFD in Wireless Sensor Networks

References:
Abstract: The progression in wireless communications and electronics has emerged the expansion of low-cost sensor networks. Sensor networks exploit large number of wireless sensor nodes to collect information from their sensing terrain. The gathered information will undergo in-network process and send to the remote sink. Sensor networks have wide range of applications including medical, military, home, etc. In the sensor networks, a fault-tolerant distributed decision fusion will occur due to the presence of sensor faults. For this fault detection, Collaborative Sensor Fault Detection (CSFD) scheme was used and this fault detection scheme is very difficult to implement because of the extensive computations. So an Approximated Collaborative Sensor Fault Detection (ACSFD) scheme was developed, which is less cost and utilizes less power than CSFD and has the same performance of CSFD. The important blocks present in the architecture of ACSFD consist of multipliers, logarithms, and sorting. In this paper, analysis has been done with various sorting algorithms and concluded the best sorting technique that can be used in ACSFD scheme to improve the performance of the fault detection scheme in the wireless sensor network.

Keywords: ACSFD, fault detection, sorting algorithms, wireless sensor networks.

References:

Authors: Anandhi, G. Gunasekaran, S.Satthiyaraj

Paper Title: VC Using Lempel-Ziv-Welch Algorithm

Abstract: Visual cryptography is one of the techniques used to encrypt the images by dividing the original image into transparencies. The transparencies can be sent to the intended person, and at the other end the transparencies received person can decrypt the transparencies using the tool, thus gets the original image. The proposed Visual cryptography provides the demonstration to the users to show how encryption and decryption can be done to the images. In this technology, the end user identifies an image, which is not the correct image. That is, while transmitting the image the sender will encrypt the image using the application here sender gets the two or more transparencies of the same image. The application provides an option to the end user of encryption. The end user can divide the original image into number of different images. Using the application we can send encrypted images that are in the format of GIF and PNG. The encrypted transparencies can be saved in the machine and can be sent to the intended person by other means.

Keywords: Image processing, visual Cryptography Scheme (VCS), GIF Encoding, Decoding.

References:

Authors: Bhagyshri Lachhwani, Mehul Barot, Poonam Sengar

Paper Title: Incremental Sequence Mining

Abstract: We are given a large database of customer transactions, where each transaction consists of customer-id, transaction time, and the items bought in the transaction. The discovery of frequent sequences in temporal databases is an important data mining problem. Most current work assumes that the database is static, and a database update requires...
rediscovering all the patterns by scanning the entire old and new database. We consider the problem of the incremental mining of sequential patterns when new transactions or new customers are added to an original database. In this paper, we propose novel techniques for maintaining sequences in the presence of a) database updates, and b) user interaction (e.g. modifying mining parameters). This is a very challenging task, since such updates can invalidate existing sequences or introduce new ones. In both the above scenarios, we avoid re-executing the algorithm on the entire dataset, thereby reducing execution time.

**Keywords:** Data mining, frequent sequences, minimum support, sequential pattern.

**References:**

**Authors:** Siva Sankara Raju R, Karun Kumar Y, Pragathi Kumar G

**Paper Title:** Design and Analysis of Rocket Motor Casing by Using Fem Technique

**Abstract:** This paper deals with the design of solid rocket mainly consists of determining the thickness of motor casing which includes the domes at head end, nozzle end and flange for bolted joints. Modeling of solid rocket motor components and its assembly is done in CATIAV5R19. Stress distributions are due to the effect of working stress developed in the components. The maximum working stress is compared with allowable yield stress of the material. Final conclusion brings out a well designed solid rocket motor for the effective storage of propellant for obtaining the required impulse. 2D Axi - Symmetric structural analysis for solid propellant rocket motor Casing is performed to determine the stress level of all components using ANSYS 12.0..

**Keywords:** Design, Analysis, Rocket Thrust Motor.

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16. “Solid Rocket Motor.”

**Authors:** Mahendra .U. Gaikwad, P.R. Kulkarni

**Paper Title:** Static and Dynamic Analysis of End Mill Tool for Chatter Vibration Reduction

**Abstract:** Milling is a very commonly used manufacturing process in the industry due to its versatility to generate complex shapes in variety of materials at high quality. Due to the advances in machine tool, CNC, CAD/CAM, cutting tool and high speed machining technologies in last couple of decades, the volume and the importance of milling have increased in key industries such as aerospace, die/mold, automotive and component manufacturing. But however the unstable machining (namely chatter vibration) is one of the main limitations for high speed machining which shortens the tool life and decreases machined surface quality. In this paper static and dynamic analysis of end mill tool with different geometry is carried out by Finite element analysis (FEA), also some practical equations are developed to predict the static and dynamic properties of end mill tool And the results obtained by both the methods are nearly same. However in case of static analysis amount of deflection of tool for a particular value of cutting force can be easily determined, while in case of dynamic (modal) analysis natural frequencies and mode shapes can be determined.

**Keywords:** CNC, CAD / CAM, (FEA).

**References:**
2. A. Tekeli and E. Budak, Maximization of chatter-free material removal rate in end milling using analytical methods, Machining Science and
Abstract: Realizing the importance of understanding major virulent proteins of HIV we are attempting to unravel various amino acid signatures that exist for two major proteins in HIV i.e. Gag and Env. The results have been obtained through freely available software VESPA available at HIV database project funded by the Division of AIDS of the National Institute of Allergy and Infectious Diseases (NIAID), a part of the National Institutes of Health (NIH). The results obtained help us to understand the sites in proteins which can be hot spot of mutations or sites where propensity of finding different amino acid exists. This is a novel work where signature patterns for various HIV proteins have been deduced.

Keywords: HIV, AIDS, (NIAID), (NIH).

References:

Authors: Shashank Mittal, Reshu Nautiyal, Swati Mamgain, Kumud Pant, Tribhuvan Chandra

Abstract: The Effects of Sasobit® Modifier on Binder at High and Intermediate Temperatures

Paper Title: Signature Patterns for Major Virulent Proteins of HIV1

References:
1. Ahmad Kamal Arshad, Frag Ahmed Ma Kridan, Mohd Yusof Abdul Rahman

Authors: Ahmad Kamal Arshad, Frag Ahmed Ma Kridan, Mohd Yusof Abdul Rahman

Abstract: Research in the laboratory was carried out to determine if the addition of warm mix asphalt additive (sasobit®) has effects on the stiffness of the virgin bitumen and if the modified bitumen has the potential to increase the amount of Reclaimed Asphalt Pavement (RAP) used in warm mix asphalt. To fulfill this purpose, two types of samples have been prepared. The first was identified as control samples (virgin bitumen 80/100 penetration grade). The other was modified using the same bitumen penetration grade with sasobit-additive in concentrations from 1% to 3% by weight of binder at intervals of 0.5%, identified as sasobit mixes. Both groups were subjected to viscosity test at high service temperatures (115, 125, 135 °C) and intermediate service temperatures (70, 80, 95 °C) as well as penetration test to all samples at 25°C to determine the effect of sasobit additive on binder at ambient temperature. The results showed significant reduction in penetration value to all samples in all concentrations of the modifier on the bitumen. The results also showed decrease in viscosity values at high service temperatures to all modified samples compared to that of control samples. However, these values increased at intermediate service temperatures to confirm the similar trend in penetration values, which indicated that the addition of sasobit on virgin binder increase the stiffness at low and intermediate temperatures. With regard to incorporating the recovered binder from RAP, the same trend was observed at high service temperature of 135°C to modified samples at sasobit concentration of 1.5%. This may assist in increasing the amount of RAP materials used with this modifier in the mix compared to the amount allowed in conventional mix.

Keywords: Warm Mix Asphalt, Sasobit additive, viscosity, high service temperature, intermediate service temperature, Reclaimed Asphalt Pavement.

References:
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The solid solubility of magnesia in magnesium aluminate spinel in magnesia does not change with temperature thus not creating bonds over periclase grains in single stage sintering process. In the present study, magnesia and alumina powders along with tetravalent oxide (TiO2) additive was analyzed for its role in reactive densification of spinel in single stage firing process in order to achieve a better binding system for magnesia-based refractories. This tetravalent oxide on reaction with magnesia from spinel solid solution with MgAl2O4 as they have similar crystal structure. The spinel solid solution formed using oxide additive is expected to higher solubility in magnesia than magnesium aluminate spinel, resulting in improvement of the bonding during sintering through increased in solid solubility at elevated temperatures, similar to the complex spinel in magnesia-chrome refractories. The formation of spinel during firing remains as a second phase that retards the grain growth of periclase.

Keywords: Densification, Periclase, Reaction sintering, Spinel Solid solution, tetravalent oxide.

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20. Some publications: 4th EFRS, JOMB journal, 6th ISR, ICEEA, ICESD, ...
22. Dissertation: The effects of Ce Doping on the PTCR effects of Barium Titanate
23. Advisors: Professor M.R. DeGuire & Professor M. Tabib Azar
26. B.S., In Ceramic, Iran University of Science and Technology, Tehran, Iran, 1985.
27. PROFESSIONAL AFFILIATIONS:
28. Iranian Ceramic Society, (member & a member of Board of the Society)
29. Iranian Metallurgical Society, (member)
30. Center of excellence in Adv. Eng. Materials. ( Head and member)
31. Member of Biomedical Research Center of Sharif
32. American Ceramic Society (Former member- While living in the USA)
33. Mohammad Bavad-Vandchali Education: Ph.D., Department of Metallurgy & Material Engineering, Iran University of Science & Technology (IUST), Tehran, Iran.
34. M.S., Department of Metallurgy & Material Engineering, Iran University of Science & Technology (IUST), Tehran, Iran.
35. B.S., Department of Metallurgy & Material Engineering, Iran University of Science & Technology (IUST), Tehran, Iran.
Keywords: Medical imaging, Thyroid, Thyroid disorders, Segmentation, Classification.

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Authors: Sajid Ullah Khan, Wang Yin Chai, Chai Soo See

Paper Title: A Novel Noise Removal Technique of X-Ray Carry-on Luggage for Detection of Contraband/Illlicit Object(s)

Abstract: Luggage inspection systems play an important role in ensuring national security at airports. In this paper, a novel approach of noise removal from dual energy X-ray images is proposed to ensure the national security at airport. This novel approach is used as a key step in our previous framework to get perfect results. High Energy and Low Energy x-ray images are combined, de-noise it with the proposed novel approach and at the end enhance the fused image with histogram specification to improve the contrast. The final image did not only contain the details, but is also background-noise-free and contrast-enhanced, therefore easier to segment automatically or be interpreted by screeners, thus reducing the false alarm rate in X-ray luggage inspection. It is observed that the proposed approach is more suitable for screeners in detecting contraband/illicit objects than using other conventional techniques.

Keywords: dual Energy x-ray Image enhancement, image restoration, image fusion, De-noising, Histogram specification.

References:
Power Flow Analysis and Voltage Stability Enhancement Using Thyristor Controlled Series Capacitor (TCSC) Facts Controller

Abstract: Power demand increased steadily while the expansion of power generation and transmission has been severely limited due to the inadequate resources and environmental forces. As a result of this, some transmission lines are heavily loaded and the system stability becomes a power transfer-limiting factor. Hence, power flow analysis and Voltage stability enhancement are of paramount essential for a secure power system operation. Presented in this paper is the application of Thyristor Controlled Series Capacitor (TCSC) for power flow analysis and voltage control of Nigerian 330kV grid system. Power flow equations involve solution to nonlinear algebraic equations using mathematical algorithms. In this work, the Newton Raphson iterative algorithm was used for solving the power flow problems due to its ability to converge very fast with small number of iteration. Simulation of power flow solutions with and without TCSC was done using MATLAB 7.90 based programme. Where voltage drops were noticed at the load bus, especially, voltages at buses 9 (Ayede.), 13(New Heaven), 14(Onitsha),and 16(Gombe), TCSC was incorporated to regulate the voltage magnitude at those buses. The application of TCSC improved the voltage profile of the system and thusly regulated the power magnitude.

Keywords: TCSC; FACTS; Voltage Stability; Power flow, voltage magnitude

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Lossy Image Compression and Data Embedded In Compressed Encrypted Image

Abstract: This work is based on lossy image compression and data embedded in compressed encrypted image. In this, the original image is compressed by lossy compression method and encrypted using the encryption key. Data is hidden into the compressed encrypted image using the data hiding key. If the receiver has encryption key then he can recover the image after decryption, if data hiding key he can extract the data, if both data hiding key and encryption key then he can extract the data and recover the original image after decryption and compression.

Authors: Suguna, Logesh Kumar, Lavanya

Paper Title: Lossy Image Compression and Data Embedded In Compressed Encrypted Image

References:
6. Padma DeviA.Shishma Girdhar and Balwinder Singh “Improved Carry select adder with Reduced Area and low power consumption” Int Jou of Com App(0975-8887) vol3-no.4June 2010.
Abstract: Many studies have been done to find other alternative material to use as modifiers in asphalt mixes on the improvement of its properties and highway quality. In this research Carbon Black and Natural Rubber (Latex) have been used as bitumen modifiers, bitumen is sensitive to rate of traffic load and temperature susceptibility. Therefore, bitumen modification has become the main factor to improve the hot mix asphalt properties and permanent deformation (Rutting). The use of carbon black and natural rubber in this project was identified to have the potential of becoming a modifier in HMA mixes due to the elastic behavior and in reducing the rutting potential. This study presents the viability of carbon black and natural rubber as an additive in bitumen as binder and hot mix asphalt concrete with different ratios of 10,15,20% CB and 1,3,5% NR blended separately and with each other. The behaviors of the two modifiers were investigated by comprehensive laboratory testing and evaluation. The DSR was used to determine the rheology of the modifiers with bitumen and Superpave mix design method was used to determine the optimum bitumen content and one aggregate gradation was considered under this investigation. The performance of carbon black and natural rubber mixtures at 40°C was determined by the dynamic creep test and indirect tensile test. It was observed that the addition of carbon black and natural rubber gave better overall performance in the bituminous mixes. The stiffness modulus decreases as the addition of carbon black and natural rubber increase. However, the performance of 10% CB gave better stiffness modulus whereas, the stiffness is higher. The creep values are also the lowest with 10% CB. Thus, this shows carbon black and natural rubber may contribute toward better flexible roads in the future.

Keywords: Carbon Black, Natural Rubber (Latex), Polymers, Modified Bitumen.

References:

Authors: D. B. Salunke, R. S. Kawitkar

Paper Title: Analysis of LMS, NLMS and MUSIC Algorithms for Adaptive Array Antenna System

Page Title: Saad Abdulqader Ali, Ismail bin Yusof, Madi Hermadi, Marwan B.S. Alfergani, Abdalla Ab Sinusi

Pavement Performance with Carbon Black and Natural Rubber (Latex)
Abstract: As technology developed this decade proves communication is the most important factor for the data interchange. Smart antennas have been considered to be one of the most demanding communication technologies. It adapted as most demanding technology because of high-bit rate or high quality in broadband commercial wireless communication. Direction-of-arrival (DOA) estimation is based on the MUSIC algorithm for identifying the directions of the source signals incident on the sensor array comprising the smart antenna system. Adaptive beam forming is achieved using the LMS algorithm for directing the main beam towards the desired source signals and generating deep nulls in the directions of interfering signals. The smart antenna system designed involves a hardware part which provides real data measurements of the incident signals received by the sensor array. Results obtained verify the improved performance of the smart antenna system when the practical measurements of the signal environment surrounding the sensor array are used. This takes the form of sharper peaks in the MUSIC angular spectrum and deep nulls in the LMS array beam pattern.

