Managing Chair
Mr. Jitendra Kumar Sen
International Journal of Engineering and Advanced Technology (IJEAT)

Reviewer Chair
Dr. Soni Changlani
Professor, Department of Electronics & Communication, Lakshmi Narain College of Technology & Science, Bhopal (M.P.), India

Dr. M.M. Manyuchi
Professor, Department Chemical and Process Systems Engineering, Lecturer-Harare Institute of Technology, Zimbabwe

Dr. John Kaiser S. Calautit
Professor, Department Civil Engineering, School of Civil Engineering, University of Leeds, LS2 9JT, Leeds, United Kingdom

Dr. Audai Hussein Al-Abbas
Deputy Head, Department AL-Musaib Technical College/ Foundation of Technical Education/Babylon, Iraq

Dr. Seref Doğuşcan Akbaş
Professor, Department Civil Engineering, Şehit Muhtar Mah. Öğüt Sok. No:2/37 Beyoğlu Istanbul, Turkey

Dr. H S Behera
Associate Professor, Department Computer Science & Engineering, Veer Surendra Sai University of Technology (VSSUT) A Unitary Technical University Established by the Government of Odisha, India

Dr. Rajeev Tiwari
Associate Professor, Department Computer Science & Engineering, University of Petroleum & Energy Studies (UPES), Bidholi, Uttarakhand, India

Dr. Piyush Kumar Shukla
Assoc. Professor, Department of Computer Science and Engineering, University Institute of Technology, RGPV, Bhopal (M.P.), India

Dr. Piyush Lotia
Assoc.Professor, Department of Electronics and Instrumentation, Shankaracharya College of Engineering and Technology, Bhilai (C.G.), India

Dr. Asha Rai
Assoc. Professor, Department of Communication Skils, Technocrat Institute of Technology, Bhopal (M.P.), India

Dr. Vahid Nourani
Assoc. Professor, Department of Civil Engineering, University of Minnesota, USA

Dr. Hung-Wei Wu
Assoc. Professor, Department of Computer and Communication, Kun Shan University, Taiwan

Dr. Vuda Sreenivasarao
Associate Professor, Department of Computer And Information Technology, Defence University College, Debrezeit Ethiopia, India

Dr. Sanjay Bhargava
Assoc. Professor, Department of Computer Science, Banasthali University, Jaipur, India

Dr. Sanjoy Deb
Assoc. Professor, Department of ECE, BIT Sathy, Sathyamangalam, Tamilnadu, India

Dr. Papita Das (Saha)
Assoc. Professor, Department of Biotechnology, National Institute of Technology, Duraipur, India

Dr. Waail Mahmood Lafta Al-Waely
Assoc. Professor, Department of Mechatronics Engineering, Al-Mustafa University College – Plastain Street near AL-SAAKKRA square- Baghdad - Iraq

Dr. P. P. Satya Paul Kumar
Assoc. Professor, Department of Physical Education & Sports Sciences, University College of Physical Education & Sports Sciences, Guntur

Dr. Sohrab Mirsaedi
Associate Professor, Department of Electrical Engineering, Universiti Teknologi Malaysia (UTM), Skudai, Johor, Malaysia
Dr. Ehsan Noroozinejad Farsangi
Associate Professor, Department of Civil Engineering, International Institute of Earthquake Engineering and Seismology (IIEES) Farmanieh, Tehran - Iran

Dr. Omed Ghareb Abdullah
Associate Professor, Department of Physics, School of Science, University of Sulaimani, Iraq

Dr. Khaled Eskaf
Associate Professor, Department of Computer Engineering, College of Computing and Information Technology, Alexandria, Egypt

Dr. Nitin W. Ingole
Associate Professor & Head, Department of Civil Engineering, Prof Ram Meghe Institute of Technology and Research, Badnera Amravati

Dr. P. K. Gupta
Associate Professor, Department of Computer Science and Engineering, Jaypee University of Information Technology, P.O. Dumehar Bani, Solan, India

Dr. P.Ganesh Kumar
Associate Professor, Department of Electronics & Communication, Sri Krishna College of Engineering and Technology, Linyi Top Network Co Ltd Linyi , Shandong Provience, China

Dr. Santhosh K V
Associate Professor, Department of Instrumentation and Control Engineering, Manipal Institute of Technology, Manipal, Karnataka, India.
Abstract: The concept of text mining is nothing but the mechanism of extracting non-trivial and interesting data from the unstructured text dataset. Text mining is consisting of many computer science disciplines with highly oriented towards the artificial intelligence in general such as the applications like information retrieval, pattern recognition, machine learning, natural language processing, and neural networks. The main difference between the search and text mining is that, search needs users attention means based users requirement search action will perform whereas text mining is the internal process which attempts to find out information in the pattern which is not known before. To do the text mining, there are many methods presented still to the date those are having their own advantages and disadvantages. The major problems related to such techniques are efficient use and update of discovered patterns, problems related to the synonymy and polysemy etc. In this paper we are investigating the one such method which is presented to overcome above said problems related to the text mining’s. The method presented here is based on innovative as well as effective pattern discovery technique and this consisting of processes like pattern deploying and pattern evolving in order to improve the effectiveness of using and updating discovered patterns for finding relevant and interesting information.

Keywords: Pattern recognition, text mining, knowledge discover, KDD.

References:
11. J. Han, J. Pei, and Y. Yin, “Mining Frequent Patterns without Candidate Generation,” Proc. ACM SIGMOD Int’l Conf. Management of Data (SIGMOD ’00), pp. 1-12, 2000.
Abstract: In this paper, the temperature distribution in convective radiative continuously moving fin with variable thermal conductivity, which is loosing heat by simultaneous convection radiation to surroundings, is studied. We consider three particular cases, namely thermal conductivity is (I) constant (II) a linear function of temperature and (III) an exponential function of temperature. Wavelet Collocation Method is used to solve this nonlinear heat transfer problem. The exact solution obtained in absence of radiation-conduction fin parameter are compared with Wavelet Collocation solution are same. The fin efficiency is computed in absence of radiation-conduction fin parameter. The whole analysis is presented in dimensionless form and effect of different parameters such as thermal conductivity parameter ‘a’, Peclet number ‘Pe’, convection-conduction parameter ‘Nc’, radiation-conduction parameter ‘Nr’, dimensionless convection sink temperature ‘θa’ and dimensionless radiation sink temperature ‘θs’ on the fin temperature is discussed in detail.

Keywords: Wavelet, Collocation, Convection, Radiation, heat transfer, fin, Conductivity.

References:

Authors: B.Gopinath, S.Suresh Kumar, Juvan Michael
Paper Title: Unified Power Flow Controller (UPFC) for Dynamic Stability in Power System using Modern Control Techniques
Abstract: Flexible AC Transmission System (FACTS) technology was introduced to overcome the operational difficulties with conventional method of power compensation. Unified Power Flow Controller (UPFC) is a sort of multi-function controller that can influence the transmission parameters individually or simultaneously. UPFC allows precise control of both real and reactive power flow in transmission line. This paper deals with the advanced control technique for UPFC to provide effective real and reactive power compensation. Adaptive Neuro Fuzzy Inference Controller (ANFIC) concept is introduced to control the system under different operating conditions. The system is tested on a 5-bus system. The computer simulations are done by MATLAB/SIMULINK.

Keywords: Adaptive Neuro Fuzzy Inference Controller, Flexible AC Transmission System, Fuzzy based PSO, Fuzzy-PI Controller, Particle swarm optimization algorithm.

References:


Authors: Neeraj Kumar, Amit Sharma

Paper Title: A review on BPR and RSCM in an Auto Ancillary Industry: A Combined Thought

Abstract: Ecological and fiscal issues have significant impacts on Reverse Supply Chain Management (RSCM) and are considered to shape one of the developmental keystones of sustainable supply chain. Business Process Reengineering is a subterfuge- determined organizational inventiveness, basically reexamine and redesign business practice with the intention of accomplishing competitive step forward in quality, receptiveness, expenditure, customer fulfillment and other critical process performance measures. In this research paper we offer an appraisal of BPR vision focusing upon the use of informational techniques to facilitate a shift way from linear sequential work organization towards parallel work and multidisciplinary team work.

Keywords: Introduction, Review on Methodology, Product Development Cycle, Frame of Work, Results & Conclusion, References

References:


14. “Going Backwards: Reverse Logistics Trends and Practice” by Dr dale S. Rogers and Dr Ronald s Tribben- Lembke ( University of Nevada Reno, Centre for Logistic Management)


 Authors: Prabhjitshek Singh, R S Chadha

Paper Title: Review to Digital Watermarking and a Novel Approach to Position the Watermark in the Digital Image

Abstract: Digital watermarking technology is a frontier research field and it mainly focuses on the intellectual property rights, identification and authentication of the digital media to protect the important documents. According to the basic analysis of digital image watermarking the digital watermarking model consists of two modules, which are watermark embedding module and watermark extraction and detection module Since it is known that digital image transmitted and spread over the network so there is a chance of being polluted by the noise or it may be attacked by the malicious users. The watermark embedded in the digital image may be incorrectly detected due to shortage of algorithms, so to precisely position the watermark is the main issue. A review to Digital watermarking is being presented in the paper and a novel watermark positioning approach is proposed in this paper which uses the statistical characteristics of the pixels to embed the watermark into brightness values of the pixels using image segmentation on the Windows platform using Matlab programming language.

Keywords: Digital Watermarking, Image segmentation, Matlab functions, Otsu’s method thresholding, Patchwork algorithm.

References:


Abstract: Internet is a heterogeneous network environment and the network resources that are available to real time applications can be modified very quickly. Today, the underlying infrastructure of the Internet does not sufficiently support quality of service (QoS) guarantees. The new technologies, which are used for the implementation of networks, provide capabilities to support QoS in one network domain but it is not easy to implement QoS among various network domains, in order to provide end-to-end QoS to the user. In addition, some researchers believe that the cost for providing end-to-end QoS is too big, and it is better to invest on careful network design and careful network monitoring, in order to identify and upgrade the congested network links [4] Real time applications must have the capability to adapt their operation to network changes. In order to add adaptation characteristics to real time applications, we can use techniques both at the network and application layers

Keywords: QoS.

References:
Abstract: Faults in induction motors may cause a system to fail. Hence it is necessary to detect and correct them before the complete motor failure. In the paper, induction motors faults are studied and detected with the use of Radial basis function neural network. Radial Basis Function is trained and tested in this paper. Simple parameters like set of currents are taken as an input and fed to a Radial basis Function Neural Network. The comparison of Radial basis Functions is shown in this paper.

Keywords: Currents, Faults, Induction Motors, Radial Basis Function, Neural Network

References:
3. Sitao Wu and Tommy W. S. Chow “Induction Machine Fault Detection Using SOM-Based RBF Neural Networks” vol. 51, no. 1, February 2004
10. Matlab Artificial Neural network toolbox
11. Matlab Radial basis function toolbox
satisfied the standard requirements of bricks grade MW. Notwithstanding the techno-economic virtues, phosphogypsum-based bricks comply with the criteria for environmentally friendly products manufactured with industrial by-product and the manufacturing process is totally energy conservative.

Keywords: phosphogypsum; Full brick grade MW; strength; Durability

References:
22. AFNOR. Lixiviation – Essai de conformité pour Lixiviacion des dechets fragmentes et des boues. NF EN 12457-3; 2002 [in French].

Authors: V. V.Govind Kumar, K. Venkata Reddy, Deva Pratap

Paper Title: Updation of Cadastral Maps Using High Resolution Remotely Sensed Data

Abstract: A cadastral map shows the boundaries of all land parcels on large scale maps together with the village registers which contains the ownership,land use and area details. Updating the cadastral information is very essential so that transformations/changes of ownership of parcels etc. can be recorded in an orderly manner for documentation and further use. Presently, the cadastral maps are being updated with high resolution remotely sensed images using Geographical Information Systems (GIS) and Global Positioning System (GPS). Present paper discusses the updation of the geospatial information and quantification of the accuracy of the geo-referenced cadastral map of Venkatapuram village of Thororrmandal, Warangal District, Andhra Pradesh, India. After mosaicing the Google Earth downloaded images of the study area, rectification of has been carried out using SOI topsheets. Vectorised cadastral map is prepared in the GIS environment using the scanned cadastral map of the study area and registered using Ground Control Points (GCPs) collected from GPS instrument. The features of cadastral map are updated by superimposing the vectorised cadastral map on the rectified imagery of the study area. The accuracy assessment of the vectorised cadastral map has been carried out. From the observation of mean percentage deviation, standard percentage deviation and parcel area, it is seen that large area parcels have more accurate and less distortion than small area parcels. The methodology presented in this paper is useful to update the cadastral maps with low to medium accuracy.

Keywords: GIS, GPS, Google Earth High Resolution Imagery, Cadastral Map Updation

References:
In this paper, investigation is carried out for the improvement of power system stability by utilizing fuzzy logic based HVDC controls.
considered in the stability analysis. Transient stability analysis is done on a multi-machine system, where, a fuzzy logic controller is developed to improve the stability of the power system. The results show the application of the fuzzy controller in AC-DC power systems and case studied at different fault locations.

**Keywords:** HVDC, Power System Stability, Multi – Machine Stability, Fuzzy Logic controller

**References:**


**Authors:** Omprakash Gawai, Ketan Pandurang Kale, Mahesh Sanjay Gund, Ganesh Balasaheb Gaware

**Paper Title:** Communication In USB’S For Data Transfer

**Abstract:** The system enables data sharing between mobile and pen drive directly without using computer or laptop. An arm processor is interfaced USB and USB host controller. Latest mobile phones have got memory capacities GB’s and can be connected computers. These mobile phones have capability to get connected to the internet. The mobile phones have the additional features like camera, mp3, multimedia A/V, etc. A large amount of data is handled through mobiles. The system will enable data sharing between mobile, pen drive, digital camera and the device having USB interface. This will eliminate need of an intermediate computer and thus save time and power.

**Keywords:** USB, GB’s, MP3, A/V.

**References:**


**Authors:** C. Rajakannan, S. Govindaradjane, T. Sundararajan

**Paper Title:** Bio – Medical Waste Management in Pondicherry Region: A Case Study

**Abstract:** Health Care Establishments (HCEs) generate biomedical waste (BMW), 15 – 35% of which are hazardous and toxic. In spite of existence of regulatory mechanisms for handling etc., the ground reality is far from satisfactory, in India. There is a need to assess the actual practices that are followed in HCEs in all major cities and towns. In this study BMW handling and management in HCEs located in Pondicherry, India has been investigated. It was found that the importance of segregation of waste has been realized by hospital staff. Further, HCEs in the region has been practicing one of the three methods (i.e. autoclaving, incineration and microwave irradiation) of treatment of BMW. A novel and low cost treatment of BMW has been proposed and implemented in private hospitals, Pondicherry as a case study. The results are very encouraging and cost effective.

**Keywords:** BMW, low cost treatment method, assessment of quantity, neem and tobacco extract, management of BMW.

**References:**

4. Government of India (GoI), National Guidelines on Hospital Waste Management Based upon the Bio-Medical Waste (Management & Handling) Rules.

Authors: Amritpal Kaur, Sandeep Singh

Paper Title: Classification and Selection of Best Saving Service for Potential Investors using Decision Tree – Data Mining Algorithms

Abstract: This research delineates a comprehensive and successful application of decision tree induction to large banking data set of different banking services obtained by numbers of customers. Complex interaction effects among banking services that lead to increased policy variability have been detected. The extracted information has been confirmed by the database managers, and used to improve the decision process. The research suggests that decision tree induction may be particularly useful when data is multidimensional, and the various process parameters and highly complex interactions. In order to classify and identify effective and beneficial saving service and design the appropriate criteria for selecting the right scheme for different persons having different taste, this study developed a data mining framework for analyzing banks and post office data, in which suitable[1] technique is employed to extract rules between present saving schemes. In other words, the objectives of this thesis are

- To classify the available saving services of banks and post office to good, medium and bad level.
- To select the best saving service according the investor’s choice and its preference.
- To guide the potential investor to invest his money in the particular scheme so as to get more benefits.
- To help to take the right decision for investment.
- To reduce the time to take particular decision as there will be no need to analyze each and every available investment scheme thoroughly.

Keywords: CHAID, C4.5, cluster, data mining, decision tree induction, ID3.

References:
1. Alex Berson, Data Warehousing, Data Mining & OLAP, pp. 351.
2. Gu Xiang, A Synthesized Data Mining Algorithm Based on Clustering and Decision Tree. New York: Springer-Verlag, 1985, ch. 4.

Authors: Santosh Kumar Bharti, Shashi Kant Dargar, Abha Nyati

Paper Title: Energy-Aware Performance Evaluation of WSNs using Fuzzy Logic

Abstract: Wireless Sensor Networks (WSNs) are being used to form large, dense networks for the purpose of long term environmental sensing and data collection. Unfortunately, these networks are typically deployed in remote environment where energy source are limited. WSN’s, present a new generation of real-time embedded systems with limited computation, energy and memory resources that are being used in a wide variety of applications where traditional networking infrastructure is practically infeasible. Appropriate cluster-head node election can drastically reduce the energy consumption and enhance the lifetime of the network. In this paper, a fuzzy based energy-aware sensor network communication protocol is developed based on three descriptors - energy, concentration and centrality. Further we have to compared fuzzy based approach with other popular protocol LEACH and improved hierarchy scheme DBS. Simulation shows that depending upon network configuration, a substantial increase in network lifetime can be accomplished as compared to probabilistically selecting the nodes as cluster-heads using only local information.

Keywords: Wireless Microsensor networks, LEACH, cluster head election, distance based Segmentation, Fuzzy C-Mean Algorithms.

References:
17.
18.

Authors: Chinar Regundwar, Navnath Rahinj, Priti Rayrikar, Shashikant Bhosale, Navnath D. Kale

Paper Title: Call Log, Message and Camera Monitoring System over Android

Abstract: There are limitations on storage of call and message logs as well as images in mobile phone memory. Android usually keeps a history of the 500 latest calls and any calls older than that are automatically deleted from the phone. We cannot see the records of deleted messages and cannot restore them same in case of images. If your data is corrupted then all of your messages may get lost so there is need of an application that could keep records of all call logs, messages and camera images at storage other than phone here we propose to develop a mobile application for android phones. This application Server will store information for further use. So user can save unlimited call logs, messages telephony activities in phone (E.g. Calls, Messaging & Camera). On occurrence of such activity it will collect information about activity (e.g. caller, call date, time, message content or image) and send it to server. And camera images and can see anytime, from anywhere by login remotely from his mobile.

Keywords: Android, data is corrupted, call logs, Messages, Camera Images, Application Server, telephony activity.

References:
1. en.wikipedia.org/wiki/Android_software_development
8. Professional Android 4 Application Development – Reto Meier
9. PROF. R. C. Dharmik, Sangharsha B. Lanjewar, New Approach For Time E

Authors: Kuldeep B. Shukla, Hetal N. Rao, Arjun H. Joshi

Paper Title: Implementation of ATM Algorithm through VHDL

Abstract: ATM (automatic teller machine) is a very essential tool required for the society in order to facilitate the need of safe transaction of money. Using this facility one can easily perform the various functions such as balance inquiry, withdrawn, money transfer etc. As this machine operation rely on bank cards, proper password, enough amount of money in one’s account, certain verification and identification methods etc. It needs to be secure and having integrity of fine level right to its coding stage for optimum utilization of the service. In order to meet such requirements the coding languages used for it are modified here. The conventional coding styles using ‘C’ and/or ‘C++’ are replaced by the VHDL code language so that the attacker cannot easily crack the security levels. In this article, the code composed of VHDL language is suggested for this purpose of security.

Keywords: Automatic Teller Machine (ATM), VHDL, Krypton Board, Integrity, Security Level.

References:
2. Mike Bond, Omar Choudary, Steven J. Murdoch, Sergei Skorobogatov, and Ross Anderson, “Chip and Skim: cloning EMV cards with the pre-play attack”. Computer Laboratory, University of Cambridge, UK.
4. Pong P. Chu “RTL Hardware Design Using VHDL, Coding For Efficiency, portability and Scalability”, Willy Interscience a john w

Authors: Priyanka Korde, Vijay Panwar, Sneha Kalse

Paper Title: Implementation of ATM Algorithm through VHDL

Abstract: ATM (automatic teller machine) is a very essential tool required for the society in order to facilitate the need of safe transaction of money. Using this facility one can easily perform the various functions such as balance inquiry, withdrawn, money transfer etc. As this machine operation rely on bank cards, proper password, enough amount of money in one’s account, certain verification and identification methods etc. It needs to be secure and having integrity of fine level right to its coding stage for optimum utilization of the service. In order to meet such requirements the coding languages used for it are modified here. The conventional coding styles using ‘C’ and/or ‘C++’ are replaced by the VHDL code language so that the attacker cannot easily crack the security levels. In this article, the code composed of VHDL language is suggested for this purpose of security.

Keywords: Automatic Teller Machine (ATM), VHDL, Krypton Board, Integrity, Security Level.

References:
2. Mike Bond, Omar Choudary, Steven J. Murdoch, Sergei Skorobogatov, and Ross Anderson, “Chip and Skim: cloning EMV cards with the pre-play attack”. Computer Laboratory, University of Cambridge, UK.
4. Pong P. Chu “RTL Hardware Design Using VHDL, Coding For Efficiency, portability and Scalability”, Willy Interscience a john w
Paper Title: Securing Personal Health Records in Cloud using Attribute Based Encryption

Abstract: This paper presents the design and implementation of Personal Health Records and providing security to them while they are stored at third party such as cloud. Personal Health Record is web based application that allows people to access and co-ordinate their lifelong health information. The patient have control over access to their own PHR. To achieve security of personal health records we use the attribute based encryption to encrypt the data before outsourcing it. Here we focus on multiple types of PHR owner scenario and division of personal health records users into multiple security domains which reduce key management complexity for owners and users. A high degree of patient’s privacy is guaranteed. Our scheme gives personal health record owner full control of his/her data. Extensive security and performance analysis shows that the proposed scheme is highly efficient.

Keywords: personal health records, attribute based encryption, cloud computing, secure sharing

References:

10. Melissa Chase “Multi-authority Attribute based Encryption,” Computer Science Department Brown University Providence, RI 02912

Authors: Ali Tarebsi, Mohamed-Ali Rezgui And Smain Bezzina

Paper Title: Assessment of the Tensile Elongation (E %) And Hardening Capacity (Hc) Of Joints Produced In Friction Stir Welded 2017 Aa (Enaw-Alcu 4mgsi) Plates

Abstract: The study has aimed at investigating the leverage of three Friction Steer Welding (FSW) factors, namely, the tool rotation speed (Nrpm), the tool traverse rate (F(mm.mn-1)) and the tool pin/shoulder diameters ratio r (%) on the two FSW process responses: the joint tensile elongation (E%) and hardening capacity (Hc). For the experiment appraisal, 18 tested coupons have been cut in 6mm thick rolled plates of 2017 A alloys. Variation in the responses is evaluated by conducting a Face-Centered Central Composite Design (FCCD) strategy and Anova Technique. Then, a second-order RSM model has been considered to describe the predictive formulation of the responses (E%) and (Hc), appropriately. Thereby, the multi-regression models pertaining to (E%) and (Hc) were built and analyzed for factors leverage and sensitivity. Lastly, a simultaneous optimization procedure is used to find out the best combination of factors N, F and r% which guarantees maximum (E%) and (Hc), concurrently. At 95% of C.I., the research findings have pointed out the leverage of the tool geometry factor (r%) as well as the rotation speed (N) on the FSW process responses (E%) and (Hc). However, the process was found robust with respect to the tool traverse rate parameter (F).

Keywords: F.S.W., R.S.M., Taguchi, ANN, Genetic Algorithms, Ductility, Tensile elongation, Hardening capacity, 2017 AA

References:


Authors: Abhinav Bhargava, Samrat Ghosh, Savan Kumar Oad

Paper Title: A Multi (U) Rectangular Micro-strip Multiband Patch Antenna

Abstract: In this paper we present a proposed design for Rectangular micro-strip patch antenna by cutting U shaped slots in the Rectangular patch which operates at two central frequencies 1.8, 2.7GHz. Which is a new dual frequency microstrip antenna? By micro strip feeding technique proposed antenna design we find the resultant return loss, VSWR and bandwidth. For the design of the microstrip antenna we have used FR-4 substrates which have permittivity of 4.4 and thickness 3.2, loss tangent is 0.02. We are using FEKO simulation software for designing and analysis. We have observed that using slotted patch antenna and using micro strip at proper location we can get better return loss, VSWR bandwidth and multiband.

Keywords: Slotted Rectangular micro-strip patch antenna, return loss, VSWR, radiation pattern.

References:

Authors: E. Mohan, K.B. Jayaramman, U. Maheswaran, D. Sathiayaraj. G.Dhakshanamoorthi

Paper Title: A Novel Approach for Satellite Image Resolution Enhancement

Abstract: Image resolution is an important issue in satellite imaging. Wavelets play a significant role in multi resolution analysis. In this paper, a new resolution enhancement technique is proposed. This method is based on interpolation of the high frequency sub-bands which are obtained by performing Discrete Wavelet Transform (DWT) on input image. DWT separates the image in to different sub-bands images namely, low-low (LL), low-high (LH), high-low (HL) and high-high (HH). Interpolation can be applied to these four sub-band images. In the wavelet domain, the low-resolution image is obtained by low-pass filtering of the high-resolution image. The low-resolution image (LL sub-band) is used as input for the proposed resolution enhancement process. The high frequency sub-bands contain the high frequency components of image. Interpolation is carried out using Adjacent pixel algorithm and Inverse Discrete Wavelet Transform(IDWT) has been applied to combine all these images to generate the final super-resolved image. This approach generates sharper and clearer image. The proposed method has shown superiority over the conventional image resolution enhancement techniques.