Keywords: Smart antenna, Angle of arrival, LMS, NLMS and MUSIC.

References:

Authors: Anwar M. Mousa

Paper Title: Promising Communication Technologies for Emergency and Safety Systems

Abstract: This article discusses the uses of promising modern communication technologies for emergency and safety systems focusing on cognitive radio technologies and their roles in effective spectrum use. Given that only 10% to 30% of licensed spectrum is occupied in a specific time and locations, the remaining unused spectrum constitutes a huge room for increasing bandwidth and hence the number of served users in emergency events. Based on cognitive radio and sensed spectrum holes, the paper developed new approximated linear relations between the total number of served users in emergency situations as a function of total available bandwidth. Results show that increasing the number of channels per cell, as a result of sensed spectrum holes, yields a significant increase in cell capacity and the number of served users. The paper begins with highlighting the impact of current and promising communications technologies on strengthening disaster awareness and mitigation.

Keywords: emergency communications, trunking, cognitive networks, spectrum holes, system capacity.

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13. www.vsat-systems.com/

Authors: Shweta Chawla, Ramanand Harijnan, Harpal Singh

Paper Title: Design Low Power 32-Bit Barrel shifter using Efficient Charge Recovery Logic

Abstract: Today power dissipation has become the main concern as the circuit size become larger and larger. Especially in this paper we presented the reduction of the power dissipation which shows an increasing growth as the technology is scaled down. Various theories have been formulated regarding this problem. Out of which Adiabatic Logic is gaining much attention because of its exemplary results. By adiabatic technique, power dissipation in transistors can be minimized as well as energy stored in load capacitance can be reused instead of dissipation as heat. In these circuits we can reduce the energy dissipation during switching process as well as reuse the energy from the load capacitance by making a feedback path from load capacitance to the supply. In this paper we first study of various adiabatic techniques and will lay emphasis on one of its
widely used technique called the Efficient Charge Recovery Logic (ECRL). We will study how ECRL technique is better than the rest and how circuits are implemented using it. Using this technology we will design a 32-bit barrel shifter and perform various tests on the circuit. We will also compare the results of this adiabatic technology with the normal CMOS technology and show the drastic reduction in power dissipation. All the design structures based on Adiabatic Switching Logic are designed and simulated using standard TSMC 0.18 μm CMOS technology and 5 V voltage supply at an operating temperature of 27°C. Mentor Graphics Corporation based tool known as IC Design Architect have been used for all the design and analysis.

Keywords: Low power, Adiabatic, ECRL, Fully Adiabatic, Partially Adiabatic Circuit (Quasi), Barrel shifter, Multiplexor

References:

Authors: 
E. Suresh Kumar, Bijan Sarkar

Paper Title: Fault Tree Analysis of Failures in Fire Detection System of Grid Connected Photovoltaic System

Abstract: The reliability of the grid connected photovoltaic system is primarily and strongly depends on the reliability of the electrical protection systems, failure of which may lead to fire. So a fire detection system is the crucial component in a grid connected PV system. So its reliability is directed related to the overall reliability of the PV system. A literature review of reliability data of fire detection system was made resulting to rough estimates of some failure frequencies. No theoretical or technical articles on the structure of reliability models of these installations were found. In this paper the classifications of failure severity were made from the system point of view by counting failures of components when possible. Since there are no established fault tree structures available for fire detection system in photovoltaics, these component failure frequencies are intended to be used in the first round of iteration in the fault trees suggested here. The analysis leads to the necessity of the estimation of reliability of fire detection system for the assessment of the reliability of the grid connected photovoltaic power system.

Keywords: Fault tree analysis, Top event, Reliability, Fire detectors, Boolean input

References:

Authors: 
E. Suresh Kumar, Bijan Sarkar, Dhiren Kumar Behera

Paper Title: Failure of Photovoltaic Modules under Lightning and Thunderstorms

Abstract: Lightning strikes can affect photovoltaic generators and their exposed installation sites as well as the sensitive electronics of the inverter. Therefore, it is necessary, to estimate the risk by lightning strikes, and to take these results into account for the design. IEC (EN) 62305-2 states procedures and data for the calculation of the risk resulting from lightning strikes into structures and for the choice of lightning protection systems. Actually, the technical guidelines for installation suggest protecting with SPD’s (surge protective device) both the DC and AC sides of the PV plant. The aim of this paper is to estimate voltages due to lightning discharges and to determine the effective need of lightning protection measures on the basis of the risk analysis and the protection costs.
Keywords: Lightning electromagnetic impulse, Lightning current arresters, Earth Termination System, Lightning protection level, Lightning flash count.

References:

Authors: Jesinth santhaseelan.J, S.Jebarani Evangeline
Paper Title: Hysteresis control of Multilevel Inverter
Abstract: Multilevel inverters are used for converting DC to AC in places where the conversion is required. However harmonics are present in all types of multilevel inverters. This causes major problems in the output voltage as well as current. In order to reduce these harmonics, several methods are used among them hysteresis control is one of the powerful method. A three phase multilevel inverter with hysteresis current control is proposed to control the current in order to reduce the total harmonic distortion, current ripples and Control over maximum switching frequency and tested using MATLAB/Simulink.
Keywords: Hysteresis modulation, multiband (MB).

References:

Authors: S. S. Gaikwad, P. S. Kachare
Paper Title: Static Analysis of Helical Compression Spring Used in Two-Wheeler Horn
Abstract: Every two-wheeler has a provision of horn. It is used for maintaining a safe distance or to communicate for safe drive. The horn is critical element in vehicle. It is directly related to safety as well as goodwill of the company. Static analysis determines the safe stress and corresponding pay load of the helical compression spring. The present work attempts to analyze the safe load of the helical compression spring. A typical helical compression spring configuration of two wheeler horn is chosen for study. This work describes static analysis of the helical compression spring is performed using NASTRAN solver and compared with analytical results. The pre processing of the spring model is done by using HYPERMESH software.
Keywords: Geometric modeling, Helical compression spring, Static analysis, Two-wheeler horn.

References:

Authors: Sudarshan D. Kore, S.S.Patil
Abstract: This paper describes analysis and design of deep beams subjected to two equal point loads acting 1/3/rd of span.
with different L/d ratios and codes referred were INDIAN STANDERD CODE (I.S.-456-2000), NEWZEALAND (NDS -3101-2006), CANADIAN(CSA-A23.3-2004), CIRIA GUIDE-2(1977) and APPENDIX-A of ACI -318 [STRUT and TIE METHOD] for design purpose. The parameters observed were Lever Arm, Theoretical steel required and strength of deep beam.

Keywords: Deep Beam, Finite, strength, code provisions, Design.

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Authors: Tania S. Dhone (Shendkar) Sulakshana Patil, Vijaya Rajeshwarkar, Dina Simunic

Paper Title: Performance Analysis of Hard Combing Schemes in Cooperative Spectrum Sensing for Cognitive Radio Networks

Abstract: The basic idea of cognitive radio is to reuse the spectrum whenever it finds the spectrum holes in wireless environment. However, detection performance in practice is often compromised with multipath fading, shadowing, receiver uncertainty and even hidden node problem due to primary users activity that is not spatially localized. To mitigate the impact of these issues, cooperative spectrum sensing has been shown to be an effective method to improve the probability of detection by exploiting spatial diversity by collaborating. This paper studies cooperative spectrum sensing and signal detection in cognitive radio system by implementing hard combining in data fusion centre using energy detector to observe the presence of primary user signal. In this paper, we analyzed the detector performance exploiting TV white space by employing OR and AND rules as decision combining under AWGN, Rayleigh time varying fading channel by setting probabilities of false alarm and measuring probability of detection. The simulation results show that cooperative spectrum sensing employing OR rule has better performance than non-cooperative. The performance of signal detection degrades in time varying fading Rayleigh channel compared to flat fading Rayleigh channel.

Keywords: IEEE 802.11af, energy detection, fading channels, spectrum sensing, cognitive radio, cooperative sensing, hard decision.

References:


Authors: Arati Deshpande, Anjali Mahajan

Paper Title: Domain Driven Multi-Feature Combined Mining for Retail Dataset

Abstract: Association Mining is used to generate the patterns from static data available. But from the business perspective, usefulness and understandability of those rules are more important. Through classical association mining many redundant rules are generated which may be not useful for business analysis. The proposed framework helps in generating the combined rules which gives informative knowledge for business by combining static and transactional data. This paper gives pruning method to remove the redundant rules before generating the combined rules. Finally Rule Clusters are generated for similar group customer or similar transaction characteristics which provide more interesting knowledge and actionable result than traditional association rule. Experimental result demonstrate the proposed techniques.

Keywords: Domain Driven Data Mining, Combined Patterns, Association Rule, Pruning

References:
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Authors: Zeinab Raveshti, Sonali R. Idate

Paper Title: Investigation and Analysis of SQL Injection Attacks on Web Applications: Survey

Abstract: SQL injection attacks are a serious security threat to Web applications. They allow attackers to gain unrestricted access to the databases underlying the applications and to retrieve sensitive information from databases. Many researchers and practitioners have proposed various methods to solve the SQL injection problem, current ways either fail to solve the full scope of the problem or have limitations that prevent their use. Many researchers and practitioners are familiar with only a subset of the wide range of techniques available to attackers who are trying to take advantage of SQL injection vulnerabilities. Many solutions proposed in the literature solve only some of the issues related to SQL injection. To solve this problem, we give an extensive review of the different types of SQL injection attacks. For each type of attack, we provide descriptions and examples of how attacks of that type could be performed. We also analyze existing detection and prevention techniques against SQL injection attacks.

Keywords: SQL injection, SQL injection vulnerabilities, security thread in web application.
References:
5. Hackers hijack a half-million sites in latest attack http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9084991

Authors:
Prabdeep Kaur, Sheveta Vashisht

Paper Title:
Mingle Intrusion Detection System Using Fuzzy Logic

Abstract:
Intrusion detection system must be proficient of known and unknown vulner-abilities. In order to obtain superior accuracy an appropriate dataset should be there to detect the known and unknown attacks. In this research work new approach will be proposed which will utilize fuzzy if-then rules to detect known and unknown attacks i.e. sequential multilevel misuse along fuzzy if-then rules. In order to evaluate the performance of proposed algorithm and KDD’99 data set will be used. As fuzzy if-then rules comes up with overheads so overhead will be evaluated in this research work.

Keywords:
KDD’99 dataset, Known and Unknown attacks, Misuse and Anomaly Detection.

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5. Mridula Gudadhe, Prakash Prasad A New Data Mining Based Network Intrusion Detection Model” International conference on computer and communication technology, [ICCCT’10]
6. Duanyang Zhao,” Analysis of an intrusion detection system” in second international conference on security and management 2012(3):127-13SSN.

Authors:
Paramjit Kaur, Rupinder Kaur

Paper Title:
Approaches for Generating Test Cases Automatically to Test the Software

Abstract:
Testing the software is very important phase in software development life cycle. So to test the software automatically is the best way to test the software because it consume less time where testing software manually is consuming process. To test the software automatically, test case generation is the best way. One way to generate the test cases is with the help of UML diagrams. In this paper we study the various techniques to generate the test cases from the UML diagrams to test the software automatically. Different tools are used to generate the UML diagrams. A new method is also proposed which will help in testing software automatically by generating test cases. Techniques in which different approaches are used like model based approach, novel approach, approach in which genetic algorithm is implemented as data mining technique are used to generate the test cases automatically, function minimization technique used for finding the minimum predicate function. The different tools like AGEDIS, TGV and GOTCHA are used for test generation. These approaches have been proposed to bring out all possible test cases of given object diagram

Keywords:
object diagrams, test cases, UML, genetic algorithm, data mining, tabu search algorithm.

References:
7. Sangeeta Sabharwal, Ritu Sibal, Chayanika Sharma, “ Applying Genetic Algorithm for Prioritization of Test Case Scenarios Derived from UML.

Authors: Manpreet Kaur, Kunwarpal

Paper Title: Optimize OLSR with Cognitive in Wireless Mesh Network

Abstract: In this paper, we review the COLSR: Cognitive Optimized Link State Routing in Wireless Mesh Network. COLSR is the extension of OLSR Protocol. With the use of COLSR the throughput and performance are enhanced. COLSR provide better solution to the problem of congestion on the nodes, with surely data are transmitted. In this paper, we also discuss the enhancement of OLSR which is purely different from existing OLSR, and also discuss the generation, reputed-trust mechanism along with weighting mechanism from the nodes and COLSR perform re-routing for degrade the packet dropping problem and enhance throughput devoid of congestion on nodes in WMN.

Keywords: Congestion, WMN, Routing protocol.

References:

Authors: Christhu Raj M R, Edwin Prem Kumar G, Kartheek Kusumpudi

Paper Title: A Survey on Detecting Selfish Nodes in Wireless Sensor Networks Using Different Trust Methodologies


Keywords: Entropy, Reputation, Bayesian, Fuzzy model, Trust

References:
Wireless Fingerprint Based College Attendance System Using Zigbee Technology

Abstract: In this paper we propose a system that takes attendance of student and maintaining its records in an academic institute automatically. Manually taking the attendance and maintaining it for a long time makes it difficult task as well as wastes a lot of time. For this reason an efficient system is designed. This system takes attendance with the help of a fingerprint sensor module and all the records are saved on a computer. Fingerprint sensor module and LCD screen are dynamic which can move in the room. In order to mark the attendance, student has to place his/her finger on the fingerprint sensor module. On identification of particular student, his attendance record is updated in the database and he/she is notified through LCD screen. In this system we are going to generate Microsoft excel attendance report on computer. This report will generate automatically after 15 days (depends upon user). This report will be sent to the respected HOD, teacher and student’s parents email id.

Keywords: Fingerprint, Enrollment, Fingerprint sensor, Failure to enroll (FTE), Failure to capture (FTC), Verification, Fingerprint templates, identification.

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4. O. Shoewu, Ph.D.1,2* and O.A. Idowu, B.Sc. 1, “Development of Attendance Management System using Biometrics” Department of Electronic and Computer Engineering, Lagos State University, Epe Campus, Nigeria.1 Department of Electrical and Electronics, University of Benin, Edo State, Nige-ria.2
5. TABASSAM NAWAZ, SAID PERVAIZ, ARASH KORRAN, AZHAM-UD-DIN “Development of Academic Attendance Monitoring System Using Fingerprint Identification” Software Engineering Department Faculty of Telecommunication & Information Engineering University of Engineering & Technology Taxila, Punjab

Database Management by Using Java Database Connectivity Architecture of JAVA

Abstract: This paper consist of Java database connectivity (JDBC). The JDBC consists of a set of interfaces and classes written in the Java programming language. This shows how the JDBC environment provides the facility to manage database for multiple applications for updating, retrieving, modify. First three steps are, Selecting the required driver for DSN, specifying the connection details for DSN and testing the creating DSN. The DSN consist of specific information for data.