Keywords: Adjacent Pixel algorithm, DWT (discrete wavelet transform), Image Enhancement, Interpolation, Adjacent Pixel algorithm.

References:


### Authors:

**Afsoona Nadia, S. K. Aditya**

### Paper Title:

**Performance Analysis of GSM Coverage considering Spectral Efficiency, Interference and Cell Sourcing**

### Abstract:

In this work, the capacity and coverage area of GSM system have been studied. This paper presents the importance of using link budget calculations, determining the path loss and cell range for RF coverage planning and improving capacity using cell-sourcing. The major contribution is to estimate the coverage of GSM system which depends on BS antenna height, transmitting antenna gain, output power of BS for propagation environment such as rural, sub-urban and urban case. MATLAB has been used for simulation and performance evaluation of capacity and coverage in GSM system. Path loss for uplink and downlink has been calculated using Link Calculator software considering 3-sector antenna. Analysis reveals that coverage area improves significantly considering spectral efficiency, interference and cell sectoring. As an example, Google Earth and Radio Works software have been used to estimate the coverage area for a particular area. A 3D coverage map has been formulated using this result.

### Keywords:

Cell Sourcing, GSM Coverage, Interference, Spectral Efficiency.

### References:


### Authors:

**Nirvesh S. Mehta, Nilesh J. Parekh, Ravi K. Dayatar**

### Paper Title:

**Improve the Thermal Efficiency of Gearbox Using Different Type of Gear Oils**

### Abstract:

Gear box performance is dependent on viscosity of lubricant oil and due to the thermal effect of heat generated in side of an oil span of gear box. Thus if we change properties of an oil, the performance of gear box does change. The effect on gear box performance will be studied by CFD Analysis. CFD analysis of gear box is carried out for different viscosity oils. For the analysis purpose design of Maruti Omni’s gear box is used. Compression of thermal analysis is done for different viscosity oils are SAE 85W 140 (High Grade), SAE 85W 140 (Commercial), SAE 80W 90 (High Grade), SAE 80W 90 (Commercial), SAE 75W 90 (High Grade), SAE 75W 90 (Commercial). SAE EDIB (Suggested Oil). So it is proved that suggested oil SAE EDIB is better than available market oils.

### Keywords:

About four key words or phrases in alphabetical order, separated by commas.

### References:

12. V. Chemory & M. Jahannini, “Experimental study of multiphase flow in a model gearbox”.
13. Solidworks software.
14. ANSYS V 12.1
15. Pro-E Wild Fire
Indian Railways is one of the world's largest railway networks comprising 115,000 km (71,000 mi) of track over a route of 65,000 km (40,000 mi) and 7,500 stations. IR carries about 7,500 million passengers annually or more than 20 million passengers daily (more than a half of which are suburban passengers) and 2.8 million tons of freight daily. Railways are divided into Zones Indian railways has 17 zones (SC, WCR, WR, NFR, ...). Zones are divided into divisions [Vijayawada division, Bhopal division Varanasi division, Moradabad division, Lucknow division etc.] Divisions are headed by a DRM [Divisional Railway Manager]. Under DRM each department has one officer as in-charge for maintenance of their equipment. Indian Railways has 68 divisions 17 zones. IR NAVIGATION is a web based application which is developed for the purpose of easy identification of trains in different aspects. It is going to provide more useful information to the user regarding the journey (between a source station and a destination station) like connecting trains, type of the trains, fare and time of the journey reducing time complexity. This is the project gathering information of Indian railways i.e., tracks routes, trains, stations, facilities in the station and trains to provide the information to the user effectively.

Keywords: DRM-Divisional Railway Manager, SC-Secunderabad, NFR-Northeast Frontier Railway, WCR-West Central Railway, WR-Western Railway

References:
1. Different division books available
2. Indian railway atlas
3. ‘Trains at a glance’ book by Indian railways
4. Different Zone division books.
5. http://www.indianrail.gov.in (Indianrail.gov.in) is a government web site.
9. http://www.irctc.co.in
10. http://www.reps.gov.in
11. http://www.trainweb.org
14. http://www.tripadvisor.in

27.

Supiah Shamsudin, Azmi Ab Rahman, Zaiton Binti Haron, Lat Da A/P Ai Nam

Water Level Evaluation at Southern Malaysia Reservoir using Fuzzy Composite Programming

Abstract: Ranking and evaluation of proper reservoir water level outflowing into downstream river system under multi-criterion environment was presented using multi-criteria decision approach specifically Fuzzy Composite Programming (FCP). The optimum water level evaluation is vital to take into consideration the various environmental, water quantity and economical aspects of the overall systems. This multicriteria analysis will optimize water release, ensuring water quality, providing economical benefits and maintaining high quality of the natural landscape. The study mainly focuses on optimizing outflowing water level by identifying and grouping the basic indicators into its particular composite structure. The basic indicators include various water quality parameters, flows rates, rainfall, scenery etc. The composite structure of the overall reservoir water use system was presented. Five(5) alternatives based on reservoir water level was adopted which include 20.6m (Alternative 1), 22.2m (Alternative 2), 23.8m (Alternative 3), 25.4m (Alternative 4) and 27.0m (Alternative 5) respectively. Sensitivity analysis using three (3) set of different weights was performed for analyzing the robustness of the optimum water level obtained. The FCP structure consists of 15 first level indicators, 5 second level indicators, 2 third level indicators and the final indicators. The optimum value was determined based on the shortest distance between the fuzzy box and an ideal point. The optimum answer was also obtained from the highest ordered sequence value obtained was Alternative 3 (0.660), followed by Alternative 4 (0.596), Alternative 2 (0.555), Alternative 5 (0.515) and lastly Alternative 1 (0.500). The highest ranking order indicated by highest ordered sequence value obtained was Alternative 3 (0.660), followed by Alternative 2 (0.555), Alternative 5 (0.515) and lastly Alternative 1 (0.500). The highest ranking order indicated the most optimum, advisable and appropriate water level for Layang reservoir.

Keywords: Fuzzy Composite Programming, MCDM, Optimum water level, Reservoir

References:
29. **Abstract:** A Visual Secret Sharing (VSS) scheme is one realization of secret sharing schemes without using computation which distinguishes VSS from ordinary cryptography. In a typical VSS scheme (normally called a (k, n) threshold VSS scheme), a dealer encodes a secret image in to ‘n’ shares each of which reveals no information regarding the secret image. In this system, the secret image can be reproduced only by stacking n number of shares in the correct order. The reproduced images will be clearer (larger contrast) and with small pixel expansion compared to Unconditional security VSS scheme. This security notion is effective when attackers cannot use computers since it may take much time to analyze combinations of sub pixels exhaustively.

**Keywords:** Visual secret sharing, Weaker security sharing, halftone technique, visual cryptography.

**References:**
1. Shamir, “How to share a secret”
4. www.wikipedia.com
5. G. Ateniese, C. Blundo, A. D. Santis, and D. R. Stinson, “Visual cryptography for general access structures”
8. Integer programming.

Authors: Neethu T. Sunil, V. Tharmalingam

Paper Title: Distributing Confidentiality to a Visual Secret Sharing Scheme

---

30. **Abstract:** Secured Administrative Information Management System using RFID is a system through which we aspire to make a computerized campus of our college. The system will help the students solve all possible problems they face. Also it will help the teaching faculty as well as the administrative staff to understand the student’s problems and queries. Student’s work of going to office and searching every notice board for the particular notices will be reduced. The system uses Radio Frequency Identification for handling all information. Applications based on RFID are rising as there can be many new technologies that can be bound to it and can be used to develop further complex systems. This paper proposes a system that will handle information of students for an institute using the RFID and contains another feature of One Time Password as well as making all the possible work online and effortless.

**Keywords:** RFID, Tags, Information Management System.

**References:**
5. Impact of RFID technology on economic order quantity models Bhadrachalam, Lakshmi ; Chalasani, Suresh ; Boppana, Rajendra V. Systems Conference, 2009 3rd Annual IEEE Publication Year:2009
6. The Use of RFID for Human Identification A DRAFT REPORT from DHS Emerging Applications and Technology Subcommittee to the Full Data Privacy and Integrity Advisory Committee Version 1.0
7. Design of an Intelligent Web-Based Help Desk System David A. Thurman, Jeffrey S. Tracy, and Christine M. Mitchell Center for Human-Machine Systems Research School of Industrial and Systems Engineering Georgia Institute of Technology Atlanta, GA 30332-0205[dave, jtracy, cm]@chmrs.isye.gatech.edu.
8. RFID infrastructure management based on event correlation analysis Lee, Ho Sung ; Oh, Sewon Won Advanced Communication Technology (ICACT), 2012 14th International Conference on Publication Year: 2012.

Authors: Rajas Hegiste, Aditya Sawant, Mangesh Kshirsagar, Devendra Kahane

Paper Title: Secured Administrative Information Management System Using Radio Frequency Identification

---

31. **Abstract:** This paper describes the development of a navigation aid in order to assist blind and visually impaired people to navigate easily, safely and to detect any obstacles. The system is based on a microcontroller with synthetic speech output. In addition, it consists of two vibrators, two ultrasonic sensors mounted on the user’s shoulders and another one integrated into the cane. This aid is able to give information to the blind about urban walking routes and to provide real-time information on the distance of over-hanging obstacles within six meters along the travel path ahead of the user. The suggested system consists then in sensing the surrounding environment via sonar sensors and sending vibro-tactile feedback to the user of the position of the closest obstacles in range. For the ultrasonic cane, it is used to detect any obstacle on the ground.

**Keywords:** Navigation Tool for Visually Challenged using Microcontroller

**References:**
Keywords: Sensors, Microcontroller, Vibrator, Navigation

References:
4. Zhang, J.; Lip, C.W.; Ong;
5. M. Bouabia Salah A.larbi and M. Bedda “An approach for the measurement of impaired people” in proc 10th IEEE International Conference on Electronic Circuits and Systems

Authors: E.Mohan, R.Kangayen, R.Lavanya, N.Deepa

Paper Title: Evolution of Open Spectrum Sharing Technology - A Survey

Abstract: The increasing demand for wireless communication introduces efficient spectrum utilization challenge. To address this challenge, cognitive radio has emerged as the key technology, which enables opportunistic access to the spectrum. The main potential advantages introduced by cognitive radio are improving spectrum utilization and increasing communication quality. These appealing features match the unique requirements and challenges of resource-constrained multi-hop wireless sensor networks (WSN). Furthermore, dynamic spectrum access stands as very promising and spectrum-efficient communication paradigm for WSN due to its event-driven communication nature, which generally yields bursty traffic depending on the event characteristics. In addition, opportunistic spectrum access may also help eliminate collision and excessive contention delay incurred by dense deployment of sensor nodes. Clearly, it is conceivable to adopt cognitive radio capability in sensor networks, which, in turn yields a new sensor networking paradigm, i.e., cognitive radio sensor networks (CRSN). In this paper, the main design principles, potential advantages and application areas and network architectures of CRSN are introduced. The existing sensing methods adopted in WSN are discussed along with the open research avenues for the realization of CRSN.

Keywords: Cognitive radio, sensor networks, opportunistic spectrum access, efficient spectrum sensing.

References:

Authors: Vikas P. Jadhao, Prakash S. Paijade

Paper Title: Influence of Masonry Infill Walls on Seismic Performance of RC Framed Structures a Comparison of AAC and Conventional Brick Infill

Abstract: The construction of reinforced concrete buildings with unreinforced infill is common practice in India. Infill panels have traditionally been made of heavy rigid materials, such as clay bricks or concrete blocks. However, more lightweight and flexible infill options such as AAC ( aerated light weight concrete) blocks are now available in India to be used as masonry infill (MI) material in reinforced concrete (RC) framed buildings. The behavior of infilled reinforced concrete (RC) frames has been studied experimentally and analytically by a number of researchers. It has been recognized that infill materials give significant effect to the performance of the resulting in-filled frame structures. Most of the researches carried out in this area are focused on parameters such as the distribution of MI, variation of geometry, the strength of infill materials and the relative stiffness of infill to frame elements. The study of the effect of types of infill materials used (lightweight versus conventional brick masonry) on the behavior of infilled R/C frames is however still limited. Previous experimental study has concluded that the R/C frame in-filled with AAC blocks exhibited better performance under lateral loads than that in-filled with conventional clay bricks. In the present paper an investigation has been made to study the behaviour of RC frames with both AAC block and conventional clay bricks infill when subjected to seismic loads.

Keywords: AAC (autoclaved aerated light weight concrete blocks), FEMA 273, FEMA 356, in-filled frames.
References:

Authors: P. R. Badadapure

Paper Title: Content-Based Image Retrieval by Combining Structural and Content Based Features

Abstract: Many different approaches for content-based image retrieval have been proposed in the literature. Successful approaches consider not only simple fea-tures like color, but also take the structural relationship between objects into account. In this paper we describe two models for image representation which integrate structural features and content features in a tree or a graph structure. The effectiveness of this two approaches is evaluated with real world data, using clustering as means for evaluation. Furthermore, we show that combining those two models can further enhance the retrieval accuracy.