Keywords: Java database connectivity, Data source name database connectivity.

References:
2. Introduction to database for web developers.
4. The java tutorial
5. “docs.oracle.com/javase/tutorial/jdbc/overview/architecture.html”.

Authors: Gunjan Talaviya, Rahul Ramteke, A.K.Sheete AVCOE, Sangamner

Authors: Sandeep Kaur

Authors: Lavanya, Saranya, Uma Maheshwari
Paper Title: Increased Speed for Network Security through Multi-Character Processing

Abstract: A clear trend that can be observed in the Internet is the increasing amount of packet data that is being inspected before a packet is delivered to its destination. More recently, Network Intrusion Detection Systems (NIDS), virus scanners, spam filters and other content-aware applications go one step further by also performing scans on the packet payload. Pattern matching algorithm is used in Network Intrusion Detection System (NIDS). The system is used to detect network attacks by identifying attack patterns. This paper proposes a memory-efficient pattern matching algorithm which can significantly reduce the number of states and transitions by merging pseudo-equivalent states while maintaining correctness of string matching. Pattern matching is achieved through Aho-Corasick (AC) algorithm. By comparison result we say our matching algorithm is memory efficient than previously proposed method. As an extension of our work, through Multi-character processing, significant speed has been increased. The reduction in clock cycle indirectly increases speed in operation.

The architecture is coded in VHDL and simulated using Modelsim and Xilinx.

Keywords: Aho-Corasick (AC) algorithm, Finite State Machine (FSM), Non-Deterministic Automation (NFA).

References:

Authors: Karan Mahajan, Manish Mahajan

Paper Title: Navigating the Current Location without the Availability of GPS

Abstract: Today in this world we are surrounded of technologies like smart phone technology. In smart phone there is an option GPS that is being used these days very much for checking in our location and navigate the google maps. But what about those cell phones which are having ANDROID operating system but no having option of GPS. This paper deals with the NAVIGATING THE CURRENT LOCATION WITHOUT THE AVAILABILITY OF GPS. Because GPS is having some limitations. First GPS may or may not be available in all smart phones. This application which we developed will work in the phones which are not having feature of GPS.

Keywords: GPS, LBS, GIS, MGIS, Android, Eclipse, SQLLITE3, PDA, Toast.

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5. Feixiang CHEN, Chongjun YANG, Wenyang YU, Xiaouq LE, Jianyu YANG “Research on Mobile GIS Based on LBS” The State Key Laboratory of Remote Sensing Information Science Institute of Remote Sensing Applications, Chinese Academy of Sciences Beijing, China, 2005.

Authors: Prashanth L Gopal, F.T Josh

Paper Title: Elimination of Lower Order Harmonics in Multilevel Inverters Using Genetic Algorithm

Abstract: This project presents the Genetic optimization method for harmonic elimination in a cascaded multilevel inverter and an optimal solution for eliminating pre specified order of harmonics from a stepped waveform of a multilevel inverter topology with equal dc sources. The main challenge of solving the associated non linear equation which are transcendental in nature and therefore have multiple solutions is the convergence of the relevant algorithm. The main objective of selective harmonic elimination pulse width modulation strategy is eliminating low-order harmonics by solving
nonlinear equations. The performance of cascaded multilevel inverter is compared based on computation of switching angle using Genetic Algorithm as well as conventional Newton Raphson approach. A significant improvement in harmonic profile is achieved in the GA based approach. A nine level cascaded multi level inverter is simulated in MATLAB/Simulink and a hardware model has been fabricated to validate the simulation results.

**Keywords:** Genetic Algorithm (GA), Multilevel inverters, Selective harmonic elimination (SHEPWM).

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9. Michalewicz.z, Schoenauer.m.(1996),”evolutionary algorithm for constrained parameter optimization problems,”vol.4,pp.1-32

**Authors:** Sreel Elamana, A. Rathinam

**Paper Title:** Interarea Oscillation Damping By Unified Power Flow Controller-Superconducting Magnetic Energystorageintegrated System

**Abstract:** Interarea oscillations are turned to be a severe problem in large interconnected power systems, hence they cause severe problems like damage to generators, reduce the power transfer capability of transmission lines, increase line losses, increase wear and tear on the network components etc. This paper introduces a new control technique that uses unified power flow controllers (UPFC) with superconducting magnetic energy storage system (SMES) in order to damp the interarea oscillation in an effective manner

**Keywords:** Unified Power Flow Controllers (UPFC), Super Conducting Magnetic Energy Storage Systems (SMES), Inter Area Oscillations

**References:**
**Authors:** M.Aruna, R.Dhivya, D.Mousabin Rani, A.Sharmila L.J.Arthiha

**Paper Title:** Electronic Toll Collection System Using Radio Frequency Technology

**Abstract:** This paper focuses on an electronic toll collection (ETC) system using radio frequency (RF) technology. Research on ETC has been around since 1992, during which RFID tags began to be widely used in vehicles to automate toll processes [1]. Next method proposes a very simple method for enhancing the performance of infrared electronic-toll-collection systems, resulting in longer communication time interval for the data transmission between the on board unit (OBU) and the road side unit (RSU). The proposed RF system uses antenna that are mounted on the windshields of vehicles, through which information embedded on the tags are read by RF readers, the toll debit will be taken from the owner’s bank account. The proposed system eliminates the need for motorists and toll authorities to manually perform ticket payments and toll fee collections, respectively. Data information are also easily exchanged between the motorists and toll authorities, thereby enabling a more efficient toll collection by reducing traffic and eliminating possible human errors.

**Keywords:** Electronic Toll Collection (ETC), On board unit (OBU), Road side system (RBU), Radio Frequency (RF).

**References:**


**Authors:** Adebayo I.G., Adejumobi, I.A., Adepoju, G.A.

**Paper Title:** Power Flow Analysis Using Load Tap – Changing Transformer (LTCT): A Case Study of Nigerian 330kv Transmission Grid System

**Abstract:** In order to ensure that electrical power transfer from generator to consumers through the grid system is stable, reliable and economical, it becomes imperative to carry out power flow studies. This paper presents power flow solution incorporating load tap changing transformer (LTCT) for solving the steady-state problems of longitudinal power system using Nigerian 330kv transmission system as a case study. In this work, the adopted numerical technique for solving the power flow problems was the Newton Raphson iterative algorithm. Modified power flow algorithm was implemented by the application of voltage control method using a load tap changing transformer (LTCT). Simulations were done using MATLAB software package. The results obtained from the existing condition of the Nigerian 330 kv transmission Network indicate that the bus voltages at New Heaven (0.929p.u), Gombe (0.886p.u), and Kano(0.880p.u) were below the set of limits, i.e., tolerance. With the incorporation of LTCT, voltage magnitudes of 0.995p.u, 0.950p.u and 0.996p.u indicate that the system power flows are within the range of the acceptable limits.

**Keywords:** Power Flow, LTCT, power system, active power loss, voltage magnitude

**References:**

50. **Authors:** Sandeep Kaur, Manisha Bhardwaj  
**Paper Title:** Review Paper on Image Processing in Distributed Environment  
**Abstract:** In distributed image processing framework consist of analysing the performance through distributed control. It also includes data association and dynamic data control. In this paper various distributed environments are discussed and shows how distributed image processing algorithms work by using dynamic data for a particular application.  
**Keywords:** Distributed Image processing, data association.

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8. A.Fakhri,A nasir,(2012)"A study of image processing in agriculture application under high performance computing environment” international journal of computer science and telecommunication

51. **Authors:** S Mohamed Ashiq, K Karthikeyan, S Karthikeyan  
**Paper Title:** Fabrication of Semi Automated Pressurized Flushing System in Indian Railway Toilet  
**Abstract:** It is a well known fact that large number of people of all age groups travel by train. Irrespective of the type of train or class, one facet of the train that needs improvement is the cleanliness of toilets. An unclean toilet causes bad smell, which makes people uncomfortable. Further it affects people by spreading various diseases. One main reason for the lack of cleanliness is that people forget to flush the toilet often. To maintain toilets clean, separate routines are adopted but only periodically at major stations. Hence most of the time, toilet remains unclean. This project aims to design and fabricate the semi automated flushing system in toilets in railway toilets. The system will be fabricated in such a way that the water is flushed only when the passenger open and close the door. For this operation, a piston mounted on the door will follow the reciprocating motion; consequently the flush system will be actuated. Possible benefits are that minimum quantity of the water will be used efficiently, which reduces wastage of water. In order to make the cleaning more effective, the pressure of the flushing system is to be increased.  
**Keywords:** flushing system, Indian railways, cleanliness, water saving, pressurized, simple, comfort

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14. T. Asano, E. Diamadopoulos, & G. Tschobanoglous (Eds.).  

52. **Authors:** S.Freeda Angeline Rachel, J.Jency Joseph  
**Paper Title:** An ZVS DC-DC converter for High voltage and Efficiency gain With Reduced Ripple Current  
**Abstract:** The power-generation market, has shown obvious growth. However, a high voltage and efficiency gain is essential for the fuel cell and PV panel and for other appliances. The high step –up converter in the proposed converter provides ripple- free input current. The full bridge converter provides high voltage gain. An APWM Full Bridge Boost converters are widely used in application where the output voltage is considerably higher than the input voltage. Zero Voltage Switching(ZVS) is typically implemented in the switches.ZVS APWM DC-DC full bridge converter that does not
have any drawbacks of that other converters of this type have such as complicated auxiliary circuit,.increased current stress in the main power switches and the load dependent ZVS operation. In this proposed method an interleaved technique of Boost and Full Bridge converter is used..The different modes of operation of MOSFET has been discussed.. Moreover converter has high efficiency because of soft switching operation in switches. A 24V input voltage, 350V output voltage, and 168W output power simulation circuit of the proposed converter has been implemented and its efficiency is up to 87.5%.

**Keywords:** Full bridge converter, Boost converter, Zero-voltage switching, Soft switching, ZVS-APWM clamping circuit.

**References:**

**Authors:** Kapil Sharma, Sheveta Vashisht, Richa Dhiman

**Paper Title:** A hybrid Approach Using Rule Induction And Clustering Techniques In Terms Of Accuracy And Processing Time In Data Mining

**Abstract:** Data Mining: extracting useful insights from large and detailed collections of data. With the increased possibilities in modern society for companies and institutions to gather data cheaply and efficiently, this subject has become of increasing importance. This interest has inspired a rapidly maturing research field with developments both on a theoretical, as well as on a practical level with the availability of a range of commercial tools.

In this research work titled a hybrid approach using rule induction and clustering techniques in terms of accuracy and processing time in Data Mining we using induction algorithms and clustering as a hybrid approach to maximize the accurate result in fast processing time. This approach can obtain better result than previous work. This can also improves the traditional algorithms with good result. In the above section we will discuss how this approach results in a positive as compared to other approaches.

**Keywords:** Rule induction, clustering, SOM algorithm, decision list induction, CN2

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13. Richard Jensen, Chris Cornelis(2009)” Hybrid Fuzzy-Rough Rule Induction and Feature Selection”, R. Jensen and Q. Shen are with the Department of Computer Science, Aberystwyth University, UK.

**Authors:** Taranjeet Kaur, Rupinder Kaur

**Paper Title:** Comparison of Various Lacks of Cohesion Metrics

**Abstract:** In software engineering there are plenty of applications used for reduced complexity and improved fault prediction approaches. In this paper we study various metrics that are not very much suitable to find fault classes in software. Basically using the concept of metrics to find fault classes and reduced complexity of classes. various techniques like linear regression, logistic regression, one way ANOVA, principal component analysis, radial basis function network, support vector machines, single layer perceptron, multilayer perceptron, error correction learning, back propagation algorithm. all
these techniques are used to find faulty classes and reduced complexity in software.

**Keywords:** Object oriented classes, class cohesion metrics, software quality, statistical approach.

**References:**

**Authors:** Ahmad Kamil Arshad, Md Diah J, Salah Mohamed Khalil

**Paper Title:** Developing and Validating HMA Workability Prediction Model for Determining the best Paddle as a Machine component for Workability Device

**Abstract:** In extending the previous work in which the authors develop a workability measuring device, this paper presents a laboratory assessment which looks into the relationship between Temperature (T), speed (S), torque (Tq), power (P) and Energy (E), under different types of asphaltic concrete mixes using transducer recording devices. Seven types of mix and 210 samples at six different mixing temperatures were used and at five different RPMs on three types of Paddle configurations (A, B & C) to determine the Paddle which produces the highest R2 and P values. Statistical analyses by the Minitab software was used to develop and validate the model for Energy (workability) for the HMA and the selection of the best Paddle for inclusion, as the component for the workability measuring device. It was found that paddle B was the most suitable and the model was therefore developed using this paddle, as a result of the significant P-value and the highest coefficient of domination (R2) for mixing Temperature, Speed, Power and Torque. The results of the sensitivity analyses demonstrate that Energy exhibits the highest increase when Speed is kept at minimum, mean and maximum values.

**Keywords:** Workability Model, Paddle, Development, Validation, Sensitivity analysis.

**References:**

**Authors:** V. Thiyagarajan, V. Sekar

**Paper Title:** Conversion of IC Engine Driven Bike into Electric Engine Driven Bike
Abstract: India has large two wheelers for personal and private transportation and these two-wheeled vehicles are driven by IC engine. Around 1.3 million vehicles are sold per month. Out of these, 600,000 are motorbikes, 400,000 are scooters, 200,000 are mopeds and 150,000 are 3-wheelers. This gives a total of around 16 million 2 and 3 wheelers sold per year in India. Many of our cities and towns suffer from severe air pollution caused partly by the large number of 2 and 3 wheelers with inefficient and polluting engines. Also few millions of vehicles are scrapped every year due to the condemned IC engines which goes for least price value. Rather, if we have a technology to recycle those vehicles for next 10 to 15 years that would enable the users to reuse their vehicles and decrease the massive manufacturing process and import/export of brand new vehicles produces a far greater impact, or carbon footprint, than running an older vehicle for many years. The technology is the conversion process of an internal combustion engine to an electric vehicle powered by batteries comprises many steps from choosing the vehicle, sizing a motor, and the type of batteries. By using an existing vehicle with this conversion technology, you are not only extending the life cycle of that unit, but saving the huge energy input of recycling, new parts production and new manufacturing. This paper takes an old, condemned motor bike of model 1997 and converts into an all-electric engine driven vehicle with a DC motor and lead acid batteries and explains the process of conversion.