Keywords: Successful approaches consider not only simple fea-tures like color, but also take the structural relationship between objects into account.

References:

Authors: Neelesh Kumar, Sanjeev Gupta, S.P.Phalambrikar

Paper Title: A Novel Three-Phase Multilevel Inverter Using Less Number of Switches

Abstract: A novel three phase multilevel inverter with a small number of switching devices is proposed. Large electrical drives and utility application require advanced power electronics converter to meet the high power demands. As a result, multilevel power converter structure has been introduced as an alternative in high power and medium voltage situations. A multilevel converter not only achieves high power rating but also improves the performance of the whole system in terms of harmonics. In this paper the proposed inverter can output more numbers of voltage levels with reduced number of switches as compared to cascade H-bridge inverter, which results in reduction of installation cost and have simplicity of control system. Finally, the simulation and experimental results

154-156
157-160
validate the concept of this new topology.

Keywords: PWM, SPWM, Cascade H-bridge(CHB), matlab simulation, multilevel inverter.

References:
5. B.P.Mcgrath and D.G Holmes “reduced n PWM harmonic distortion for multi level inverters operating over a wide modulation range” IEEE Transactions on power electronics vol 21 no 4 pp941-949, july 2006

Authors: Tourkia Lajnef, Slim Abid, Anis Ammous

Paper Title: Design and Simulation of Photovoltaic Water Pumping System

Abstract: The power source for pumping water is one of the most promising areas in photovoltaic applications. This paper presents the performance of the photovoltaic plant especially in the case of climatic and load fluctuations. The studied system consists of the PV array, the AC motor, the centrifugal pump and using an MPPT algorithm to improve the efficiency of the PV system. This methodology allows an optimal control and monitoring of inverters by calculating the duty cycle of the DC-DC converter and the voltage/frequency control. Each subsystem is modeled in order to simulate the whole system in MATLAB/SIMULINK. The non linear averaged modeling technique of the converters is used in order to picture accurately the PV system behavior during a low simulations time.

Keywords: Photovoltaic pumping system, MPPT, inverters, simulation model, control.

References:
5. Tourkia Lajnef, Slim Abid, Anis Ammous

Authors: Sule, Samuel

Paper Title: Structural Models for the Prediction of Compressive Strength of Coconut Fibre-reinforced Concrete

Abstract: The quality of concrete used in any construction work is a function of its compressive strength. In this paper, structural models are formulated to predict the compressive strength of coconut fibre-reinforced concrete mix 1:2:4 at water-cement ratios of 0.55 and 0.60 using three-dimensional elasticity equations. The results obtained using the formulated models were compared with the measured values and were found to be very close (correlation coefficient = 0.9011). For both the measured and predicted values, the compressive strength of concrete mix (1:2:4) were found to decrease as the coconut fibre contents increased.

Keywords: structural models, compressive strength, coconut fibre, three-dimensional elasticity equations, fibre contents.

References:

Authors: Zuhair Hasnain, Naila Rozi

Title: To Analyze Sequence against the Rice Repeat Database VIA Known Repeats & Transposes DNA

Abstract: Rice ESTs and FL-cDNAs and transcript assemblies (PUTs) from the Plant GDB were aligned to the pseudomolecules using gmap. Only the FL-cDNA and PUTs alignments are shown in the browser. Only the EST and FL-cDNA alignments were used for gene model improvement by PASA. We search sequence against a rice repeat database to identify known repeats and transpose’s (DNA transposes’, retroelements, MITEs, etc). To analyze the growth and yield response of rice under different sowing dates and split nitrogen application, a field study was conducted at farmer’s field Punjab Pakistan during Kharif season 2011. The study revealed that N in split form had no significant effect on yield the yield components of rice while early sowing is considered suitable for farmers under agro-ecological conditions of Punjab Pakistan.

Keywords: Rice repeat DNA sequences, transplanting time, Nitrogen, Yield and yield components

References:

Authors: Anisaaara Nadaph, Vikas Maral

Title: Query-Log Aware Data Replicated Declustering

Abstract: Query-Log is general record of what mysqld is doing, the server writes information to this log when client connect or disconnect. Declustering parallelizes the query retrieval process by distributing the data items requested by queries among several disks. Replication enables alternative disk choices for individual disk items and thus provides better query parallelism options. existing replicated declustering schemes do not consider query log information and try to optimize all possible queries for a specificigue type, such as range or spatial queries. In such schemes, it is assumed that two or more copies of all data items are to be generated and these data items are copied to disks by different algorithm. However, It is not feasible in some applications for generation of even two copies of all of the data items, since data items tend to have very large sizes. In this work we assume that there is a given limit on disk capacities and thus on replication amounts. We utilize existing query-log information to propose a selective replicated declustering scheme, in which we select the data items to be replicated and decide on their scheduling onto disks. We suggest an iterative algorithm to get a two-way replicated decluster and by making use of this algorithm

168-171

172-177
One of the important cues in solving crimes and apprehending criminals is matching sketches with digital face images. This paper presents an algorithm that extracts discriminating information from local regions of both sketches and digital face images. All details information present in local facial regions are encoded using multi-scale circular Weber’s local descriptor. We propose a novel discriminative descriptor modified WLD i.e. multi-scale circular Weber Local Descriptor. It is inspired by Weber’s Law. We organize MWLD features to compute a histogram by encoding both differential excitations and orientations at certain locations of an sketch and digital face image. Further, an evolutionary memetic optimization approach is proposed to assign optimal weights to every local facial region for identification purpose. Foreign sketches drawn by sketch artist is of poor quality, a pre-processing technique is used to enhance the quality of images and improve the identification performance. Comprehensive experimental evaluation on different sketch databases show that MCWLD proposed algorithm yields better identification performance compared with the existing face recognition algorithms.

Keywords: MWLD, WLD, MWLD, MCWLD.

References:

Authors: R. T. Saudagar, U. S. Wankhede

Paper Title: Experimental Analysis of Vapour Compression Refrigeration System with Diffuser at Condenser Inlet

Abstract: This paper discusses design and testing of diffuser at condenser inlet in vapour compression refrigeration system. Four diffusers with divergence angle 10°, 15°, 20° and 30° were designed for same inlet and outlet diameters. The diffusers used were with inlet diameter equal to discharge tube diameter of compressor and outlet diameter equal to condenser inlet diameter. The system was analysed using the first and second laws of thermodynamics to generate a multiway replicated declustering. Later by making use of efficient heuristics we improve the multi-way replicated declustering. The survey show that the suggested work gives better performance result over the existing replicated declustering schemes.

Keywords: Declustering, replication, parallel disk architectures, iterative improvement heuristics.

References:
thermodynamics to determine the refrigerating effect, the compressor work input, coefficient of performance (COP) and the rate of heat rejected from the system. During the test, the COPs of the system without diffuser and with optimized diffuser at condenser inlet were found out. With diffuser at condenser inlet, amount of heat rejected from condenser is also increased. To remove the same amount of heat, less heat transfer area required. This concept reduces size of condenser to achieve the same system efficiency.

Keywords: Condenser, Diffuser, Experimental analysis, Vapour compression refrigeration system.

References:

Authors: J.T Liberty, A.U Dziavma

Paper Title: Design, Construction and Performance Evaluation of Cassava Chips Dryer Using Fuel Wood

Abstract: The design, construction and performance evaluation of a cassava chips dryer using fuel wood as source of heat was undertaken with a view to help small scale farmers’ process cassava chips. The dryer consists of a frame, drying chamber, a tray, fuel wood housing, perforated air space and a chimney. The dryer was evaluated in terms of final moisture content, drying capacity, time taken to dry the chips and the quality of the chips. Results showed that the moisture content of 65.03% (wb) was reduced to 13.11%, the drying capacity was 6kg per loading and the drying time which was supposed to be 3 hrs was increased to 4hrs due to difficulty in regulating the heat produced by the fuel wood. Compared to other types of dryers (solar dryer, platform dryer, flat – bed dryer, continuous dryer et c.), the batch type dryer is preferred due to its ability to be used during rainy season and in the absence of electricity. The quality of the chips was found to be good. The dryer has an efficiency of 80%. The evaluation of the dryer shows that it can be used for small scale drying of cassava chips.

Keywords: batch type dryer, cassava chips, fuel wood, performance evaluation.

References:
45. Dahiya m.t., Akoroda M.O., Alvarez M.N., Kandera P.M., Okeke J.E., Jalloh A. (1994). Development and Dissemination of appropriate Root crops Packages to farmers in Africa. 2-9

Authors: Molsen Darabian, Bahram Khorram, Mehdi Azari

Paper Title: Improvement of Power System Transient Stability Using an Intelligent Control Method

Abstract: Shunt Flexible AC Transmission System (FACTS) devices, when placed at the mid-point of a long transmission line, play an important role in controlling the reactive power flow to the power network and hence both the system voltage fluctuations and transient stability. In this paper, a new intelligent controller used to control the output of an SVC to damp power system oscillations is developed. This controller is an online trained wavelet neural network controller (OTWNNC) with adaptive learning rates derived by the Lyapunov stability. Effectiveness of the proposed technique is robustness to different operating conditions and disturbances. The effectiveness of the proposed controllers is demonstrated on a 2-machine system. Results obtained show improvement in the overall system damping characteristics using the proposed method (OTWNNC).

Keywords: Wavelet neural network (WNN), Particle Swarm Optimization (PSO), SVC Design, Transient stability.
In this study, the spark electric discharge machining (SEDM) of titanium alloys with different electrode materials such as electrolytic copper, beryllium copper, tungsten copper, graphite, aluminum, steel(EN24) and copper-impregnated graphite were conducted to find the suitable electrode material. Therefore the design of experiments were conducted using Taguchi method to find the optimum machining parameters with process parameters such as current, spark on time, spark off time to explore the influence of various SEDM parameters on various requirements such as material removal rate, electrode wear and over cut. The experimental results reveal that...

Authors: K. M. Sivakumar, R. Gandhinathan

Paper Title: Establishing Optimum Process Parameters for Machining Titanium Alloys (Ti6Al4V) In Spark Electric Discharge Machining

Abstract: In this study, the spark electric discharge machining (SEDM) of titanium alloys with different electrode materials namely electrolytic copper, beryllium copper, tungsten copper, graphite, aluminum, steel(EN24) and copper-impregnated graphite, were conducted to find the suitable electrode material. Therefore the design of experiments were conducted using Taguchi method to find the optimum machining parameters with process parameters such as current, spark on time, spark off time to explore the influence of various SEDM parameters on various requirements such as material removal rate, electrode wear and over cut. The experimental results reveal that...

References:

201-204
the suitable electrode material for machining titanium alloys is copper impregnated graphite. It is found that material removal rate is mainly influenced by discharge on time (Ton) and discharge current (I), whereas discharge off time (Toff) has least effect on material removal rate. Electrode wear is mainly influenced by discharge on time (Ton) and discharge off time (Toff), whereas discharge current (I) has least effect on electrode wear. Over cut is mainly influenced by discharge current (I) and discharge on time (Ton), whereas discharge off time have a very least effect on over cut.

Keywords: EDM, Titanium alloys, electrode material, nontraditional machining.

References:
2. ASM handbook, properties and selection: Non ferrous alloys and special purpose materials, Vol 2, 1993

Authors: Ajay K. Singh, A. Rehman
Paper Title: The Influence of Engine Speed on Exhaust Emission of Four Stroke Spark Ignition Multi Cylinder Engine

Abstract: An experimental study is carried out to investigate engine performance parameters and methods of reducing emissions from spark ignition engine. Fuel efficiency is one of the major concerns for the users, the designers and the manufacturers of internal combustion (IC) engines. The effect of increasing the temperature of cylinder liner has the advantage of reducing the specific fuel consumption but it increases thermal stresses on piston head, challenges material properties such as high temperature yield strength, creep and high temperature fatigue, increases chances of knocking and pre ignition and decreases the volumetric efficiency. Coolants with specified fluid properties are circulated through inner channels in the cylinder blocks to maintain an optimum temperature.

The present investigation reports the experimental study carried out by using three cylinders, four stroke petrol carburetor of Maruti 800 engine. The engine is connected to eddy current type dynamometer to provide suitable loading with provisions for measuring and control of fuel flow to maintain fuel–air mixture ratio. It is found that exhaust emission is a dependent parameter on decrease even at higher loads which confirming that engine perform better upon optimal load condition rather than part load condition.

Keywords: Exhaust emission, spark ignition engine, optimization, and engine speed.