Keywords: EV Conversion, Peukert’s Effect, Conversion Process, Vehicle Mechanics, Transmission Stages

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Authors: B.Saranya, V.Ramaniyetha, M.Vinodhini, R.Sujipriya, A.Shankar

Paper Title: An Embedded Based Code Finder Using Robotic Arm Movement

Abstract: Robotics is the science of designing and building robots suitable for real-life applications in automated manufacturing and other non-manufacturing. Robots are meant to aid people, making a task easier or aiding a person who wants or needs help. The main use of robots has so far been in the automation of mass production industries, where the same, definable tasks must be performed repeatedly in exactly the same fashion. There are some places that still maintain manual records. This project is used for the concern that do not process with mass products instead to deal with ledgers and old records. The main aim of this system is to find a particular code present in a book. The code has been developed using embedded C. A barcode scanner is used to scan the barcode in the paper and it sends to the microcontroller to compare with the predefined barcode. If the code is matched then the microcontroller stops the process of the stepper motor, servo motor and electromagnet. Thus the particular person’s record is found out using this system. The experimental results in software illuminate the reliability of this Code finder system as compared with the existing system is also much cheaper and ‘smarter’ than the traditional ones.

Keywords: Degree Of Freedom (DOF), Printed Circuited Board (PCB), Microelectromechanical Systems (MEMS)

References:

Keywords: Data aggregation; Wireless sensor networks; Privacy homomorphism encryption.

References:

Authors: Vijoy Kumar Peddiny, P.Swaminathan
Paper Title: Improved Natural Balancing Of Ripple Rejection LC-Filter with Modified Phase-Shifted PWM for Single-Leg Five-Level Flying-Capacitor Converters

Abstract: Multilevel power electronic converters are the converter of choice in medium-voltage applications due to their reduced switch voltage stress, better harmonic performance, and Lower switching losses. Flying-capacitor multilevel converter has a distinct advantage in terms of its ease of capacitor voltage balancing. This paper analyses the natural voltage-balancing characteristic of a flying capacitor multilevel converter when it is operated under the spectrally modified Phase Shifted-pulse width modulation (PWM) strategy. Filter network connection is proposed that significantly improves the natural balancing response of a flying capacitor converter for either PWM strategy. This is most significantly done by simulation.

Keywords: Multilevel inverter, Phase shifted-PWM, Single leg five level Flying capacitor converter, self-pre-charging.

Authors: John Major, J, Shajin Prince, Akuluri Rakesh
Paper Title: Secure Data Aggregation and Data Recovery in Wireless Sensor Networks

Abstract: several data aggregation schemes based on privacy homomorphism encryption have been designed and reviewed on wireless sensor networks. Cluster heads can exactly aggregate the cipher texts without decryption; thus, transmission overhead is reduced. Though, the base station only fetches the aggregated result, which origin two problems. First, the usage of aggregation function is obviated. Second, the base station cannot confirm the data integrity and authenticity. This paper go over to the above two drawbacks. In the design, the base station can recover all the sensing data even the data has been aggregated. Besides, the design has been concluded and adopted on both homogeneous and heterogeneous wireless sensor networks.

Keywords: Data aggregation; Wireless sensor networks; Privacy homomorphism encryption.
References:

Authors: Keta Raval, Rajni Bhoomarker, Sameena Zafar

Paper Title: Implementation of Digital Watermarking For Image Security with EBCOT Algorithm and Error Correcting Codes

Abstract: In the cutting edge of technology, secured communication media becomes the essential need of multimedia broadcasting. In the reference of multimedia broadcasting, digital audio, video, internet data needs copyright authentication to prevent unauthorized access of data. Digital Watermarking by DWT–DCT with secret key provides robustness as well as securing information. Digital Watermarking is processed by some way before it reaches to the receiver. The uncompresed digital image has lots of problems related to bandwidth. We can do effective image compression by EBCOT Algorithm. Error correcting codes reduces the effect of noises and attacks on communication channel. Digital watermarking provides cost effective solution for image security and communication.

Keywords: Discrete Cosine Transform, Discrete Wavelet Transform, Embedded Block Coding With Optimal Truncation.

References:

Authors: Solmaz Ghanbarnezhad, Ali Nemati, Maryam Abolfazli

Paper Title: Effect of Calcination Temperatures on Synthesis of Zinc Titanate Nano-Crystal Powders via Combustion Technique

Abstract: Zinc titanate (ZnTiO3; ZT) powders were successfully prepared by a combustion technique. ZT powders were heated at various calcination temperatures, ranging from 500 to 850 ºC, for 2 h at a heating/cooling rate of 5 ºC/min. Powder samples were characterized using thermogravimetric (TGA), differential thermal analysis (DTA), X-ray diffractometry (XRD), scanning electron microscopy (SEM) and laser particle size analyzer (LPSA). The second phases such as ZnO and TiO2 were detected in the powders calcined below 800 ºC. A single perovskite of the ZT powders was found with calcination temperatures a

References:
Routing Analysis in Wireless Mesh Network with Bandwidth Allocation

Abstract: Wireless Mesh Network (WMN) is an important network to provide Internet access to remote areas and wireless connections in a metropolitan scale. As part of the Internet, WMN has to support diversified multimedia applications to all its users. It is essential to provide efficient Quality-of-Service (QoS) support to the networks. Searching the path with the maximum available bandwidth is one of the fundamental issues for supporting QoS in the WMN. The available path bandwidth is defined as the maximum additional rate a flow can push through saturating its path. Therefore, if the rate of traffic in a new flow on a path is no greater than the available bandwidth of this path, accepting the new traffic will not exit the bandwidth guaranteed of the existing flows. Due to interference among channel links, the bandwidth is a bottleneck metric in wired networks, is neither a defect nor additive in wireless networks. In this paper a computing path weight which captures the available path bandwidth information is proposed. This paper also show that the efficient routing protocol based on the new path weight which provides the consistency and loop-freeness to the network. The consistency property guarantees that each node makes an appropriate packet forwarding decision, so that a data packet does traverse through the exact path. The simulation experiments also show that the proposed path weight gives high-throughput paths.

Keywords: Wireless mesh networks, routing, efficient routing proactive hop-by-hop routing, distributed algorithm.

References:

Keywords: HITS, Pagerank algorithm, TSPR, Web mining weighted pagerank algorithm, WPCR etc.

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8. IML, A project management database system, 2005.

Authors: Mohammed Shareef Mahmoud Shareef, R.K. Pandey
Paper Title: Study of Risk and Loss Control Program in Civil Engineering Projects

Abstract: Most of the construction projects are having their own risks and loss factors involved, and hence in order to control such damages we have use strategies to control those risk and loss factors related to project. In this article we are presenting the study over techniques for management of risk and loss control in construction projects. For construction projects, there are many risk and loss facets as well as complicated relations, which will influence it. The complicated relations include direct, indirect, obvious, implicit or unpredictable, What's more, the various risk factors will cause different severity of the consequences. If you do not consider these risk factors, or ignore the major factors, they all will cause damage because of decision-making errors. Quality targets, time targets, cost targets are the three objectives of project management. In the construction project, the time objective is closely and inseparably related to the cost objective. Hence risk and loss management of construction period is a key part in the risk management of construction.

Keywords: Quality targets, time targets, cost targets are the three objectives of project management. In

References:

Authors: Anusuya Venkatesan, Latha Parthiban
Paper Title: Hybirdized Algorithms for Medical Image Segmentation

Abstract: Clustering analysis is a unsupervised pattern recognition and groups similar data items into same cluster while dissimilar data item will be moved into different clusters. The purpose of data clustering is to reveal the data patterns and gain some initial insights regarding data distribution. Similarly Image segmentation groups pixels of an image into multiple segments with respect to intensities. This in turn helps to segment objects of interest from the images. In this paper we discuss various segmentation algorithms such as Fuzzyc-means, Maximum Entropy optimized with Particle swarm Optimization to detect abnormalities present in the image. We apply these algorithms on MRI image and Ultra sound images. In order to improve the visibility of ultra sound images, we apply morphological filtering before segmentation. The results section of this paper show the outcome of the algorithms.

Keywords: FCM, Maximum Entropy, PSO, MIR and Ultra sound image.

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3. Single point iterative weighted fuzzy C-means clustering algorithm for remote sensing image segmentation Pattern Recognition, Volume 42, Issue
11, November 2009, Pages 2527-2540 Jianchao Fan, Min Han, Jun Wang

Authors: Bilal Abdullah Nasir
Paper Title: Design of High Efficiency Cross-Flow Turbine for Hydro-Power Plant

Abstract: The cross-flow hydraulic turbine was gaining popularity in low head and small water flow rate, in establishment of small hydro-power plant, due to its simple structure and ease of manufacturing in the site of the power plant. To obtain a cross-flow turbine with maximum efficiency, the turbine parameters must be included in the design. In this paper all design parameters of cross-flow turbine were calculated at maximum efficiency. These parameters include runner diameter, runner length, runner speed, turbine power, water jet thickness, blade spacing, number of blades, radius of blade curvature, attack angle and the blade and exit angles.

Keywords: Cross-flow turbine, hydro-power plant, design parameters, maximum efficiency.

References:

Authors: Lavanya Pamulaparty, C.V. Guru Rao
Paper Title: A Novel Approach to Perform Document Clustering Using Effectiveness and Efficiency of Simhash

Abstract: Similarity is the most important feature of document clustering as the amount of web documents and the need of integrating documents from the huge multiple repositories, one of the challenging issues is to perform clustering of similar documents efficiently. A measure of the similarity between two patterns drawn from the same feature space is essential to most clustering procedures. From huge repositories, similar document identification for clustering is costly both in terms of space and time duration, and specially when finding near documents where documents could be added or deleted. In this paper, we try to find the effectiveness of Simhash based similarity measurement technique for detecting the similar documents which are used to perform clustering of documents using novel based K-means clustering method.

Keywords: document clustering, Simhash similarity measure, k-means clustering, near documents, fingerprints.

References:


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Authors: S. L. Bangare, A. D. Kadam, P. S. Bangare, P. V. Katariya, C. A. Khot, N. R. Kankure

Paper Title: Solutions Concerning Information Systems for Real Time Bus Arrival

Abstract: In today’s world public transport systems plays an important role in the development of the country. Many factors such as mobility, environmental and energy objectives place demands on public transport systems. Current systems which are old and in need of upgrading, must expand service area, improve efficiency and increase service frequency to serve these demands of the public travelling through the improved transportation system. Research is necessary to solve operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the transport industry and provide people with the real time arrival predictions so as to save their time over waiting & measure the performance of different transport systems. This paper provides means by which the transport industry can develop innovative near-term solutions to meet demands placed on it.

Keywords: Automatic vehicle location (AVL), Automatic passenger counter (APC), Passenger system, Real Time Bus

References:

Authors: A. D. Prasad, Kamal Jain, Ajay Gairlinga

Paper Title: Surface Temperature Estimation using Landsat Data for part of the Godavari and Tapi Basins, India: A Case Study

Abstract: This paper presents results of surface temperatures for a part of the Godavari and Tapi Basins, India. Thermal infrared remote sensing proved its capability in monitoring temperature field. Landsat data of the study area have been used for the surface temperature estimation and analysis. The method used to extract surface radiance from the digital number (DN) values is based on USGS, 2001. Landsat 7 Science Data User’s Handbook. The surface temperature is then extracted from the surface radiance. Based on Landsat image, average temperature of the study area is 25°C, minimum temperature as 150°C, maximum temperature as 350°C respectively, are inferred. The results have been compared with data obtained by India Meteorological Department data. The comparison of observed temperatures has shown a good correlation, with a difference of 2-2.5°C.

Keywords: GIS, Godavari, Landsat7, Temperature.

References:

Authors: Kalyan Chatterjee, Mandavi, Prasannjit, Nilotpal Mrinal, S.Dasgupta

Paper Title: Adaptive Filtering and Compression of Bio-Medical Signals Using Neural Networks

Abstract: Biomedical signals are often contaminated by noise. Thus, noise removal and subsequently their lossless compression is also very necessary. This paper presents an adaptive filtering technique for removing noise from ECG signal using the Recursive Least Square (RLC) method. Twelve significant features are extracted from an echocardiogram (ECG) dataset. After carrying out noise cancellation followed by Recursive Least Square method filtered, ECG signal is obtained. Moreover we have also compressed the ECG signals. The filtered signals are used as input to the artificial neural network. Finally these samples which are used in the database are trained and tested using the Back Propagation Algorithm. The compression ratio is observed to be 0.9745583. It is further observed that input signals are same as the supervised signals used in the network. This paper presents experimental results which demonstrates the usefulness of adaptive filtering and data compression in several bio-medical applications.

Keywords: Adaptive filtering, Data compression, back propagation, Recursive least square method.

References:


Z. Djurović, B. Kovačević, An Adaptive Kalman Filtering Using Recurrent Neural Networks, Proc. 4th Seminar on Neural Network Applications in Electrical Engineering. NEUREL-97


Authors: Sakkeer Hussain C.K., R. Muthukumar, A. Rathnam

Paper Title: A Novel Control Strategy for High Efficient SSPFC Topology

Abstract: The conventional SSPFC (single-stage power factor correction) converters suffer from low efficiency because of high voltage and current stresses acting on switching devices and other circuit parameters. The introduction of resonant converters along with the conventional SSPFC provides a very sensible solution for the above mentioned problem. Since this resonant SSPFC converter operation carried out with variable frequency, it provides an efficient operation only at full load. Below full load, the operation results in efficiency drop due to the shift from resonant frequency. A load dependent strategy helps in maintaining the efficiency level as constant even below full load. Two variables are to be controlled in this circuit, which are resonant frequency and duty ratio. Normally two controllers are essential to perform the operation which cause increased cost and requires more processing time. This paper proposes a single PI controller to control the both variables to provide high converter efficiency and to reduce the cost and the processing time. The proposed system provides a constant efficiency in conversion process up to 50% of full load current. The MATLAB simulation is presented to verify the performance analysis.

Keywords: AC/DC converters, power factor correction converters, PI controller, resonant converter.


Authors: Pankaj N. Shrirao, Rajeshkumar U.Sambhe, Pradip R.Bodade

Paper Title: Convective Heat Transfer Analysis in a Circular Tube with Different Types of Internal Threads of Constant Pitch

Abstract: This work presents an experimental study on the mean Nusselt number, friction factor and thermal enhancement factor characteristics in a circular tube with different types of internal threads of 120 mm pitch under uniform wall heat flux boundary conditions. In the experiments, measured data are taken at Reynolds number in range of 7,000 to 14,000 with air as the test fluid. The experiments were conducted on circular tube with three different types of internal threads viz. acme, buttress and knuckle threads of constant pitch. The heat transfer and friction factor data obtained is...
compared with the data obtained from a plain circular tube under similar geometric and flow conditions. The variations of heat transfer and pressure loss parameters in the form of Nusselt number (Nu) and friction factor (f) respectively is determined and depicted graphically. It is observed that at all Reynolds number, the Nusselt number and thermal performance increases for a circular tube with buttress threads as compared with a circular tube with acme and knuckle threads. These are because of increase in strength and intensity of vortices ejected from the buttress threads. Subsequently an empirical correlation is also formulated to match with experimental results with ± 8% and ± 9%, variation respectively for Nusselt number and friction factor.