References:
10. Employing dual circuit cooling, SAE paper, no. 8802631
Paper Title: A Serial Based Encryption for Enhanced Access Control in Cloud Computing

Abstract: Cloud storage allows us to enjoy the on demand cloud application without any hardware implementation. Cloud provides the service a required by the cloud user in a rental basis. Even though the cloud issues the cloud application without any physical implementation results in a security risk since the cloud data can be accessed by everyone. To avoid security issue in the outsourced data a prevention measure is needed to secure the data from unauthenticated users or intruders. A flexible distributed storage integrity mechanism utilising homomorphic tokens and is proposed in this paper to provide security in the outsourced cloud data. This mechanism include the techniques such In order to address security for outsourced data and secure cloud storage, we propose in this paper a flexible distributed storage integrity checking mechanism, utilizing the homomorphism token and distributed erasure-coded data. The proposed design allows users to audit the cloud storage with very low computation cost and lightweight communication. The auditing result not only guarantees strong cloud storage correctness, but also simultaneously identifies fast data error localization, i.e., the identification of misbehaving server. Considering the cloud data are dynamic in nature, the proposed design further supports secure and efficient dynamic operations on outsourced data, including block modification, deletion, and append. Analysis shows the proposed scheme is highly efficient and resilient against Byzantine failure, malicious data modification attack.

Keywords: The auditing result not only guarantees strong cloud storage correctness, but also simultaneously identifies fast data error localization, i.e.,

References:
11. http://picasaweb.google.com/11697225586192795116/Fuel InjectorCleaner?gsessionid=audogWxU0zxsCk9FOwQGCA#5
17. www.asnu.com

Authors: Vikash Sharma, Jayant Kumar
Paper Title: Energy Efficient Partitioning Of Last Level Cache Memory with Cooling Management for Memory and CPU Subsystems

Abstract: This paper presents a technique to improve the overall performance of the multiprocessor chip. Efficient partitioning of last-level cache memory in a multi-processor chip can increase the performance significantly. The concept is to first allocate the fixed number of ways for a core and then forced the cache data to be way aligned so that a particular way is owned by a core at a particular time. At the time of access, cores cooperate with each other to migrate the ways between them so that a core has to consult only those ways which it has owns to find its data from which dynamic energy can be saved and unused ways can be power-gated for saving the static energy. This paper also presents a cooling management strategy for memory and CPU subsystems. It manages the temperature of memory and CPU subsystems by activating the memory and CPU actuators which does the required action in the subsystems of memory and CPU. It considers the thermal and power states of CPU and memory, thermal coupling between them and fan speed to arrive at energy efficient decisions.

Keywords: last level cache memory (LLC), CPU actuator, Memory actuator, RAP, WAP

References:
5. Rui Ayoub, Raj Nath Tajana Rosing. JETC: Joint Energy Thermal and Cooling Management for Memory and CPU Subsystems in Servers HPCA 2011

Authors: U.Jyostna Sai Prasanna, M.V.D.Prasad
Paper Title: Automatic Fire Sensing and Extinguishing Robot Embedded With GSM Modem

Abstract: Our goal is to develop an intelligent multi sensor based fire fighting robot in our daily life. We design the fire detection system using four flame sensors in the fire fighting robot, and program the fire detection and fighting procedure using sensor based method. The fire fighting robot is equipped with four thermistors/flame sensors that continuously monitor the temperature. If the temperature increases beyond the predetermined threshold value, buzzer sounds to intimate the occurrence of fire accident and a warning message will be sent to the respective personnel in the industry and to nearby fire station with the GSM module provided to it. Fire Fighting Robot continuously monitors the temperature at four sensors and if fire accident is true, the robot moves to the direction to which the temperature is recorded to be the relatively maximum among the four sensors and extinguishes the fire with water pump provided to it. After extinguishing the fire it comes back to its initial position. It is more advantageous than a smoke detector as it can extinguish the fire at the inception than waiting for an object to burn and produce smoke. When a smoke detector detects fire it, sprays water all over the place, instead of that particular point of source. It voluntarily detects and extinguishes fire without human aid.

Keywords: Extinguisher, Fire Sensors, GSM, Microcontroller

References:
1. Muhammad Ali Mazidi, the 8051 Microcontroller and Embedded Systems.
4. Wireless communication technologies: new multimedia Systems By Norihiko Morinaga
5. Encyclopedia of Fire fighter surveillance robot

Authors: Shivam Pandey, Mohan Rao Mamdikar, Bhudev Kumar Mahato

Abstract: The efficient use of energy is an important performance target to magnify the lifetime of wireless sensor networks (WSNs). The idle listening of sensor nodes is one of the primary causes of energy waste; so many typical MAC protocols are designed to rescue power by placing the radio in the low-power sleep mode. In this paper, a new

References:
11. Muhammad Ali Mazidi, the 8051 Microcontroller and Embedded Systems.
4. Wireless communication technologies: new multimedia Systems By Norihiko Morinaga
5. Encyclopedia of Fire fighter surveillance robot
energy-efficient Slotted MAC (SL-MAC) protocol is proposed for wireless sensor networks. It is designed with three main features: 1) reducing energy consumption 2) minimizing the number of collisions 3) reducing average packet delay. Sensor nodes in SL-MAC have a very short listen time period which would reduce the energy required to communicate with other nodes. Also, the number of collisions is minimized by using Back-off algorithm in SL-MAC. This saves the energy required to re-send the corrupted packets. Simulation results show much better performance of the energy consumption compared with the existing MAC Protocols.

Keywords: Energy management, medium access control (MAC), wireless sensor networks (WSN).

References:

Authors: Gaurang A. Parmar, Yogesh D. Rathod, Sunil H. Kukadiya, Sarthi B. Bhavsar, Jigar K. Sevalia

Paper Title: Study on Remedial Measures to Control Machine Induced Vibration of Factory Building

Abstract: A comprehensive understanding of structural dynamics is essential to the design and development of new structures, and to solving the vibration problems on existing structures. A broad range of complex vibration problems can occur in the Looms Industry. A successful analysis and resolution of machine vibration problem requires a thorough understanding of the equipment, and the ability to apply various diagnostic techniques. Due to heavy machine operations the building is subjected to vibration effect. This paper aims at understanding the behaviour of Looms factory building, subjected to dynamic loading and provision of certain remedies to such buildings which can overcome resonance condition.

Keywords: Cross Bracing, Cross Tie-Beam, Haunch, Jacketing, Looms Industry, Time History.

References:
5. Lachal A. and Aribert J. M. “ Static Design and Cyclic Behaviour of end- plate steel and composite joints strengthened by haunches”, Advances in Steel structures, Vol. – II.

Authors: Deepanshu Sharma, Banwari, Deepak Upadhyay

Paper Title: Software Project Health Analysis: Prediction of Outcome at Initial Stage

Abstract: The paper proposes an approach for analyzing the health of a software project. The approach aims at the prediction of software project outcome as Success or Failure at the Initial stage. The approach involves the collection of historical projects data in a defined format. The collected data is in the form of Risk Factors and their corresponding values of Impact and Probability. The collected data is then performed with some pre-processing so as to generate information (rule set) from them. The generated rule set or information can then be applied to future projects so as to predict their outcome based on the values of the Impact and Probability for existing Risk Factors. Here we have used Decision Tree Rule Induction for the generation of the rule set from the pre-processed data.

Keywords: Decision Tree, Project Health Analysis, Risk Factors and Dimensions, Rule Set.
Abstract: The power interconnection is getting increasingly congested so to control power flow of transmission grid, to limit loop flows, and also the capacity of transmission line can be increased by use of flexible ac transmission systems (FACT) devices. But high cost and reliability concerns have limited the FACT solutions. This paper introduces the concept of Distributed SERIES FACTS (D-FACTS) as an alternative approach to realizing cost-effective power flow control by way of distributed series impedance (DSI) and a distributed static series compensator (DSSC). D-FACTS can be clipped on power line and it can dynamically and statically change the impedance of the line so as to control and increase capacity of power flow. D-FACTS provides higher performance and lower cost method for enhancing T&D system reliability and controllability, improving asset utilization and end-user power quality, while minimizing system cost and environmental impact.

Keywords: Power flow control, FACTS device system, Distributed flexible AC transmission systems

References:
5. constants for 132KV/400KV overhead line for Iraq network.
9. Prof Deepak Divan Georgia Institute of Technology Atlanta, "Distributed Intelligent Power Networks – A New Concept for Improving T&D System Utilization and Performance ", GA 30332

References:
2. Yaow-Ming Chen, Yuan-Chuan Liu, and Feng-Yu Wu, “Multi-Input DC/DC Converter Based on the Multi winding Transformer for

Keywords: Fuel cell, Multiple - Input Converter, PV panel, Power Conditioner, Renewable Energy Integration, Wind Turbine Generator.

Authors: Nadia Adnan Shiltagh, Lana Dalawr Jalal

Paper Title: Optimal Path Planning For Intelligent Mobile Robot Navigation Using Modified Particle Swarm Optimization

Abstract: This study investigates the application of Modified Particle Swarm Optimization (MPSO) to the problem of mobile robot navigation to determine the shortest feasible path with the minimum time required to move from a starting position to a target position in working environment with obstacles. In this study, MPSO is developed to increase the capability of the optimized algorithms for a global path planning. The proposed algorithms read the map of the environment which expressed by grid model and then creates an optimal or near optimal collision free path. The effectiveness of the proposed optimized algorithm for mobile robot path planning is demonstrated by simulation studies. The programs are written in MATLAB R2012a and run on a computer with 2.5 GHz Intel Core i5 and 6 GB RAM. Improvements presented in MPSO are mainly trying to address the problem of premature convergence associated with the original PSO. In the MPSO an error factor is modelled to ensure the PSO converges.

MPSO try to address another problem which is the population may contain many infeasible paths; a modified procedure is carried out in the MPSO to solve the infeasible path problem. The results demonstrate that this algorithm have a great potential to solve the path planning with satisfactory results in terms of minimizing distance and execution time.

Keywords: Modified Particle Swarm Optimization, Global Path Planning, Robot Navigation, Intelligent Mobile Robot

References:

Authors: Y. T. Prabhu, K. Venkateswara Rao, V. Seshai Kumar, B. Siva Kumari
Paper Title: X-ray Analysis of Fe doped ZnO Nanoparticles by Williamson-Hall and Size-Strain Plot Methods

Abstract: In the preparation of Fe doped ZnO a novel process is used with different doping concentrations from 2% to 10% by surfactant assisted combustion synthesis. The synthesized samples were characterized with X-ray diffraction pattern analyzer and TEM. From X-ray diffraction, it was observed Fe-doped ZnO nanoparticles (NPs) have hexagonal wurtzite structure and further crystallite sizes were decreased with increasing doping concentrations. Transmission electron microscopy (TEM) showed that powder was polycrystalline in nature with random distribution of nano grained Fe doped ZnO. Using X-ray broadening crystalline development in the Fe doped ZnO–NPs was investigated. The crystallite sizes and lattice strain on the peak broadening of Fe doped ZnO–NPs were studied using Williamson- Hall (W-H) analysis and size- strain plot. Strain, stress and energy density parameters were calculated for the XRD peaks of all the samples using (UDM), uniform stress deformation model (USDM), uniform deformation energy density model (UDEDM) and by the size-strain plot method (SSP). The results of mean particle size of Fe doped ZnO–NPs showed an inter correlation with W-H analysis, SSP, and TEM results.

Keywords: Fe Doped ZnO, Surfactant Assisted Combustion Synthesis, XRD, TEM.

References:

Authors: Mamta Juneja, Parvinder Singh Sandhu

Paper Title: Information Hiding using Improved LSB Steganography and Feature Detection Technique

Abstract: This paper proposes an improved Least Significant bit(LSB) based Steganography technique for images imparting better information hiding . It presents an embedding algorithm for hiding encrypted messages in nonadjacent and random pixel locations in edges and smooth areas of images. It first encrypts the secret message, and detects edges as well as smooth areas in the cover-image using improved feature detection filter. Message bits are then, embedded in the least significant byte of randomly selected edge area pixels and 1–3–4 LSBs of red, green, blue components respectively across randomly selected pixels across smooth area of image. It ensures that the eavesdroppers will not have any suspicion that message bits are hidden in the image and standard steganography detection methods cannot estimate the length of the secret message correctly. The Proposed approach is better in PSNR value and Capacity as shown experimentally than existing techniques.

Keywords: Canny filter, Feature detection, Hough transform, Image Steganography, Information hiding, LSB based Insertion.

References:


Authors: Yazdan Khan, Ashish Kumar, Aakash Dhiman

Paper Title: Bandwidth Improvement of the Rectangular Microstrip Antenna by Using Single Dipole Stub

Abstract: In the most recent days microstrip antennas are mostly used in the wireless communication due to the salient features like low cost, less weight, small size. But these antennas are having some drawbacks like narrow bandwidth, low gain etc. In this paper a microstrip antenna with wide bandwidth is presented. For this purpose we took two different radiating elements which are connected together through a matched section and these elements are embedded on a single layer structure. This new introduced structure offers a dual-band microstrip antenna. By controlling the resonant frequency of these two elements, means by keeping constant value of resonant frequency of one element and varying the resonant frequency of other element, then a much more improved bandwidth approximately 21 % has been obtained. Representation, calculation and measurement for this new antenna has been done with the help of software MATLAB and also from EM-TALK online antenna calculator.

Keywords: Bandwidth Improvement; Microstrip Antenna; Radiating elements; Resonant Frequency.