Keywords:
Internal threads, Enhancement, heat transfer and turbulent flow

References:

Authors:
Satish bykkam, K.Venkateswara Rao, Ch.Shilpa Chakra, V.Rajendar, Rotte Naresh Kumar, J.Ananthaih

Paper Title:
Graphene Oxide Thin Films: A Simple Profilometer for Film Thickness Measurement

Abstract:
Graphene oxide (GO) films are a few hundred nanometers thick semi-transparent films which have recently become commercially available. GO, used to make the films, is the oxidized form of graphene which can be visualized as a graphene sheet with its basal plane decorated by oxygen-containing groups. GO, produced using the Hummers method, is hydrophilic, solution processable, and an insulator. GO can also be treated to be converted into reduced Graphene Oxide (rGO), which is conductive. The GO can be deposited onto a substrate such as FTO, ITO and glass, to create films. The resulting graphene oxide film measured by a simple profilometer based upon a commercial strain gauge force transducer is described. It has been described on polymer film coated substrates to determine film thicknesses on the order of 20 nm. Measured film thicknesses agree with gravimetrically determined values to within 20 nm and also suitable to potential applications.

Keywords:
Hummers' method, Graphene oxide thin film, spin coating, profilometer

References:
Abstract: The reliable and safe use of wire rope is crucial for crane operations. Wire rope is a very useful and long lasting structural element when properly used and maintained. Therefore, wire rope safety is (or should be) a constant concern of wire rope operators and safety authorities. Safe use of the crane wire ropes depends directly on the rope condition, and on the in-time and reliable rope inspection. This study is focused on the failure analysis of crane wire ropes in service in Morocco. These wastes needs to be managed as well as their impacts needs to be ascertained to pave way for their proper management, however in many cities of India wastes materials management is still a problem. In this research work we are discussing the method for the management and control of waste construction materials. The main objective of this work is present the waste control procedures included as part of particular site management in general based on pull learning process and focusing process transparency principle based on qualitative and quantitative data collection techniques. Additionally we are presenting the literature survey study over waste management system as well as construction waste management.

Keywords: These wastes needs to be managed as well as their impacts needs to be ascertained to pave way for their proper management.

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Authors: G Padmanabha Sivakumar, S.Rameshwari Devi

Paper Title: A Comparative Study: Multiplier Design using Reversible Logic Gates

Abstract: Low power consumption and smaller area are some of the most important criteria for the high performance systems. Optimizing the speed and area of the multiplier is a major design issue. However, area and speed are usually conflicting constraints so that improving speed results mostly in larger areas. Hence in this paper we try to determine the best solution to this problem by using reversible logic gates. Reversible logic has emerged as a promising technology having its applications in low power CMOS. Reversible logic circuits have theoretically zero internal power dissipation because they do not lose information, the classical set of gates such as AND, OR, and EXOR are not reversible. The most significant aspect of the reversible gates used in this paper , are that it can work singly as a reversible full adder, that is reversible full adder can be integrated with a single gate only. General multiplier is based on two concepts. The partial products can be generated in parallel and thereafter the adders can be implemented with a single gate only. The entire power analysis can be done using HSPICE tool, and hence by the comparisons done we can conclude that the proposed system can reduce the power consumption. Furthermore, it has been demonstrated that the proposed design of reversible multiplier circuit using modified full adder, needs fewer garbage outputs and constant inputs. The multipliers can be generalized for N x N bit multiplication. Thus, this work will be of significant value as the technologies mature.

Keywords: Reversible logic gates, Reversible logic circuit, Adders, multipliers, power analysis, simulation outputs

References:


**Abstract:** Metamaterials have been an attractive topic for research in the field of electromagnetic in recent years. This paper highlights the review work of some pioneers whose work has been very promising for scientific and engineering community. In the latter part, a new shape for metamaterial namely Criss-Cross shape has been discussed and its study has been presented in this paper. This shape has been inspired from the famous Jerusalem Cross and Cross with square loops structures. The unit cell response for this shape has been investigated for giving negative response of ε and μ.

**Keywords:** Metamaterials, negative index, effective medium parameter, Jerusalem cross, DNG.

**References:**

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**Abstract:** Data distribution and data retrieval has always been an integral part of the Internet. In particular, video streaming has been gaining popularity over the last few decades. Though there has been no shortage of innovations and Experimentations, no single system has been able to deliver highly scalable and reduce congestion to the requesting users. The development of p2p technologies brings unprecedented new momentum to Internet video streaming. This work proves that p2p is indeed more efficient by taking into account the factors of scalability, response time and reliability of serving the request. This work is broadly and logically divided into joining the network gro...

**Keywords:** Ant Colony Optimization, Peer to Peer, Mesh network, Video Streaming, Bandwidth Optimization.

**References:**
7. You Tube, http://www.youtube.com
Authors: Sonam Wadhwa, Kunwar Pal

Paper Title: Providing Security in VPN by using Tunneling and Firewall

Abstract: The use of security increased consistently day by day. Huge amount of network requires large amount of security. For maintain things consistent and proper functioning, people require secure way to share information over the network. To accomplish this goal Virtual Private Network is one of the popular techniques. It constructs logical link by using existing public infrastructure. Internet is one of the public networks and VPN utilize the internet to connect the users. IPSec Protocol is a protocol suite based on VPN to protect the communication. For uninterrupted VPN services, it is necessary to provide some mechanism by the combination of tunneling and firewall. This paper proposes a new kind of configuration for security to the public network.

Keywords: Tunneling, Firewall, IPSec, Virtual Private Network, Algorithm.

References:
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10. Kenneth Ingham and Stephanie Forrest, “A History and Survey of Network Firewalls”,

Authors: VJ Earnest Praisen R. Narciss Starbell

Paper Title: Simulation of Single Phase Photovoltaic Inverter in PSIM

Abstract: In this paper presents a simulation of single phase inverter with MPPT Buck-Boost converter and SHE PWM pattern for reduction of lower level of Harmonics. This method will be useful in reduces the losses in photovoltaicinverter circuitry for the power produced by solar panel is costly and lower in amount specially compared with conventional energy sources, but the MPPT circuit will increase the efficiency of the solar electrification and the selective harmonic elimination inverter methodology (SHE) will also increases the efficiency by reducing the losses at the inverter with lower total harmonic distortion (THD). The perturb and observe algorithm is used in MPPT control methodology. The simulation of this total circuit simulated in PSIM.

Keywords: MPPT in PSIM, Single phase solar photovoltaics, PWM based Harmonic elimination in PSIM

References:

Authors: Hardik Patel, Rajniukant Soni

Paper Title: Low Voltage, High Gain CMOS Op Amp Using Nested Transconductance Compensation Capacitance

Abstract: An analytic design guide was formulated for the design of 3-stage CMOS OP amp with the nested Gm-C(NGCC) frequency compensation. The proposed design guide generates straight-forwardly the design parameters such as the W/L ratio and current of each transistor from the given design specifications, such as, gain-bandwidth, phase margin, the ratio of compensation capacitance to load capacitance. The applications of this design guide to the 10pF load capacitances, shows that the designed OP amp work with a reasonable performance in both cases, for the range of compensation capacitance from 10% to 100% of load capacitance.

Keywords: Low voltage OP amp, design guide, frequency compensation, nested Gm-C
Abstract:

Transformer less Soft Switching Bidirectional DC-DC Chopper has been proposed in this paper. The above mentioned system can be operated with ZVS, fixed switching frequency, and a ripple-free inductor current regardless of the power flow direction. To provide ZVS of the power switches and a ripple-free inductor current, the proposed converter utilizes a simple auxiliary circuit that consists of an additional winding to the main inductor and an auxiliary inductor. In the ZVS operation, the reverse recovery problem of the anti parallel body diode of the power switch does not occur. The ripple-free inductor current can reduce the voltage ripple. Analysis of the proposed bidirectional DC-DC converter a discussed in detail, and the experimental results obtained on 100-W prototype are analyzed in this paper.

Keywords:
Bidirectional DC-DC converter, DC-DC power conversion, zero-voltage-switching

References:
The page contains a mixture of text and references, but the main focus is on a paper titled "3-bit R-2R Digital to Analog Converter with Better INL&DNL" by Ankit Upadhyay and Rajanikant M. Soni. The abstract of the paper states: "In this paper analysis of 3-bit R-2R ladder DAC proposed with most of the specification in the last decade has been done. All analysis have been supported by simulations results. To carry out the simulations Eldo spice, IC Station and Design architect from Mentor Graphics Tools is used. For all about Pre Layout simulation has been realized using (0.35um) CMOS process Technology.

Keywords: digital-to-analog converters(DAC), R-2R ladder network, INL,DNL

References:
**Paper Title:** Structural And Magnetic Properties of Indium Substituted Cobalt Ferrite Nanoparticles Synthesized by Sol-Gel Auto-combustion Technique

**Abstract:** The indium substituted cobalt ferrite having general molecular formula CoInxFe2-xO4 (for x = 0.0, 0.3,0.5) have been prepared by sol-gel auto combustion technique. The as prepared sample was sintered at 6000C for 4hr. The X-ray diffraction pattern reveals the formation of single phase indium substituted cobalt ferrite samples. The lattice constant obtained from XRD data increases with increase in indium substitution x. The Particle size obtained from XRD data is in the nanometer range. The particle size decreases with increase in indium substitution x. The average grain size obtained from Scanning electron microscopy technique is in nanometer range. The pulse field hysteresis loop tracer technique is used to determine the magnetic parameters such as saturation magnetization (Ms), remanent magnetization (Mr) remanent ratio (Mr/Ms) and coercivity of the samples. The saturation magnetization (Ms), Magneton number (nB) decreases with increase in indium substitution in cobalt ferrite samples.
Keywords: Cobalt ferrite, Magnetization, Nanoparticles, Sol-gel auto-combustion

References:
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Authors: P.B.Buchade

Paper Title: Development of a Versatile Mathematical Routine Library with Microcontroller

Abstract: A software tool for micro controller applications with assembly language programming for interfacing concepts having a multipurpose routine library is developed. This library is intended to solve different mathematical equations like linear equations, first polynomial, second polynomial etc encountered in data acquisition and analysis. Routines are also developed for proper formatted display on LCD. Some of the unique features of this method are highlighted. A multipurpose mathematical routine library which can be used as a tool in designing and implementation of microcontroller based instrumentation systems. The analog voltage on a selected channel read from instrumentation is converted to digital form with ADC stored in internal memory. The subroutine programs for performing the mathematical operations like addition, subtraction, multiplication, division etc in 16 bit format are tested with Integrated Development Environment (IDE) simulator. This subroutine programs are then further used to solve the equations with asm51 cross assembler. The program can debug, erased and reprogrammed immediately and online tested. After assembly completion, error free program is downloaded with FLASH MAGIC in a microcontroller chip

Keywords: Embedded, Microcontroller, Routine Library, software

References:

Authors: R.G. Tambe, M.B. Vaidya

Paper Title: Implementing Mobile Crawler Using JINI Technology to Reduce Network Traffic and Bandwidth Consumption

Abstract: To search any information on the web users extensively use the search engines. As the growth of the World Wide Web exceeded all expectations, the search engines rely on web crawlers to maintain the index of billions of pages for efficient searching. The web crawlers have to interact with millions of hosts and retrieve the pages continuously to keep the 417-419

References:
index up-to-date. According to literature survey, most of the network traffic and bandwidth is consumed by web crawlers so instead of using them, we are proposing mobile crawler developed using JINI technology with the help of remote page selection, filtration and compression at web servers and not search engine.

**Keywords:** JINI Technology, Mobile Agent, Mobile Crawler, web Crawler

**References:**

12. Complete code listings for the agent and agent host architecture components described in this article.

### Authors:
Sunanda Kisanrao Kapde, S.V.Patil

**Paper Title:** Image Compression Method

**Abstract:** Data transmission and storage cost money. The more information being dealt with, the more it costs. In spite of this, most digital data are not stored in the most compact form. Rather, they are stored in whatever way makes them easiest to use. Data compression is the general term for the various algorithms and programs developed to address this problem. A compression program is used to convert data from an easy-to-use format to one optimized for compactness. Here two algorithms were selected namely, the original block truncation coding (BTC) and Absolute Moment block truncation coding (AMBTC) and a comparative study was performed. The results have shown that the ATBTC algorithm outperforms the BTC. It has been show that the image compression using AMBTC provides better image quality than image compression using BTC at the same bit rate. Moreover, the AMBTC is quite faster compared to BTC.

**Keywords:** BTC, AMBTC, Q level quantizer, image compression; mean, standard deviation

**References:**

3. Edward J. Delp, Martha Saenz, and Paul Salama BLOCK TRUNCATION CODING (BTC)/Video and Image Processing Laboratory School of Electrical and Computer Engineering Purdue University West Lafayette, Indiana

### Authors:
Sohini Mondal, Bishnu Prasad De

**Paper Title:** New Delay and Power Analysis for a CMOS Inverter Driving RLC Interconnect

**Abstract:** In this era, the on-chip interconnect delay is significantly more dominating than the gate delay. Several approaches have been proposed to capture the interconnect delay accurately and efficiently. Here delay and power analysis for a CMOS inverter driving a resistive-inductive-capacitive load is presented. A closed form delay and power model of a CMOS inverter driving a resistive-inductive-capacitive load is discussed. The model is derived from Sakurai’s alpha-power law and exhibits good accuracy. The model can be used for the design and analysis of the CMOS inverters that drive a large interconnect RLC load when considering both speed and power. Closed form expressions are also presented for the propagation delay and transition time which exhibit less than 15% error compared to the SPICE for a wide range of RLC loads. Explicit methods are also provided for modeling the short-circuit power dissipation of a CMOS inverter driving a RLC line. The average error is within 22% compared to SPICE for most practical loads.

**Keywords:** Electronics, CMOS, Delay , Power, RLC Interconncet, SPICE, VLSI (Very large scale integration)

**References:**

Load Frequency Control of Interconnected Power System in Deregulated Environment: A Literature Review

Authors: Mukta, Balwinder Singh Surjjan

Abstract: This paper reviews the procedures used to obtain Grid Stability. The grid stability requirements, Interconnected System, Automatic Generation Control (AGC), requirement for intelligent controller, Fuzzy logic controller and High Voltage DC transmission are discussed with their usage in Grid Stability.

Keywords: Automatic Generation Control, Integral Controller, Fuzzy logic Controller, Deregulated Environment, Wind Turbine Generator

References:
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“As Basic Process Controllers” by


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Authors: Nirmal Sharma, S. K. Gupta

Paper Title: Data Warehousing: A Logical Approach to Organization

Abstract: In this research paper will decide manage the design, development, and logical operation of even a single organization’s warehouse can be a difficult and time consuming program. In this paper, we present the first steps to ensure a successful data warehouse development effort. The paper of objective is the problem should be clear, be specific, and have testable criteria for success. If specify these problems and get customer and organization report. This approach is successfully identified on our client’s data warehouse and data development tool. The data warehouse is developing by scratch; the user uses strange data by the easiest way. In this condition counts the data through online analysis tools. The data analysis tools will compare in terms of cost, purpose and user friendliness logical approach. It is not upgrading existing databases or converting from one or more legacy systems. It will have a long list “things about that don’t work right” to start with.