References:
8. www.wikipedia.org

Authors: Mangesh Powar, Tejas Vichare, Rashmi Udege, Yojana Namdas, Swati Joshi

Paper Title: Swammis: Sinhgads' wide Area Multiuser and Multitasking Intranet System (Educational ERP)

Abstract: In educational system at different departments, all the administrative jobs are being carried out manually. It not only consumes a lot of time but also reduces output efficiency. For every single job, faculties need to manually approach colleagues, carry out sumptuous hand written documentation, attendances, leave applications etc. If such jobs are automated by an Intranet application and a common communication platform, by making use of different technologies such as remote installation, VOIP with video conferencing, PDF data extraction in LAN etc. This paper begins by explaining the background to education ERP systems and goes on to discuss specific systems and their capabilities. Enterprise Resource Planning (ERP) Systems are powerful software packages that enable educational system to integrate a variety of disparate functions.

Keywords: ERP, video conferencing, RTMFP, VOIP, PDFand data extraction.

References:

Authors: M. Velan

Paper Title: Environmental Sustainability and Cleaner Perspectives - A Challenging Experience from Lignite Mining Industry in India

Abstract: Mining of lignite causes pollution of Environment and ecological damage if unattended. Being conscious that environmental regeneration is the foundation on which Productivity has to be built, N.L.C. started investing in Eco Care long back and it continues. Early investment in Environment protection has resulted in steady growth. N.L.C.’s futuristic vision is to be in the vanguard among the contributors to the community, environment and the Nation by developing and utilizing industrial and human resources to the optimum. Untiring efforts are being put
in Mines (NLC as a whole) to maintain and sustain the ecological balance arising due to the continuous mining activity. The Neyveli’s Environmental Management System is becoming a symbolic role model for any of the opencast mines in the South-East Asia.

Keywords: Lignite, mining, Sustainability, Environmental, protection.

Authors: Amit Kumar, Harish Chandra Maurya, Rahul Misra

Paper Title: A Research Paper on Hybrid Intrusion Detection System

Abstract: An intrusion detection system (IDS) is a device or software application that monitors network or system activities for malicious activities or policy violations and produces reports to a Management Station. Some systems may attempt to stop an intrusion attempt but this is neither required nor expected of a monitoring system. Intrusion detection and prevention systems (IDPS) are primarily focused on identifying possible incidents, logging information about them, and reporting attempts. In addition, organizations use IDPSes for other purposes, such as identifying problems with security policies, documenting existing threats and deterring individuals from violating security policies. IDPSes have become a necessary addition to the security infrastructure of nearly every organization. Different methods can be used to detect intrusions which make a number of assumptions that are specific only to the particular method. Hence, in addition to the definition of the security policy and the access patterns which are used in the learning phase of the detector, the attack detection capability of an intrusion detection system also depends upon the assumptions made by individual methods for intrusion detection. The purpose of an intrusion detection system is to detect attacks. However, it is equally important to detect attacks at an early stage in order to minimize their impact. I have used Dataset and Classifier to refine Intruders in Networks.

Keywords: (IDS), (IDPS), IDPSes.

References:

Authors: Ashish Bodanwar, Rahul Mudpalliwar, Vikrant Pawar, Kaustubh Gaikwad

Paper Title: Drowsy Driving Detection System

Abstract: In this paper, we propose a drowsy driving detection system in which sensors like alcohol sensor, accelerometer, IR sensors are used for detection of drowsiness and alcohol consumption by driver. In addition to that

References:
294-297

Authors: Ashish Bodanwar, Rahul Mudpalliwar, Vikrant Pawar, Kaustubh Gaikwad

Paper Title: Drowsy Driving Detection System

Abstract: In this paper, we propose a drowsy driving detection system in which sensors like alcohol sensor, accelerometer, IR sensors are used for detection of drowsiness and alcohol consumption by driver. In addition to that

References:
294-297
we have used GPS receiver and GSM modem, for communication with the remote control station. The system used in the vehicle will continuously sends the readings obtained from various sensors and current position of the vehicle which will obtain from GPS receiver to the control station. As a result we get immediate information related to the driver’s condition. Detail design criteria with respect to various sensor and system are given. The proposed system will accurately derive the various parameters and inform control room.

**Keywords:** Alcohol consumption, control room, drowsiness, position.

**References:**
7. Embedded system design book- Raj Kamal
8. www.keil.com/arm/
9. www.embedded arm.com
10. Mikro Elektronika Easy ARM v7 user manual

**Authors:** S.Saravanan, R.Vidhya, S.Thangavel

**Paper Title:** Online SOC estimation and Intelligent Battery Charger for Solar PV System

**Abstract:** In this paper, the state of charge of the battery is determined and the battery is allowed to charge or discharge by standard reference current, since the overcharging and undercharging would affect the battery performance. So a battery should not be fully charged or discharged, because overcharging of a battery will affect the life time of the battery and undercharging of a battery will increase the initial charging time. Online estimation to determine SOC of battery is attempted in the proposed work with the electrical parameters which is developed using an intelligent controller.

**Keywords:** So a battery should not be fully charged or discharged

**References:**
1. Indu Rani, G.Saravana Ilango, C.Nagamanri, "Control Strategy for power flow management in a PV system supplying DC loads", IEEE,2011

**Authors:** Kalaiselvan C, Arun Prakash R

**Paper Title:** Accelerated Life Testing of Ceramic Capacitors and Integration of its Reliability Test Data with PLM Solutions

**Abstract:** As the market for an electronic device continues to grow and expand, it has become evident that product reliability must remain a top priority for electronic device manufacturers. The Electronic Device manufacturing industry is now under increasing pressure to maintain their places in the market. To improve their ability to innovate, get products to market faster, and reduce errors, the manufacturers have been continuing to improve their product reliability and product development. time. Product reliability is considered as a prime contributor to quality and competitiveness. The reliability of the product is usually determined by testing the product to failure and collection of time to failure (TTF) data. For some products the test time to evaluate reliability is usually very longer, if it is tested under actual working condition of the products. Hence the accelerated and highly accelerated life testing (HALT) testing method is employed to accelerate to stress condition on the product to quicken the degradation of products performance. The obtained performance data when analyzed, yields its reasonable estimates of products life under actual conditions. In this study, the ceramic capacitor are evaluated for it reliability using HALT. The capacitors are considered to be failed when its insulation resistance dropped. The product lifecycle management (PLM) integration methodology adopted in this study is based on 3-tier client server architecture. The software tool like Java, HTML (HyperText Markup Language) and SQL (Structured query language) are used to create the front and back end 3-tier architecture.

**Keywords:** Highly Accelerated life Testing, Time to Failure (TTF), Product Lifecycle Management (PLM), Server Architecture.
References:
9. Yongjiae Shin, Soon-Hung Han, Doo-Hwan Bae Integration of heterogeneous CAD databases using STEP and the Internet.
10. Soumil D. Deshmukh Manoj D. Patil “PDM Requirements for Large Scale Engineering”, presented at Product Data Technology Europe 2002 At Centro Ricerche Fiat, Turn, Italy 7th - 9th May 2002.

Authors:
Aayush Agarwal, Rekha Saraswat

Paper Title: Modified Group Signature in Online Auction System

Abstract: Group Signature scheme allows members of a group to sign messages on behalf of the group, such that the resulting signature does not reveal the identity of the signer. Signatures can be verified with respect to a single group public key. In case of dispute, only a designated group manager, because of their special property, is able to open signatures, and thus reveal the signer’s identity. Its applications are widespread used, especially in e-commerce such as e-cash, e-voting and e-auction. On the other hand, Internet is an open environment, and the unsecured environment can obstruct the development of e-commerce. Therefore, Internet must have some protocol to prevent the important message from impersonating and modifying. Recently, online auction has been receiving more and more attention in the world of electronic commerce, hence, the security and efficiency of online auction is more and more important. This paper proposes a new scheme for conducting secure and anonymous online auctions using a modified type of group signature. Our scheme solves the problems of the existing auction schemes and has following characteristics: unforgeability, anonymity, unlinkability, exculpability, coalition-resistance, verifiability, robustness, traceability, revocation, one-off registration, unskewability and unblockability. Our scheme has comparable efficiency to the existing schemes for the enhanced security and privacy it provides.

Keywords: anonymity, authenticated encryption, E-auction, group signature.

References:
15. www.ebay.com
16. www.ubid.com
17. Jarrod Trevathan and Wayne Read, “SECURE ONLINE ENGLISH AUCTIONS”, School of Mathematical and Physical Sciences James Cook University.

Authors:
Amruta Deshpande, Apurva Bhoite, Ashish Kalbhor, Sandeep Mane, Prema Desai

Paper Title: KinoSense: Framework for Tasking Applications on Smartphones using Sensing and Co-ordination

Abstract: A growing class of smartphones use tasking applications that run continuously, process data from sensors to determine the user’s context (such as location), and fire certain actions when the right conditions occur. We propose a framework which enables smartphones to use device sensors to perform some actions by defining a rule. The idea is to develop primitives that would simplify the use of device sensors and services for both developers as well as users. We hereby overcome the issues in current approaches by creating broader and more meaningful definitions to be used on smartphones. KinoSense provides a task execution framework to automatically distribute
and coordinate tasks, energy-efficient modules to infer user activities and compose them. These applications combine sensing from the device and coordination between all sensors.

Keywords: Framework, Triggers, Actions, Sensors, Events

References:
2. OnX http://www.onx.mv
5. Yong-Hua Cheng, Wen-Kuang Kuo, Szu-Lin Su; “An Android system design and implementation for telematics services”, IEEE ICIS 2010

Authors: N. Nandhini, S. S. Suganthi

Paper Title: Wireless Control of a Robotic Arm Using Inertial Sensor

Abstract: The development of wireless sensing control unit operation is base on wearable inertial sensors. Inertial sensors are of triaxial accelerometer and MEMS. It extends to the control of an anthropomorphistic robotic arm. Accelerometers used to measure the orientation and angular velocity of the lower arm. The data processing has been carried out on low cost micro controllers. The movement of the user arm was mimicked by the anthropomorphistic robotic arm. The orientation of the control unit is tracked and displayed using MATLAB. Applications include industrial operation, remote operation in hazardous area, medicine and underwater recovery.

Keywords: accelerometer, inertial sensors, MEMS, motion sensing, robotic arm.

References:


Paper Title: GSM Based Server Control System (SCS) For Better Security of Computer Automation

Abstract: Server Control System (SCS) provides remotely controlling approach that allows computer user to control operation from remote location provided the user is authenticated. User does this by carrying out computer operations through GSM modem and SMS technology. This paper also demonstrates on network and prevent unauthorized access using attention commands (AT). Hence this application will help user to operate his computer remotely and also get SMS alert to prevent unauthorized access to computer.

Keywords: Mobile phone, Short message service (SMS), Global system for mobile phone (GSM).

References:
Towards An Improvement of the Security of A WSN Based On Power Management as Part of the QOS

Abstract: Wireless sensor networks (WSN) is tending towards becoming a complete solution in communication protocols, embedded systems and low-power implementations. However, the resource constraints which includes, limited communication range, limited energy, limited computing power, limited bandwidth and the fear of intruders have limited the WSN applications. Since lightweight computational nodes that are currently being used in WSN pose particular challenge for many security applications, the whole research therefore, is the investigation of new security techniques and appropriate implementation for WSN nodes, including various trade-offs such as implementation complexity, security flexibility, power dissipation, and scalability. The goal of this research is to develop a scheme to control the flow through the components of the WSN. This allows to improving the security of WSN by the good management of energy resources, as well as the local management of communications. In this sense, we proposed an improvement of the reactive AODV Routing Protocol [11] under the NS2 Simulator for the security support always as part of Quality of Service.

Keywords: WSN, energy management, security, NS2 Simulator.

References:
5. D.mohammadi & H.jadidoslemany ‘comparison of the attacks on the link layer in wsn ’ 2011
6. JA Stankovic ‘DOS in WSN ’
8. Wassim Maari (2009), Déviation d'exigences de Qualité de Service dans les Réseaux de Capteurs Sans Fil basés sur TDMA.

Design aspects of Phased Array Antenna at L-Band

Abstract: The multiple object tracking is done using Phased Array Radar. Phased array antenna, Digital receiver, Data processing system is the major systems of the Phased Array Radars. Phased array antenna consists of an array of radiating elements and each element is connected to a phase shifter. The phase shifters control the phase of the radiated signals at each element to form a beam at the desired direction. This paper deals with design aspects of Phased array antenna and to study its properties. Based on the study, simulations are carried out on 1X4 array and the same is fabricated for testing to analysis the results.