Keywords: Data warehousing, development, manage warehouse & Logical data.
References:

Authors: Hitesh Modi, Nilesh D. Patel

Paper Title: Design and Simulation of Two Stage OTA Using 0.18μm and 0.35μm Technology

Abstract: The OTA is an amplifier whose differential input voltage produces an output current. Thus, it is a voltage controlled current source. Operational transconductance amplifier is one of the most significant building-blocks in integrated continuous-time filters. Here we design a two stage operational transconductance amplifier in TSMC 0.18μm and 0.35μm technology with all the transistor in the saturation region. The simulated output frequency response is shown for a supply voltage of 1.8V and 3.3V using IC studio in Mentor Graphics. DC gain is 47.86dB and 46.75dB, power consumption is 2mW and 3.2mW and slew rate is 37.58 V/μs and 31.67 V/μs for 1.8V and 3.3V respectively.

Keywords: Two stage operational transconductance amplifier, CMOS analog integrated circuits, Gain and Phase Margin.

References:
4. Carsten Wulfh and Trond Ytterdal, “High Speed, High Gain OTA in a Digital 90nm CMOS Technology”.

Authors: Gaurav Chandra, D.K.Saxena, Gaurav Bhandari

Paper Title: Performance Tradeoff of PTS & SLM Technique Using Various Modulator in 802.11g

Abstract: Orthogonal Frequency Division Multiplexing technique (OFDM) is a most widely used technology in today’s wireless communication system. This technology suffer with a shortcoming known as Peak to Average Power Ratio (PAPR), due to this, the High Power Amplifiers (HPA) are worked in nonlinear region and cause inter-modulation distortion and unwanted out of band radiation. To combat the PAPR various PAPR reduction technique are developed. In this paper the most efficient signal distortion-less technique, Partial Transmit Sequence (PTS) and Selected Mapping (SLM) are used under different modulator namely Quadrature Phase Shift Key (QPSK) and Quadrature Amplitude modulator and analyzing and comparing the techniques simultaneously and varying the different parameters like Modulation factor, Sub-band, oversampling factor has been done.

Keywords: CCDF, ODFM, PAPR, PTS, QPSK, QAM and SLM

References:
Abstract: As we know that delay occurs in every phase of construction project. One of the key characteristics of the construction projects is executing the scope of work in a specific amount of time. As project time overrun may have bad consequences for the project performing organization such as cost overrun, damage of company’s reputation, etc. it is important to clarify between causes of excusable delays and causes of non-excusable delays. While most previous studies have focused on finding causes or overcoming delays in the construction phase, few studies have analyzed delay problems in the planning and design phases. The main purpose of proposed research work is to identify and rank delay causes in the planning and design phases. A structured questionnaire was sent to engineers at the A/E companies for public construction projects in INDIA. Based on 95 valid responses, this study identified the delay causes and analyzed the importance and frequency of delays using the relative importance index. Analytical results reveal that “changes in client’s requirement” are the main causes of delays in both planning and design phases. The finding is good justification for many public clients who usually change their requirements during the planning and design phases that really delay construction projects.

Keywords: Civil construction projects, delay, executable delays, non-executable delays, delay factors.


Abstract: Experimental investigations were carried out on corroded reinforced High Performance Concrete (HPC) beams of size 150 mm X 250 mm X 3000 mm under both static and cyclic loading, separately under four point bending. Some of the beams were provided with 10% corroded steel and some with 25%. Corrosion of reinforcement was induced by immersing the RC beams in NaCl solution and by electrical conductivity and monitored with the corrosion analyser. The trend of the load-deflection relation of the beams was similar to that in the case of normal reinforced concrete beams under static loading. The strain energy absorbed by the both categories of the beams was calculated. It was found that the energy absorbed by corroded beams were lower by 10%, 25%, respectively. Some of the beams were also tested under cyclic loading separately. It was observed that the deflection, compressive strain, tensile strain of the beams increase with the number of cycles. The paper presents in detail the experimental investigations conducted on beams and pertinent conclusions drawn there from.

Keywords: High performance Concrete, Corroded steel, Silica Fume, Hyper Plasticizer.

References: 1. Indian standard code specification for 53 grade Ordinary Portland Cement 12269-1997
2. Sammy, Y.N. and Xihuang Ji, “High performance concrete incorporating zeolite, fly ash, and silica fume,” SP172-50, American Concrete Institute, December 1, 1999, pp. 951 to 970.
3. Wei, S., Ganghua, P., and Dajun. D., “Effect of combined use of ultra fine fly ash and silica fume on strength of HPC, ” SP172-16, American Concrete Institute, pp. 299 to 312.
A Neural Network Approach for Randomized Unit Testing Based On Genetic Algorithm

Abstract: The goal of unit testing is to isolate each part of the program and show that the individual parts are correct. A unit test provides a strict, written contract that the piece of code must satisfy. As a result, it affords several benefits. Unit tests find problems early in the development cycle. In continuous unit testing environments, through the inherent practice of sustained maintenance, unit tests will continue to accurately reflect the intended use of the executable code in the face of any change. Depending upon established development practices and unit test coverage, up-to-the-second accuracy can be maintained. In this paper, a genetic algorithm to evolve a set of inputs. So the system called Nighthawk, which uses a genetic algorithm (GA) to find parameters for randomized unit testing that optimize test coverage. Therefore using a feature subset selection (FSS) tool to assess the size and content of the representations within the GA. The enhancement in this work is to introduce Neural network based unit testing , include some training sets for possible output and then apply the Genetic

References:

Authors: R. Raju, P. Subhapriya

Paper Title: A Neural Network Approach for Randomized Unit Testing Based On Genetic Algorithm

Abstract: The goal of unit testing is to isolate each part of the program and show that the individual parts are correct. A unit test provides a strict, written contract that the piece of code must satisfy. As a result, it affords several benefits. Unit tests find problems early in the development cycle. In continuous unit testing environments, through the inherent practice of sustained maintenance, unit tests will continue to accurately reflect the intended use of the executable code in the face of any change. Depending upon established development practices and unit test coverage, up-to-the-second accuracy can be maintained. In this paper, a genetic algorithm to evolve a set of inputs. So the system called Nighthawk, which uses a genetic algorithm (GA) to find parameters for randomized unit testing that optimize test coverage. Therefore using a feature subset selection (FSS) tool to assess the size and content of the representations within the GA. The enhancement in this work is to introduce Neural network based unit testing , include some training sets for possible output and then apply the Genetic

References:

Authors: R. Raju, J. Mohananpriya

Paper Title: Truthful Mechanisms for Scheduling Selfish Related Machines Using ACO

Abstract: Task scheduling is a major challenge in parallel and distributed systems. Task scheduling techniques in distributed systems are usually based on trusting the Accuracy of the information about the status of resources. In a commercial multi- Cloud environment, individual providers are focused towards increasing their own profits and do not care about the utility of users and other providers. In such an environment, we cannot trust the information presented by the providers. To address the scheduling problem in a commercial multi-Cloud environment using reverse auctions, propose a new truthful mechanism for scheduling single tasks on the set of resources. Then adapt the proposed mechanism to dynamically schedule workflow applications. A new pricing model and truthful scheduling mechanism to find the best resource for executing a task, Ant Colony Optimization is introduced. The proposed system is used to dynamically schedule multiple tasks using multiple servers. Also task rescheduling is achieved when the task is not completed within the time. The monetary cost and execution time of the task is more concentrated in the proposed system.
Algorithm. Therefore these results shows a better efficiency in the unit testing and reduce the test coverage.

Keywords: Unit testing, Genetic algorithm, Neural network, FSS.

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4. Randomized Differential Testing as a Prelude to Formal Verification Alex Groce, Gerard Holzmann, and Rajeev Joshi. Laboratory for Reliable Software, Jet Propulsion Laboratory, California Institute of Technology Pasadena, CA 91109, USA.
5. On the Value of Combining Feature Subset Selection with Genetic Algorithms: Faster Learning of Coverage Models James H. Andrews University of Western Ontario Department of Computer Science, London, Ont., Canada, N6A 2B7 andrews.cs@uwo.ca Tim Menzies Lane Department of Computer Science, EE, Morgantown, WV, USA tim@menzies.us.
10. SWAT: A Spiking Neural Network Training Algorithm for Classification Problems John J. Wade, Liam J. McDaid, Jose A. Santos, and Heather M. Sayers IEEE TRANSACTIONS ON NEURAL NETWORKS, VOLL, NO. 11, NOVEMBER 2010
15. Toward the Training of Feed-Forward Neural Networks With the D-Optimum Input Sequence Marcin Witzacz IEEE TRANSACTIONS ON NEURAL NETWORKS, VOL. 17, NO. 2, MARCH 2006.

Authors: Vakkalagadda Prasad, Mada Yaswanth Manikanta, M.V.D Prasad

Paper Title: Modular Architecture for Industrial Automation

Abstract: Industrial automation is the wide area of FPGA based nodes and zigbeebasedcommunication devoted to industrial applications, Commercial applications and medical equipment. Industrial automation which are mainly depend on the power systems and requires to control over long distances which require wireless sensor networks and Zigbee based communication systems. The wireless technology require for the sensing, processing, power monitoring and communication among the industrial machines. These can be achieved by the various technologies like FPGA Based nodes for wireless sensor networks and Zigbee based communication etc. This paper proposes a digital system for the sensing, processing, power monitoring and communication using the FPGA Based nodes for wireless sensor networks and the Zigbee based technology. The growth of sensor networks during the last years is a fact and within this field, wireless sensor networks are growing particularly as there are many applications that demand the use of many nodes even hundreds or thousands. More and more applications are emerging to solve several problems in data acquisition and take advantage of the environment, by using wireless sensor networks, light low power consumption, low size and low cost. With this goal in mind, we propose a modular architecture for the nodes, composed of four layers: communication, processing, power supply and sensing. The purpose is to minimize the redesign effort as well as to make the node flexible and adaptable to many different applications. In a first prototype of the node, we present a node with a mixed design based on a microcontroller and an FPGA for the processing layer and Zigbee technology for communications. Zigbee protocol as the communication medium between the transmitter and receiver modules which transfers the data efficiently.

Keywords: These can be achieved by the various technologies like FPGA Based nodes for wireless sensor networks and Zigbee based communication etc.

References:

Authors: Jayesh D. Kamble, Gaurav S. Apshete, Rekha V. Nagargoje, Sonam R. Jain

Paper Title: Process Adaptive Web Services with Container Management System

Abstract: In highly dynamic and heterogeneous environment such as mobility transactional system and ubiquitous computing, software must be able to adapt at runtime and react to the environment. Furthermore it should be independent of
In this paper results are presented on an experimental investigation carried out on mortar cubes which were subjected to bacterial precipitation by different bacterial strains and influence of bacterial calcite precipitation on the compressive strength of mortar cube on 7, 14 and 28 days of bacterial treatment. Three bacterial strains Bacillus Flexus, isolated from concrete environment, Bacillus pasturii and Bacillus sphaericus were used. The cubes were immersed in bacterial and culture medium for above mentioned days with control cubes immersed in water and was tested for compressive strength. The result indicates that there was improvement in the compressive strength in the early strength of cubes which were reduced with time. Among the three strains of bacteria, Cubes treated with Bacillus flexus which is capable of surviving at high pH, precipitate high calcite, and has less generation of acid.

Keywords: Bacillus flexus, calcite, compressive strength, mortar cubes.

References:


Authors: Jagadeesha Kumar B G, R Prabhakara, Pushpa H.

Paper Title: Effect of Bacterial Calcite Precipitation on Compressive Strength of Mortar Cubes

Abstract: In this paper results are presented on an experimental investigation carried out on mortar cubes which were subjected to bacterial precipitation by different bacterial strains and influence of bacterial calcite precipitation on the compressive strength of mortar cube on 7, 14 and 28 days of bacterial treatment. Three bacterial strains Bacillus Flexus, isolated from concrete environment, Bacillus pasturii and Bacillus sphaericus were used. The cubes were immersed in bacterial and culture medium for above mentioned days with control cubes immersed in water and was tested for compressive strength. The result indicates that there was improvement in the compressive strength in the early strength of cubes which were reduced with time. Among the three strains of bacteria, Cubes treated with Bacillus flexus which is not reported as bacteria for calcite precipitation has shown maximum compressive strength than the other two bacterial strains and control cubes. Bacillus flexus which is capable of surviving at high pH, precipitate high calcite, and has less generation of acid can be used for bacterial calcite precipitation as concrete crack remediation and improvement of compressive strength of both mortar and concrete.

Keywords: Bacillus flexus, calcite, compressive strength, mortar cubes.

References:


Related Papers:

This research aims to improve the plant layout of manufacturing industry to make optimum space utilization, eliminate obstructions in material flow and thus obtain maximum productivity. The present layout and operation process of each section (i.e. material storage, cutting, machining shop, fabrication shop, assembly and inspection section and finish product storage) have been investigated. The problem in the space utilization and material flow pattern was identified. Flow process chart of each product is studied and it is analyze by Minimum Product Travel Method and CRAFT (Computerized Relative Allocation of Facilities Technique). The result showed that raw material section, process chart of each product is studied and it is analyze by Minimum Product Travel Method and CRAFT (Computerized Relative Allocation of Facilities Technique). The result showed that raw material section, cutting section and fabrication shops should be allocated to make the good material flow. The suitable of new plant layout can decrease the Distance of Material Flow and Transportation Cost which rises production.
Keywords: CRAFT, Plant Layout, Production

References:

Authors: N. A. Ansari, P. N. Shende, M. J. Sheikh, R. D. Vaidya

Paper Title: Study and Justification of Body Postures of Workers Working In SSI by Using Reba

Abstract: An efficient and effective system, which is the base of a productive system, depends on the manner of service delivery by human operators. Important aspect is an ergonomics in order to improve performance of workers at work, develop an independent measure at work which will coordinate psychological, physical, and physiological aspects that is dependable for person behavior and effectiveness at work and stand as a key factor deciding workers efficiency. This paper center of attention on the ergonomics thought required to be governed in the small scale industries (SSIs), a precise case of Cultivators and Harvester manufacturing unit is considered, which is different from all these aspects. mainly, an important & large component ‘turn table’ is considered for analyzing the ergonomic manufacturing methods. The crack between ergonomic considerations and actual practices at the place of work gives the standpoint to design the workstation. The data of musculoskeletal disorder of employee working at workplace of Cultivators and Harvester manufacturing unit is collected, analyzed and justified by using REBA.

Keywords: Ergonomic, Small Scale industries (SSIs), Cultivators and Harvester, musculoskeletal disorders, REBA etc.

References:

505-509
Authors: Vedavathi, N., Dharmaiah Gurram
Paper Title: Theorems on Planar Graphs

Abstract: Graph coloring is a well-known and well-studied area of graph theory with many applications. In this paper, we will discuss list precoloring extensions.

Keywords: 5-list-coloring, 2-connected, P-separating 3-cycle.

References:

Authors: Kanwal Singh, Himanshu Aggarwal
Paper Title: Critical Factors in Consumers Perception towards Mobile Commerce in E-Governance Implementation: An Indian Perspective

Abstract: Mobile commerce (M-commerce) tools and its services are growing at a much faster pace in this digitized world. The competitive race between the various mobile phone companies and the products that they make, offer much competitive price and services to the citizens in their day to day lives. But the common man and the Government in every country are all confused and helpless with this dynamic state of the mobile technology and its M-services. The need is so as to be par with or have equally capable standards viz. M-commerce technologies with such new innovative and technological wonderful services so as to offer efficient services to the common citizens. This paper provides an opportunity for the common citizens perceptions based on mobile commerce to be studied and also, finding the critical factors in consumer’s perception towards mobile commerce in e-Governance implementation.

Keywords: Mobile commerce, E-Governance, Citizen Perception, Adoption factors, Mobile services

References:

Authors: Anuradha Garg, Ajay Tiwari, Hemant Kumar Garg
Paper Title: A Secure Energy Efficiency Routing Approach In Wireless Sensor Networks

Abstract: For the energy limited wireless sensor networks, the critical problem is how to achieve the energy efficiency. Many attackers can consume the limited network energy, by the method of capturing some legal nodes then control them to start DoS and flooding attack, which is difficult to be detected by only the classic cryptography based techniques with common routing protocols in wireless sensor networks. We argue that under the condition of attacking, existing routing schemes are low energy-efficient and vulnerable to inside attack due to their deterministic nature. To avoid the energy consumption caused by the inside attack initiated by the malicious nodes, this paper proposes a novel energy efficiency routing. Under our design, each node computes the trust value of its 1-hop neighbors based on their multiple behaviors attributes evaluation and builds a trust management by the trust value. By this way, sensor nodes act as router to achieve
dynamic and adaptive routing, where the node can select much energy efficiency and faithful forwarding node from its neighbors according to their remaining energy and trust values in the next process of data collection.

**Keywords:** Wireless Sensor Network, Energy efficiency, node compromised, trust management.

**References:**

**Authors:** Madhuri V. Joseph

**Paper Title:** Data Mining and Business Intelligence Applications in Telecommunication Industry

**Abstract:** Telecommunication companies today are operating in highly competitive and challenging environment. Huge volume of data is generated from various operational systems and these are used for solving many business problems that required urgent handling. These data include call detail data, customer data and network data. Data Mining methods and business intelligence technology are widely used for handling the business problems in this industry. The main application areas of BI and Data Mining in telecommunication industry include fraud detection, network fault isolation and improving market effectiveness.

**Keywords:** Data Mining, Telecommunications, Business Intelligence, Fraud Detection, Network fault Isolation, Marketing & CR.M

**References:**
Authors: Nishu kalia, Kundan Munjal

Paper Title: Multiple Black Hole Node Attack Detection Scheme in MANET by Modifying AODV Protocol

Abstract: Mobile Ad hoc Networks (MANET) is a self-configuring, infrastructure less network consists of independent mobile nodes that can communicate via wireless medium. Each mobile node can move freely in any direction, and changes their links to other devices frequently. Security is an essential part of ad hoc networks. Due to its dynamic topology, resource constraints, no centralized infrastructure and limited security, it is vulnerable to various attacks and black hole attack is one of them. In this attack, the malicious node advertises itself as having the shortest path to the destination and falsely replies to the route requests, and drops all receiving packets. In this paper, a mechanism to detect the multiple black hole nodes has been proposed by modifying AODV protocol.

Keywords: MANET, fake RREQ, Record field, multiple black hole nodes.

References:

Authors: Jyotsna Yadav, Arpita Bharti, Rohit Patel, Mukesh Kumar

Paper Title: Implementation and Performance Comparison Study of 1-D and 2-D FIR Filter using MATLAB

Abstract: FIR filters have only a finite number of terms in their impulse response. These filters have a number of advantages over the IIR filter types. FIR filter is always stable, realizable, and provides a linear phase response under specific conditions. These characteristics make FIR filters attractive to many filter designers. However, the major disadvantage of FIR filters is that the number of coefficients needed to implement a specific filter is often much larger than for IIR designs. Finite Impulse Response (FIR) filter is a filter structure that can be used to implement almost any sort of frequency response digitally. An FIR filter is usually implemented by using a series of delays, multipliers, and adders to create the filter's output. A Multirate digital signal processing is required in digital system where more than one Sampling Rate is required. This paper brings the performance comparison between the FIR designing methodologies like the 1-D, 2-D FIR Filters. In this paper 1-D, 2-D FIR filters using their operation have been implemented and simulated in the MATLAB and Simulink environment and their response has been studied in the waveforms. Simulation result shows that 2-D filter has increased computation speed as compared to 1-D, and is more efficient in reducing the noise in the signal.

Keywords: Digital Filters, FIR Filters, 2-D FIR Filter, MATLAB.

References:
Virtual Environments Provide Mammoth Security for Critical Server

Abstract: Security is the key factor of resolution of computer era. In every field of computer it may be cloud computing, neural network, data ware house, data mining, or grid computing in every field the security is central theme. We can provide the security by means of authentication process. Authentication is nothing but the process of validating who you are to whom you claim to be. The most common approach for authentication is alphanumeric passwords. Traditionally, alphanumeric passwords have been used for authentication. The textual passwords meets with the two conflicting things a) Passwords should be easy to remember, at the same time b) Passwords hard to guess. Users tend to choose meaningful words from dictionaries, which make textual passwords easy to break and vulnerable to dictionary or brute force attacks. Many available graphical passwords have a password space that is less than or equal to the textual password space. Now day’s graphical passwords are other alternatives. Our paper reports to the comparison study between the different graphical password schemes and the alphanumeric passwords.

Through we present and evaluate the 3-D password. The 3-D password is a multifactor authentication scheme. The 3-D password presents a 3-D virtual environment containing various virtual objects. The user navigates through this environment and interacts with the objects. The 3-D password is simply the combination and the sequence of user interactions that occur in the 3-D virtual environment. The 3-D password can combine recognition-, recall-, token-, and biometrics-based systems into one authentication scheme. This can be done by designing a 3-D virtual environment that contains objects that request information to be recalled, information to be recognized, tokens to be presented, and biometrical data to be verified.

Keywords: Authentication, biometrics, graphical passwords, multifactor, textual passwords, 3-D passwords, 3-D virtual environment.

References:
5. BC news, Cash Machine Fraud up, Say Banks, Nov. 4, 2006.

Authors: Rahul Vivek Purohit, Syed A. Imam
Paper Title: Learning Role of Facial Marks in Automatic Face Recognition for Forensic Science Applications

Abstract: In forensic science applications, when an image is partially damaged or occluded, some ancillary information like facial marks and gender can be used to enhance the face recognition accuracy. This information coupled with traditional face matcher provides more descriptive evidence and at the same time may speed up the recognition process. This paper proposes a method to utilize facial marks for improving face image matching.

Keywords: soft biometric, facial marks, global features, face vacs

References:
Authors: Amruta S. Moon, Rajiv Srivastava Yogdhar Pandey

Paper Title: Impact of Kernel Fisher Analysis Method on Face Recognition

Abstract: Human Face recognition is a challenging task in computer vision and pattern recognition. Face recognition is difficult because it is a real world problem. The Human Face is complex, natural object that tends not to have easily identified edges and features. Because of this, it is difficult to develop a mathematical model of that face that can be used as prior knowledge when analyzing a particular image. This paper deals with the correspondence presents Color and Frequency Features based face recognition. The CFF method, which applies an Enhanced Fisher Model (EFM), extracts the complementary frequency features in a new hybrid color space for improving face recognition performance. The new color space, the RIQ color space, which combines the component image of the RGB color space and the chromatic components and of the YIQ color space, displays prominent capability for improving face recognition performance due to the complementary characteristics of its component images. The EFM then extracts the complementary features from the real part, the imaginary part, and the magnitude of the image in the frequency domain. The complementary features are then fused by means of concatenation at the feature level to derive similarity scores for classification. The complementary feature extraction and feature level fusion procedure applies to the I and Q component images as well. The hybrid color space improves face recognition performance significantly, and the complementary color and frequency features further improve face recognition performance. In CFF method particular, the Indian database had used for experimental analysis. There are many problems with face recognition such as facial expression, pose, age and occlusion. The Training set contains 200 images that are either controlled or uncontrolled. The Target set has 400 controlled images and the Query set has 100 uncontrolled images. While the faces in the controlled images have good image resolution, the faces in the uncontrolled images have lower image resolution and . These uncontrolled factors pose grand challenges to the face recognition performance. The face images used in our experiments are normalized to 64×64 to extract the facial region, which contains only face and the performance of face recognition is thus not affected by the factors not related to face, such as hair styles. These experimental results show that the combination of the hybrid color and frequency features by the CFF method is able to further improve face recognition performance. In particular the CFF method achieves the face verification rate (corresponding to the TestSet3) of 80.3% at the false accept rate of 0.1%. Future research will be considered applying kernel methods, such as the multiclass Kernel Fisher Analysis (KFA) method to replace the EFM method for improving face recognition performance. And Note that the KFA method achieves, at 0.1% false accept rate, 84% face verification rate (FVR) respectively. Experimental result shows that the proposed method is efficient and improves the face recognition performance by large margin.

Keywords: KFA(Kernel Fisher Analysis), CFF(Color and Frequency Features based face recognition), EFM, RIQ.

References:
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Authors: Ranjeet Srivastva, Aditya Raj, Tushar Patnaik, Bhupendra Kumar

Paper Title: A Survey on Techniques of Separation of Machine Printed Text and Handwritten Text

Abstract: In many documents such as admission form, bank cheques, memorandums, letters and application forms machine printed and handwritten characters are mixed. Since the algorithms for recognition of machine-printed texts and handwritten texts are different, it is necessary to distinguish between these two types of texts before giving it to respective OCR systems to process it. This separation will definitely increase the performance and overall system quality. The paper discusses some observations about characteristics of these two types of texts and various techniques of separation of machine printed and handwritten text into three categories (Structural and statistical features, Gradient features and Geometric features) based on feature extraction method.

Keywords: Feature Extraction, Handwritten Text, Machine Printed Text, OCR.

References

Authors: Yashima Ahuja, Sumit Kumar Yadav

Paper Title: A Statistical Approach to Support Vector Machine

Abstract: This paper provides you a brief description about support vector machine. In this, we have explained other universal approximators rather than layered feed-forward network and radial-basis function networks. Here, we have also explained mathematical concepts of support vector machine.

Keywords: Dual Problem, Linearly Separable, Non-linear Separable, Primal Problem, Support Vector Machine

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12. Support Vector Machine,
13. Support Vector Machine,
18. Authors: R.Balamurugan, S.Muruganand
Abstract: In this paper, Electronic laser speckle pattern technique has been adopted to measure small deformation/displacement of a specimen. A low cost Laser Speckle Interferometer has been designed with minor modification of Michelson Interferometer. Laser speckle images are recorded before the deformation (reference image) and after deformation. By simple subtraction of the digital speckle images, a fringe pattern obtained using image processing technique. It gives information about the displacement by means of its phase evaluation.

Keywords: Laser speckle, image Subtraction, displacement/deformation.

References:


16. G. S. Lehal and Chandan Singh, “Feature Extraction and Classification for OCR of Gurmukhi Script”.


Authors: Alok Kumar, Madhuri Yadav, Tushar Patnaik, Bhupendra Kumar

Paper Title: A Survey on Touching Character Segmentation

Abstract: Character segmentation is an important step of Optical Character Recognition (OCR) system. The segmentation of touching symbols is one of the key factors which affect the performance of recognition system. Therefore, to make OCR systems more effective and accurate, segmentation of touching characters is an important task. This paper explains the concepts of touching characters and presents the survey of various approaches for touching character segmentation.

Keywords: Optical Character Recognition systems, Recognition rate, Segmentation, Touching Characters.

References:


Authors: Pallavi Hemant Dixit, Utam L. Bombale

Paper Title: Arm Implementation of LSB Algorithm of Steganography

Abstract: Network security and protection of data have been of great concern and a subject of research over the years There are many different forms of steganography mechanisms like LSB, Masking and filtering and Transform techniques. All of them have respective strong and weak points. The Least Significant Bit (LSB) embedding Technique suggests that data can be hidden in the least significant bits of the cover image and the human eye would be unable to notice the hidden image in the cover file. This technique can be used for hiding images in 24-Bit, 8-Bit, Gray scale format. This paper explains the LSB embedding technique and Presents the evaluation for various file Formats. In a network, the success of the algorithm depends on hiding technique used to store information into the image. This paper is based on the study of steganography with its LSB algorithm. Human biometrics like iris, fingerprint, and face are the unique things for human. That’s why we propose a unique authentication and encryption technique using IRIS biometric pattern of a person. Text message encrypted by cryptographic key which is generated by iris image. Then using LSB algorithm this encrypted text message hide into the iris image. LSB algorithm is implemented in ARM7 LPC2148.

Keywords: iris image, steganography, LSB.

References:
Contextual Advertising is a type of Web advertising. Content match has greater potential for content providers, publishers and advertisers, because users spend most of their time on the Web on content pages. In past researches, Contextual targeting technology works by searching the website and looks up relevant keywords. But Nowadays, in contextual advertising, matching is determined automatically by the page content, which complicates the task considerably.

We Proposed a System which can target the large group of consumer on internet. In Our system we make contextual targeting more relevant with Extraction of relevant entities from the web page. We extract the entities from web page, which is of interest to the consumer. We target the interest of internet user and put up the ads according to their interest. The system is designed in such a way that it can extract entities (Name, Place, Title, Location, date etc) from web page and ad publisher put up a advertise on that page which include those entities which are extracted from page. This Process will extract different types of entities, which will identify by different patterns prepared by the rules based approach. The described system able to find out the entities in many context using pattern identification. Once pattern will match entities are extracted and used by ad publisher for publishing the ads according to the context of entities. The above described method is more relevant and effective and it will target more consumers and generate revenue by advertising.

Keywords: (Name, Place, Title, Location, date etc) from web page and ad publisher put up a advertise on that page which include those entities which are extracted from page.

References:
1. Zaqqng Nie, Ji-Rong Wen, and Wei-YingMa “Statistical Extraction from Web Manuscript” ID 0004-SIP-2011-PIEEE.R1
Abstract: Power flow analysis is the backbone of power system analysis and design. They are necessary for planning, operation, economic scheduling and exchange of power between utilities. The principal information of power flow analysis is to find the magnitude and phase angle of voltage at each bus and the real and reactive power flowing in each transmission lines. Power flow analysis is an important tool involving numerical analysis applied to a power system. In this analysis, iterative techniques are used. This process is difficult and takes a lot of times to perform by manually. The objective of this project is to develop a tool for power flow analysis that will help for analysis become easier. The economic load dispatch plays an important role in the operation of power system, and different techniques have been used to solve these problems.