Keywords: phased array antenna, phase shifter,1X4 array

References:
There are number of methods that can be used to reduce the size of the antenna especially when it is too be used at lower operating frequencies. Fractal is one of the ways which can be used to miniaturize antennas due to their space filling ability. It helps in fitting large electrical lengths into small volume. In this paper the radiation pattern of 1X4 array of micro-strip patch antenna over fractal geometry can be observed

Keywords: Fractal antenna, micro-strip patch antenna, ADS software, returns loss

References:
5. IE3D software

In this paper the theoretical and simulated results of rectangular microstrip are presented which can be utilized for multi-frequency operation. For this purpose, two rectangular microstrip antennas are designed with center frequencies 9 GHz and 5.67 GHz. Various parameter such as width, dielectric constant & effective length are calculated. Then the antenna impedance is matched to 50 ohm of coaxial fed for maximum power transfer. Now the designed structure is rearranged for multi-frequency operation by connecting two microstrip antennas at corner with corner excitation. The operating frequency, return loss and radiation pattern of the proposed structure are investigated. We observe a drastic reduction in resonant frequency. The radiation pattern for each resonating frequencies is nearly same. The frequency ratio (the ratio of second or higher resonating frequency to the first resonating frequency) of the proposed antenna is observed to be increased. The entire simulation work is done on IE3D software

Keywords: Microstrip Antenna, Rectangular, Multi-frequency, Return loss, Frequency Ratio.

References:

Using the basic properties involving the sojourn time and the transition rate between two states and the first passage time for a Continuous Time Markov Chain (CTMC) the applicability for optimizing the second sales used two wheelers in a showroom. Only the basic properties of the CTMC and the properties of rate matrix we are able to obtain a solution for maximum profit.

Keywords: Sojourn time, rate matrix, generator matrix, first passage time.

References:
Authors: Tejal Chauhan, Shraddha Singh, Sameena Zafar

Paper Title: A New Technique for Artificial Bandwidth Extension of Speech Signal and its Performance Analysis

Abstract: In current scenario of wireless communication system, quality of voice output is degraded due to its limited bandwidth (300-3400 Hz) and power constraints which in turn offers speech sounding muffled and thin. Recent wireless systems involved in transmission of speech demands evolution of efficient and effective methods for maintaining quality of speech, especially at the receiving end. In order to obtain toll quality of speech and high intelligibility cum naturalness in wireless systems, NB speech coders should be upgraded to its counterpart WB coders (50-7000Hz). For the effective utilization of WB speech communication in wireless media, it is indeed necessary to upgrade both end devices and network to be WB compatible which is costly and time consuming affairs. In the meantime some techniques have been developed to artificially extend bandwidth of NB speech to WB at receiver which leads to improvement in the quality of recovered speech. Amongst all elements of the communication system (channel, transmitter and receiver), quality and intelligibility of voice at receiver side majorly depend upon channel condition. Many techniques are adopted to mitigate the effect of the channel. In order to maintain quality and naturalness of voice at receiver side in various unpredictable channel conditions, AMR (Adaptive Multi Rate) NB is considered to be one of the obvious potential candidates. AMR NB is operated on various modes of bitrate between 4.75 and 12.2 kbps. Depending upon the channel conditions, specific mode of operation is selected dynamically. For example, Low bit rate mode of operation is selected in bed channel conditions, that allows more error protection bits for channel coding and vice versa. Since inception, many speech coding techniques like CELP, ACELP and RPE-LTP are adopted in different applications in 2G and 3G. In this paper, implementation of ABWE algorithm is developed on CELP based GSM AMR 06.90 NB Coder using MATLAB simulation; further Subjective (MOS) and Objective (PESQ) analysis are carried out to judge the overall performance of developed coder. The evaluated results for both analyses clearly advocate that BWE coder offers significant improvement in recovered speech quality in comparison with legacy GSM AMR NB decoder.

Keywords: ABWE, AMR, CELP, GSM, Speech coding, Steganography, Subjective Analysis, Objective Analysis.

References:
6. ETSI Channel coding (GSM 05.03 version 8.9.0 (2005-01), release 1999), pp. 12-19 & 98.

Authors: Gaurav Govind Keswani

Paper Title: Artificial Intelligence- Is Our Future Bright or Bleak

Abstract: The paper reviews the meaning of artificial intelligence and its various advantages and disadvantages. It also considers the current progress of this technology in the real world and discusses the applications of AI in the fields of heavy industries, gaming, aviation, weather forecasting, expert systems and heuristic classification, with the focus being on expert systems. This is because Expert Systems are primarily being used for cyber defense as information stored in computers and in transit is facing increasing threats. It focuses on the concept, architecture and working of Expert Systems while also considering its work in other fields. The paper concludes by analyzing the future potential of Artificial Intelligence.

Keywords: Artificial Intelligence, Expert Systems, Heuristic Classifications.

References:
1. Song Ning and Ma Yan “Discussion on Research and Development of Artificial Intelligence”, Chongqing Normal University, China.
4. Heuristic Classifications

Authors: Gajula RajyaLakshmi, CH.Phani Krishna,Venu Samson Deva Kumar

Paper Title: Commercial Statistics Management System

Abstract: To maintain the statistical information of earnings, counters and parcel goods of different stations in Vijayawada division. It is also used to know the variance between different types of earnings during the particular time period by auto remainders”, using J2EE technology. The project is used to maintain the minimum and desired

References:
1. Song Ning and Ma Yan “Discussion on Research and Development of Artificial Intelligence”, Chongqing Normal University, China.
4. Heuristic Classifications
amenity availability status and requirement according to station wise. It is also used to find the status of the work, work in progress through online using indicators. The project is used to enter the complaints from the passengers of different stations and to know the status of the complaints whether it is rectified or not through online according to station wise. It is also used to know the other stations list. The project is also used to know the commercial contracts information like parking publicity, pay and use, ATMs, retiring rooms and catering units according to station wise. It is also used to know the status of the contract. It is used to know the upward and downward trains details and timings in different stations particularly Vijayawada division. Used to know the earnings of different categories like earnings, counters and parcel goods according to different stations. It is also used to know the variations between different time periods. This includes knowing the contracts information like parking, publicity, retiring rooms, catering units, etc according to station wise. It is used to know the progress of the work and schedule of the work through online. It is also used to know the catering details and performance in catering technology.

Keywords: commercial statistics, Sr. DCM, Amenities, work contracts, Earnings.

References:
2. Pearson Education – Sun Microsystems Gary Cornwell
3. Core Java™ 2 Volume II – Advanced - Cay S. Horstman
4. Pearson Education – Sun Microsystems Gary Cornwell
5. Head First Servlets & JSP - Eric Freeman
6. O’Reilly – SPD Elisabeth Freeman
8. SPD
10. Pearson Education – Sun Microsystems
11. Java Database Best Practices-George Reese
12. O’Reilly – SPD
13. JBoss – A Developers Notebook-Norman Richards
14. O’Reilly – SPD-Sam Griffith

Authors: Sasi.C, G.Mohan

Paper Title: Performance Analysis of Grid Connected Wind Energy Conversion System with a PMSG during Fault Conditions

Abstract: Wind energy, among all of the renewable energy sources, has made rapid developments and significant inroads in electrical power systems. With the increased use of wind energy conversion systems (WECSs), several technologies have been developed. Since WECSs are more cost competitive, the comparison of different wind generator systems is the need of the hour. Permanent magnet generators employing these technologies have some significant advantages over conventional generators, such as no need of excitation, low volume and weight, high precision, and deletion of the gearbox. The aim of the paper is to analyse the performance of grid connected wind energy conversion system with a permanent magnet synchronous generator during fault conditions. The model includes a PMSG model, a pitch-angled controlled wind turbine model, power electronic converters and a power system model. A phase to phase fault is simulated on 132 KV bus of power system model and the measured results obtained from grid connection of the permanent magnet synchronous generator are presented followed by some conclusions.

Keywords: Permanent Magnet Synchronous Generator, Power Electronic Converter.

References:

Authors: Vishal R. Naik, V.K. Matawala
### Paper Title: Experimental Investigation of single phase Chevron Type Gasket Plate Heat Exchanger

**Abstract:** Corrugated plate heat exchangers have larger heat transfer surface area and increased turbulence level due to the corrugations. In this study, experimental heat transfer data will obtain for single phase flow (oil-to-water) configurations in a corrugated plate heat exchanger for different chevron angle plates. The effect of variation of chevron angles with other geometric parameter on the heat transfer coefficient will be study. Reynolds number ranging from 50 to 10000 and Prandtl number ranging from 3 to 75 will be taken for given experiment. Based on the experimental data, a correlation will estimate for Nusselt number as a function of Reynolds number, Prandtl number and chevron angle.

**Keywords:** Chevron angle, Corrugated plate heat exchangers, Heat transfer coefficient, Nusselt number, Prandtl number, Reynolds number, Single phase flow

**References:**

### Paper Title: Design of Two Level DWT Architecture for Multimedia Applications

**Abstract:** Images are to be transmitted without loss of information. That can be achieved by transforming using Discrete Wavelet Transform (DWT). The discrete wavelet transform (DWT) is being increasingly used for image coding. This is due to the fact that DWT supports features like progressive image transmission (by quality, by resolution), ease of transformed image manipulation, region of interest coding, etc. Hence, there is a need of design efficiency & fast architecture for DWT. This paper is introducing an efficient architecture to enhance speed of DWT Computation. The Discrete Wavelet Transform (DWT) is based on time-scale representation, which provides efficient multi-resolution. The introduced architecture increases levels of DWT architecture to achieve lower power applications. This paper describes Lossless 2-D DWT (Discrete Wavelet Transform) using Lifting Scheme Architecture to reduce computational overheads. The behavior of designed DWT architecture is modeled using the Verilog HDL and functionality could be verified using the Modelsim simulation tool.

**Keywords:** Discrete wavelet transform, very-large-scale integration (VLSI), folded architecture, single-input/single-output

**References:**

Authors: Vedgupt Saraf, D.S. Rao

Paper Title: Devanagari Script Character Recognition Using Genetic Algorithm for Get Better Efficiency

Abstract: Character recognition is the mechanical or electronic translation of scanned images of handwritten, typewritten or printed text into machine-encoded text. In India, more than 300 million people use Devanagari script for documentation. There has been a significant improvement in the research related to the recognition of printed as well as handwritten Devanagari text in the past few years. The problem arises in Devanagari script character recognition using quadratic classifier provides less correctness and less efficiency. For the answer of the above problem and for get better efficiency we use the genetic algorithm. It will give the better results from the above methods. The idea of genetic algorithm comes from the fact that it can be used as an outstanding means of combining various styles of writing a character and generates new styles. Closely observing the ability of human mind in the recognition of handwriting, we find that humans are able to recognize characters even though they might be seeing that style for the first time. This is possible because of their power to visualize parts of the known styles into the unknown character. We try to represent the same power into the machines.

80.

Keywords: Handwritten Character Recognition, On-line and Off-line Character Recognition, Genetic Algorithms, Segmentation.

References:
6. Nafiz Arica, Student Member, IEEE and Fatos T. Yarman-Vural, Senior Member, IEEE, “An Overview Of Character Recognition Focused On Off-line Handwriting”, Computer Engineering Department, Middle East Technical University, Ankara, Turkey, Manuscript received June21,1999.

Authors: A.Umarani, A.Asha, M.V.Vandhana, P.Nandhini, B.Dhivya

Paper Title: Denoising of Medical Images Using Virtual Instrumentation

Abstract: The medical image (CT angiographic images) we obtained from various devices is corrupted with noise. The obtained image needs processing before it can be used for any diagnosis. Low contrast and poor quality are the main problems in the production of medical images. Denoising is the process with which we reconstruct a signal from a noisy one. Image denoising involves the manipulation of the image data to produce a visually high quality image. Good quality image should have a less CNR value when compared to SNR. Developing Image denoising algorithms is a difficult operation because fine details in a medical image embedding diagnostic information should not be destroyed during noise removal. In this paper we will discuss the differences of different types of noises at different level are done. We have determined quantitative and qualitative analysis using Laboratory Virtual Instrumentation Engineering Workbench.

81.

Keywords: Noises, Angiography, LabVIEW

References:
3. denoising of medical images using total Variational method by V N Prudhi Raj1 and Dr T Venkateswarlu
5. An intelligent approach to image denoising by Tanzila Saba, Amjad Rehman and Ghazali Sulong
6. A non-local algorithm for image denoising by Antonio Buades, Bartomeu Coll, Jean-Michel Morel

Authors: Thumil Vannan .P.S, S. Uvaraj

Paper Title: Effective Data Retrieval System with Bloom in a Unstructured p2p Network

374-377

378-382
Abstract: Bloomcast, an efficient and effective full-text retrieval scheme, in unstructured P2P networks. Bloomcast is effective because it guarantees perfect recall rate with high probability. It is efficient because the overall communication cost of full-text search is reduced below a formal bound. Furthermore casting bloom filters instead of raw data across the network. Bloomcast reduces the communication cost and storage cost for replication. Bloomcast replicates the items uniformly at random across the P2P networks, achieving a guaranteed recall at a communication cost of O(√N), where N is the size of the network. The main contribution of this proposal of Bloomcast design through both mathematical proof and comprehensive simulations.