Keywords: This process is difficult and takes a lot of times to perform by manually.

References:

Authors: T. Ratna Reddy, M.V.S. Murali Krishna, Ch. Kesava Reddy, P.V.K.Murthy

Paper Title: Comparative Performance of Ceramic Coated Diesel Engine with Mohr Oil in Crude and Biodiesel Form

Abstract: Investigations were carried out to evaluate the performance of a low grade low heat rejection (LHR) diesel engine with ceramic coated cylinder head with 3-mm air gap with different operating conditions [normal temperature and pre-heated temperature] of crude mohr oil (CMO) and mohr oil based biodiesel (MOBD) with varied injection pressure and injection timing. Performance parameters of brake thermal efficiency, exhaust gas temperature, volumetric efficiency and sound intensity were determined at various values of brake mean effective pressure (BMEP).Exhaust emissions of smoke and oxides of nitrogen (NOx) were recorded at the various values of BMEP. Combustion characteristics at peak load operation of the engine were measured with TDC (top dead centre) encoder, pressure transducer, console and special pressure-crank angle software package. Conventional engine (CE) showed compatible performance, while LHR engine showed marginally increased performance with vegetable oils (CMO & MOBD) operation at recommended injection timing and pressure. The performance of both version of the engine improved with advanced injection timing and at higher injection pressure when compared with CE with pure diesel operation.

Keywords: Crude Mohr oil, Bio-diesel, CE, LHR engine, Fuel Performance, Exhaust Emissions, Combustion Characteristics.

References:
Abstract: In the recent scenario, distillation process with solar still plays vital role for getting potable water from brackish and sea water. In this paper, attempt has been made to enhance the productivity of the solar still with the help of LHTESS (Latent heat thermal energy storage sub-system). Latent heat storage in a phase change material PCMs is very attractive because of its high storage density with small temperature difference. For experimentation and comparison purpose, a Cascade Solar Still with and without LHTESS were designed and constructed for water purification with a view of enhancing productivity. Solar still of the present study mainly consists of stepped absorber plate integrated with phase-change energy storage sub-system or LHTESS and single slope glass plate. This setup will be placed at an angle of 25° to the horizontal. Paraffin wax is used as LHTESS due to its feasible general and economic properties [1]. The hourly productivity is slightly higher in case of solar still without LHTESS during sunny days. The disadvantages of phase change material is corrosion when in direct contact with metal pipings or housings [5].

Keywords: Distillation, Solar Still, LHTESS, Paraffin wax, salt hydrated phase change materials, PCMs.


Authors: Philip A. Adewuyi, Muniru O. Okelola, Adewale O. Jemilehin

Paper Title: PIC Based Model of an Intelligent Gate Controller

Abstract: To have an idea is good but to have the idea replicated with a good model is better. This explains the decision to have sensitive places protected, using an intelligent gate controller system, from unwanted individuals or group of individuals that usually take advantages of loose security systems at the point of entry. The microcontroller used for this model is PIC16F84A programmed using “miKroBasic pro for pic”. This microcontroller serves as the main controller linking the software components with the hardware components. Features that serve as the input are the face of the driver as well as the plate number of the vehicle. These features are extracted using pattern recognition protocols and processed in Luxand SDK interface and character recognition is done using the OCR tool. In addition, voice control module is embedded in the design using Java programming language to make the process audible via a speech rendering element. This model is built using hardware components, such as; electronic switches in form of relays, the 12V step down transformer, a wooden cabinet, surveillance cameras, dc motor, a monitor, and a host of others.

Keywords: DC motor, microcontroller, mikroBasic, OCR, Surveillance, voice recognition

References:

Authors: S. Naghibzadeh, M. A. Faghihi-Sani, S. Baghshahi

Paper Title: Synthesis of Beige Pigment on the Basis of (Fe, Zn, Cr, Al) Spinel

Abstract: The beige pigment based on (Fe, Zn, Cr, Al) Spinel structures were successfully synthesized by solid reaction of oxides. At first a reference beige pigment CBD3002 from Qumisar company has been analysed by XRF, XRD, SEM and EDS to characterize the pigment. Then the beige pigment on the basis of (Fe, Zn, Cr, Al) Spinel were synthesized successfully by solid reaction of oxides.
According to these results, various formulations have been prepared and calcined at different conditions. The obtained pigments have been analysed by XRD, SEM/EDS, LPSA and CIE-Lab. The prepared pigments as well as the reference pigments, have been added to the glaze. Then, after glaze firing, their colors have been measured in CIE-Lab system. The results showed that color quality of the optimized pigment (i.e. ZnO/Cr2O3=4.16, Fe2O3/Cr2O3=1.50 and Ca at 1200°C) prepared in this work was better than the reference one. Adding more than 3Wt.% of the pigments in the glaze does not induce significant changes in color. The prepared pigment showed good thermal and chemical stability.

**Keywords:** Beige, Synthesis, Spinel, Ceramic pigment

**References:**


**Authors:** B.Damodhara Reddy, S.Aruna Jyothy, I.V.Ramana Reddy

**Paper Title:** Influence of Microsilica on the Properties of Ordinary Portland cement and Portland Slag Cement with and without Super plasticizers

**Abstract:** The development of the construction industry in the global level needs more and more quantity of cement for sustainable growth. But, the production of each tonne of cement clinker releases one tonne of carbon dioxide, which affects the earth’s ecosystem. The construction industry is now slowly becoming aware of the environmental issues and other sustainable development issues for cement and concrete industries. It is looking for the ways and means to develop building products, which will increase the life span and quality. In this regard the merits of using certain industrial by products such as fly ash, ground granulated blast furnace slag, microsilica, and rice husk ash have been well recognized by the construction industry. Therefore, it should be obvious that certain scale cement replacement with industrial by products is highly advantageous from the stand point of cost, economy, energy efficiency, durability and other ecological and environmental benefits. In the present investigation an attempt is made to find various properties based on the experimental results, mathematical models were elaborated to predict the strength of mortar cubes with partial replacement of cement by Microsilica admixture with 5%, 10% and 15%of total powder content by weight both with and without the presence of Superplasticizer. Strength of cubes with Ordinary Portland Cement (OPC) and Portland Slag Cement (PSC), after 3,7,28, 90 days and 365 days of curing and also durability tests after 60 days, were analysed to evaluate the effect of addition content, the time of curing and the compressive strength changes. The investigation revealed that use of one of such waste materials microsilica which is a waste material obtained from alloy industries can be used for partial replacement of cement, which leads to economy and in addition by utilizing the industrial wastes in the useful manner the environment pollution is also reduced to great extent and which leads to sustainable development. Test results indicate that the use of microsilica has improved the performance of cement in strength as well as in durability aspect.

**Keywords:** Compressive Strength, Durability, Ordinary Portland cement (OPC), Portland Slag cement (PSC), Microsilica (MS).

**References:**

14. IS 9103-1999 Concrete Admixtures-Specifications, Bureau of Indian Standards, New Delhi, India.
15. IS 5514:1969 Apparatus used in Le Chatelier test, Indian Standards, New Delhi, India.
Abstract: Performance appraisal system is used in the organizations to measure the effectiveness and efficiency of their employees. Performance Appraisal system is needed because every employee has a different attitude to handle the work. Performance Appraisal tends to improve the work performance, communication expectations, determining employee potential and aiding employee counseling. In this paper we present the review of some popular performance appraisal techniques along with their pros and cons, Ranking, Graphic Rating Scale, Critical Incident, Narrative Essays, Management By Objectives, Assessment Centers, BARS, 360 Degree and 720 Degree are some performance appraisal techniques.

Keywords: Ranking, Graphic Rating Scale, Critical Incident, Narrative Essays, MBO, Assessment Centers, BARS, Human Resource Accounting, 360 degree appraisal, 720 degree appraisal

References:

Abstract: QR codes are developed by a Japanese company has been around for over fifteen years. With the advent of smart and Web capable mobile devices, we witness a steady growth of interesting commercial applications using QR codes. It cannot be denied that documents in the form of hardcopy are still being used, especially important documents such as land titles, application forms, contracts and tickets. However there are reports of forgery cases over the years and as such, it is imperative to have a mechanism for integrity verification of hardcopy document. The research proposed the usage of two-dimensional (2D) barcodes, which has the capability of storing data, to assist in reducing the action of hardcopy forgeries. We introduce an application for the automated examination using the QR code. In this, we make use of QR code to generate an question paper, the snap of the QR code is taken by every student and the required data is decoded and question paper is generated on the mobile phone. Students can give the answers by using their mobile phone itself.

Keywords: QR Code, MCQ, SCA, MCA

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Abstract: Orthogonal Frequency Division Multiplexing (OFDM) is considered as a digital multi carrier modulation technique. This technique will use a large number of closely spaced orthogonal subcarriers to avoid cross-talk. It provides high data rates with sufficient robustness to radio channel damages. A major problem in OFDM is carrier frequency offset error between the transmitted and received signals. Due to this the orthogonality of the subcarriers is no longer maintained which results in ICI (Inter carrier Interference). As a result the power leakage among the subcarriers which results in reduction in the system performance. In this paper, different ICI cancellation techniques such as frequency domain equalization, time domain windowing, pulse shaping and ICI self-cancellation are studied and our main concentration is on the ICI self-cancellation scheme.

Keywords: Carrier frequency offset (CFO), crosstalk, Inerter Carrier Interference, frequency domain equalization, pulse
shaping, self-cancellation, multicarrier modulation.

References:

Authors: Ramanand Harijan, Padma Devi, Pawan Kumar

Paper Title: Design of A Low Voltage Low Power CMOS Current Mirror with Enhanced Dynamic Range

Abstract: A novel cascode current mirror (CM), suitable for operation at low voltage levels is presented. The mirror has high input and high output voltage swings. The presented current mirror circuit combines the advantages of wide input swing, wide output swing and large output resistance capability which makes it attractive for low-voltage and low power application. Based on IBM 0.18um MOS model parameters, TSPICE simulation results show that the input current range of 1uA to 2mA with 882.83MHz bandwidth for the presented level shifted low voltage current mirror circuit. The power dissipation has improved by more than 40%.

Keywords: Current mirror, Low voltage current mirror, level shifted Current mirror, Level shifted low voltage current mirror, Dynamic range.

References:

Authors: Felixkala T and Sethuraman V.S

Paper Title: Shrinkage Properties of HPC using Granite Powder as Fine Aggregate

Abstract: Shrinkage is the time-dependant decrease in concrete volume compared with the original placement volume of concrete. Shrinkage potential of a high performance concrete is perhaps the most important consideration which affects the long-term strength and durability, and hence efforts are being made to reduce the shrinkage and shrinkage cracks. The main objective of this experimental work was to investigate the shrinkage properties of concrete made with granite powder as fine aggregate and partial replacement of cement with combination of admixtures. The granite powder, one of the byproducts in stone crushing process, not being used for any applications other than filling up low lying areas was identified as a replacement material for river sand in concrete. Admixtures such as silica fume, fly ash, slag and superplasticiser have the inherent ability to contribute to continued strength development and very high durability. In the present work, concrete made with 25% of granite powder as a replacement of sand and with 10% of Fly ash, 10% of ground granulated blast-furnace slag, 7.5% of silica fume and 1% of superplasticiser as a replacement of cement were considered. The results indicated that concrete specimens produced with admixture and granite powder has lesser shrinkage parameters like maximum length of crack, minimum width of crack, total number of cracks as compared with conventional concrete specimens. The test results also indicated that the values of both plastic and drying shrinkage strains of concrete in the granite powder with admixture concrete specimens were greater than those of ordinary concrete specimens.

Keywords: HPC, Granite powder, admixtures, plastic shrinkage, drying shrinkage and crack.
Abstract: In the field of Software Engineering software risk management is an important area. Due to the complex nature of software development industry there are many types of risks which can cause project failure. From such risks developing wrong software functions is one due to which many problems can arise. If effects of this risk are not estimated it would pose problems for the success of the project. By estimating the effects of developing wrong software functions developer will come to know which problem they have to face with the occurrence of this risk and considering these effects developer can take appropriate action to manage this risk. So, we are proposing a FCM based tool to estimate the effects of developing wrong software functions.

Keywords: Risk Management, Fuzzy Cognitive map.

References:

Statistical New Coordinated Design of PSSs and SVC via Hybrid Algorithm

Abstract: The assessment of new coordinated design of Power System Stabilizers (PSSs) and Static Var Compensator (SVC) in a multimachine power system via statistical method is proposed in this paper. The coordinated design problem of PSSs and SVC over a wide range of loading conditions is formulated as an optimization problem. The Bacterial Swarming Optimization (BSO), which synergistically couples the Bacterial Foraging (BF) with the Particle Swarm Optimization (PSO), is employed to search for optimal controllers parameters. By minimizing the proposed objective function, in which the speed deviations between generators are involved; stability performance of the system is improved. To compare the capability of PSS and SVC, both are designed independently, and then in a coordinated manner. Simultaneous tuning of the BSO based coordinated controller gives robust damping performance over wide range of operating conditions and large disturbance in compare to optimized PSS controller based on BSO (BSOPSS) and optimized SVC controller based on BSO (BSOSVC). Moreover, a statistical T test is performed to ensure the effectiveness of coordinated controller versus uncoordinated one.

Keywords: Statistical T test, SVC, PSSs, Multimachine Power System, Coordinated design, Bacteria Swarm Optimization.

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Authors: Anjali Singla, Jagpreet Kaur
Paper Title: A Survey on Parallel Partition Prime Multiple Algorithm
Abstract: One of the important problems in data mining research is discovering Association rules from databases of transactions, where each transaction contains a set of items. In this dissertation work and improved approach proposed for parallel association rule mining. I proposed a new parallel partition prime multiple algorithms for association rule mining. Partition prime multiple algorithm addresses the shortcoming of previously proposed parallel buddy prime algorithm. New efficient algorithm proposed for load balancing. The proposed algorithm for parallel frequent item set mining and load balancing reduces the time and data complexity and divide transactional database efficiently for good load balancing among the processor.

Keywords: Association Rule, Load Balancing Algorithm

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Authors: Arshi Salamat
Paper Title: A Simple Scheme for Measurement of Power Frequency Deviation
Abstract: Measurement of power frequency deviation is important for the design of power system equipments such as stabilizers, frequency meters etc. This paper has suggested a monitoring scheme using a 90° phase shifter. The use of phase shifter makes it easier to compare the two frequencies, the nominal and deviated frequency. The shifted and normal frequency signals are combined through EX-OR gate. If the power frequency differs from its nominal value, a difference in
the pulse counts of two successive pulses occur which will be proportional to amount of deviated frequency. This method has advantage of providing high resolution. Also it is very simple and less expensive as compare to other methods. The scheme is implemented using 8085 microprocessor.

**Keywords:** Zero Crossing Detector, Deviation, Phase shifter, Resolution

**References:**