Keywords: P2P O(√N),

References:

Authors: Shrikrishan Yadav, Shailendra Singh, Dharmendra Dubey

Paper Title: A To Z Applications of a Robot: A Study

Abstract: Technology has been used to make nearly every aspect of our lives easier. In the future robot will play vital role in our daily life. There are many fields where a robot is ahead than the human in every manner. Robots are mainly used in industries as compare to other field. Factory mechanization is at present expected to improve productivity, quality and safety in the production industry, especially for functions depending on workers. By using robots in different types of technology such as sensing, measurement technology, control technology, mechanics technology, and to automate operations, the efficiency, reliability and performance can be increased of the system. Industry is one area where robots have typically been used over the years. Robots are the backbone of modern industries. Small companies are presently increasing their automation level to stay competitive. Typically, the service life of a robot is 15 years. Thus, making a onetime investment may help a firm to increase productivity as compare to human workers. In this paper we have discuss the different applications of a robot in different field of life.

Keywords: Assembling, Education, Entertainment, High Power Lines, Highways, Industry, Railways.

References:
3. Industrial robots by Sanjib Pohit

Authors: Das S.S., Bhanuse V.R., Dombale A.B.

Paper Title: Abdominal Organ Segmentation Using Sparse Representation and Further Combining Graph Cuts an Oriented Active Appearance Models

Abstract: Segmentation of abdominal 3-D organ segmentation (e.g.Liver) from volumetric images forms the basis for surgical planning required for living donor transplantations and tumor resections surgeries. This paper introduces a novel idea of using sparse representations of organ shapes in a learned structured dictionary to produce an accurate preliminary segmentation, which is further evolved based on a strategic combination of the active appearance model, live wire, and graph cuts for abdominal 3-D organ segmentation. The increased accuracy of the preliminary segmentation translates into faster convergence of the evolution step and highly accurate final segmentations.

Keywords: Abdominal Organ Segmentation, Sparse Representation, Graph Cuts, Active Appearance Models.
This paper describes an original idea to eradicate the hazardous usage of electrical wires which involve lot of confusion and danger of having long, hazardous and tangled wiring. This paper as a whole gives an answer to why the need for wired transmission is decreasing. What is proposed here is a novel technique of efficiently transmitting power through wireless systems.

Abstract: We cannot imagine the world without electric power. Generally the power is transmitted through wires. This paper describes an original idea to eradicate the hazardous usage of electrical wires which involve lot of confusion in particularly organizing them. Imagine a future in which wireless power transfer is feasible: cell phones, household robots, mp3 players, laptop computers and other portable electronics capable of charging themselves without ever being plugged in, freeing us from that final, ubiquitous power wire. Some of these devices might not even need their bulky batteries to operate. This paper includes the techniques of transmitting power without using wires with an efficiency of about 95% with non radiative methods. Due to which it does not affect the environment surrounding. These techniques Includes resonating inductive coupling through induction. This is particularly suitable for long range distances ranging kilometers. With this we can avoid the confusion and danger of having long, hazardous and tangled wiring. This paper as a whole gives an effective, high performance techniques which can efficiently transmit the power to the required area vary in given distances for the power transmission through induction.

Keywords: Induction, Power, Receiver, Short distance, Transmitter, Transmission, Wireless, Wires.

References:
2. U.S.Patent 787,412, “Art of Transmitting Electrical Energy through the Natural Mediums”.

Authors: Kilaru Kalyan, Shaik Aavae Mohsin, Angadi Suresh

Paper Title: Transmission of Power through Wireless Systems

Abstract: A body area network is a wireless network of biomedical sensors that are attached to a human body. The aim of wireless area network (WBAN) is to facilitate continuously recording and monitoring of a person’s health condition and transfer it over a long-distance communication network. A sensing system is to be worn by the individuals for a long duration. This limits the size of the battery. These factors have made energy the most critical resource in WBAN. The parameters sensed by the individual devices are to be transferred onto a mobile phone or a

Keywords: Segmentation, sparse representation, AAM, Graph cut.

References:
1. Medical Image Segmentation by Combining Graph Cuts and Oriented Active Appearance Models Xinjian Chen, Jayaram K. Udupa, Ulas Bagci, Ying Zhuge, and Jianhua Yao in IEEE TRANSACTIONS ON IMAGE PROCESSING, VOL. 21, NO. 4, APRIL 2012.
2. LIVER SEGMENTATION USING STRUCTURED SPARSE REPRESENTATIONS Vimal Singhal Dan Wang Ahmed H. Tewfik Bradley J. Ericsson† University of Texas, Austin, Texas, USA, Mayo Clinic, Rochester, Minnesota, USA in 978-1-467-0046-9/12/26.00 ©2012 IEEE.
3. ACM-Based Automatic Liver Segmentation from 3D CT Images by Combining Multiple Atlases and Improved Mean Shift Techniques by Hongwen Jin*, Jangping He, Xin Yang, Rudi Dukler, and Jan Cornelis in IEEE TRANSACTIONS ON INFORMATION TECHNOLOGY IN BIOMEDICINE
4. Automatic Segmentation of the Pulmonary Lobes From Chest CT Scans Based on Fissures, Vessels, and Bronchi by Bianca Lassen*, Eva M. van Rikxoort, Michael Schmidt, Sjoerd Kerkstra, Bram van Ginneken, and Jan-Martin Kuhnigk by IEEE TRANSACTIONS ON MEDICAL IMAGING, VOL. 32, NO. 2, FEBRUARY 2013.
5. Interactive Organ Segmentation using Graph Cuts by Yun Boyko and Marie-Pierre Jolly Imaging and Visualization Department Siemens Corporate Research 755 College Road East, Princeton, NJ 08540, USA yuri@csd.uwo.ca, jolly@sr.siemens.com in Proceedings of “MICCAI”-2000, LNCS 1935, pp.276-286.
9. Evaluating performance of image segmentation criteria and techniques by Received: 16 April 2012 / Accepted: 17 October 2012 © Springer-Verlag Berlin Heidelberg and EURO - The Association of European Operational Research Societies 2012.
table via wireless network. This data is then gathered, stored and then sent to the doctor for continuous monitoring of the patient’s health condition. The doctor can thus access the patient’s health status on the go and this will help the patient to get immediate attention in life-threatening situations.

Keywords: Healthcare, Medical Server, Body Area Network (BAN), Remote Monitoring.

References:
6. World-Health-Organization

Authors: Jigar K. Sevalia, Nirav B. Siddhpura, Deep B. Shah, Jai V. Kapadia, Chetan S. Agrawal

Paper Title: Performance Evaluation of Axially Loaded Element Using Bamboo as Reinforcement

Abstract: There is a long-standing tradition of Bamboo Construction, dating back many hundreds of years. Different cultures have found in this material an economical system of building, offering sound yet light and easily replaceable forms of shelter. Bamboo can be used to make all the components of small buildings, both structural and non-structural. It is, however, often used in conjunction with other materials, cost and availability permitting. This study represents the use of Bamboo as reinforcement in axially loaded cement concrete members. In this study, various surface treatments on bamboo have been used before using as reinforcement in axially loaded element. The various chemical treatments used are Araldite, Epoxy and Bitumen. The cage of Bamboo using Bamboo stirrups was prepared for reinforcing in cement concrete column element.

Keywords: Bamboo strips, Column, Compression Test, Cracks, Tensile test.
Abstract: Recently electric vehicles are gaining more attention. The major factor to be noted in the development of electric vehicles is the battery technology. Concerned with the battery, a fast charging scheme should be used. In this paper a novel fast charging scheme for the electric vehicle is proposed. Hybrid energy storage system is a combination of battery and Super capacitor is used, and also online fuzzy logic controller is used for real time evaluation. Hybrid electric vehicles have a major focus in recent years and they have been made leaps and bounds in development. The major benefit of using Hybrid energy Storage System is that the life span of the batteries are extended also the charging time of the battery is greatly reduced. The Fuzzy Logic Controller keeps the State Of Charge within limits which also enhances the life time of the battery.

Keywords: Electric Vehicle (EV), Fuzzy Logic Controller (FLC), Hybrid Energy Storage System (HESS), State Of Charge (SOC).

References:
confidence in Users towards Cloud based data storage. The paper handles key questions of the User about how data is uploaded on Cloud, maintained on cloud so that there is no data loss; data is available to only authorized User(s) as per Client/User requirement and advanced concepts like data recovery on disaster is applied. In this paper we look at the various current researches being done to solve these issues, the current trends in securing, ensuring privacy and availability of these data on cloud storage services.

General Terms Cloud computing, Security and Reliability.

**Keywords:** Storage, Data Availability, data storage auditing, data owner auditing, Privacy, and Security.

**References:**

7. Francese Sebe’ , Josep Domingo-Ferrer, Antoni Marti nez-Ballestre, Yves Deswarte, Jean-Jacques Quiquisquer ‘Efficient Remote Data Possession Checking in Critical Information Infrastructures’, 1041-4347/08/$25.00 © 2008 IEEE Published by the IEEE Computer Society
10. Reza Curtmola, Osama Khan, Randal Burns, Giuseppe Atienese” MR-PDP: Multiple-Replica Provable Data Possession”, 1063-6927/08 $25.00 © 2008 IEEE DOI 10.1109/ICDCS.2008.68
11. Raghul Mukundan, Sanjay Madria, Mark Linderman” Replicated Data Integrity Verification in Cloud”, IEEEeese number 88ABW-2012-0360
12. Qian Wang, Student Member, IEEE, Cong Wang, Student Member, IEEE, Kui Ren, Member, IEEE, Wenjing Lou, Senior Member, IEEE, and Jin Li“Enabling Public Auditable and Data Dynamics for Storage Security in Cloud Computing” 1939-1374/12/$31.00 © 2012 IEEE Published by the IEEE Computer Society.
13. Smitha Sundareswaran, Anna C. Squicciarini, Member, IEEE, and Dan Lin” Ensuring Distributed Accountability For Data Sharing in the Cloud”, 1545-5977/12/$25.00 © 2012 IEEE Published by the IEEE Computer Society.

**Authors:** Debajan Mukherjee, Asim Kumar Jana, Malay Kumar Pandit

**Paper Title:** Detailed Investigation on Power Conditioning Unit (PCU) using Intelligent Signal Processing

**Abstract:** Harmonic in power line communication is an important matter now a days. With the extensive usage of non- linear loads in power systems, the harmonic effect becomes more prominent. Fast Fourier Transform (FFT) is one of the most popular computation algorithms for harmonic analysis. In this paper, single phase current waveform is taken from a three phase supply fed to motor through power analyzer interfaced with PC. FFT is done using matlab program on the imported data. After that, same waveform like the current waveform obtained from the hardware setup is designed in SIMULINK window of matlab 7.5 version. Those designed waveforms are filtered by Recursive Least Square (RLS) Filter to reduce Total Harmonic Distortion (THD) in the filtered output and the response of Normalised Least Mean Square (NLMS) for same input signal is discussed in detail in author’s previous publication, given as reference. Adaptive signal processing to eliminate harmonics is replicated again in Code Composer Studio (CCS) using TMS320C6713 SIMULATE OR. Here comparison is done between the responses of RLS filter with Normalised LMS filter. At last, the conclusion is drawn as NLMS filter is superior than RLS filter in the field of power line harmonic elimination to author’s best knowledge.

**Keywords:** RLS Filter NLMS Filter, FFT, SIMULINK, Total Harmonic Distortion (THD), TMS320C6713 SIMULATOR, CCS.

**References:**

92.

**Authors:** N. Abdul Rahim, Paulraj M P, A.H. Adom

**Paper Title:** Heterogeneous Multi-Classifiers for Moving Vehicle Noise Classification using Bootstrap Method

**Abstract:** In this paper, a simple system has been proposed to identify the type and distance of a moving vehicle using multi-classifier system (MCS). One-third octave filter bank approach has been used for extracting the significant feature from the noise emanated by the moving vehicle. The extracted features were associated with the type and distance of the moving vehicle and the heterogeneous multi-classifier system (HTMCS) based on multilayer Perceptron (MLP), K-nearest neighbor (KNN) and support vector machines (SVM) has been developed. Bootstrap sampling method based HTMCS was developed and the developed model has yielded a higher classification accuracy when compared to the individual base classifier models.

**Keywords:** Bootstrap, Heterogeneous, Moving Vehicle, Multi-classifier System, One-Third-Octave

**References:**


93.

**Authors:** Tarun Kumar Gautam, Neha Bajpai

**Paper Title:** Reduction of Test Cases and Prioritization by using Weight Concept

**Abstract:** Length and complexity of the software are rising day by day. So software testing is particularly difficult for development of high assurance software such as software that is produced commercial airborne system. Modified condition/Decision Condition (MC/DC) is an effective verification technique and can help to remove safety faults. This paper present new approach for test case reduction and prioritization that effectively use MC/DC criteria. In this approach we used weight concept for discarding weak test case and set priority.

**Keywords:** Test case reduction, Truth vector, Prioritization, Modified condition/Decision condition, coverage
on place always at different time intervals. He does not


Authors: Taslim Shaikh, Ninasikhi, Seema Rajput

Paper Title: TEST-JIG Card for Signal Conditioning Using DSPIC Microcontroller

Abstract: In this paper we have presented an automated multichannel Data Acquisition System, which is used to provide a high resolution system and provides data regarding temperature, pressure, RPM and RTD calculation of system used for diesel engine. Test-Jig Card is used for this purpose. Test-Jig Card includes a microcontroller instead of a computer which work on very small voltage can even work on battery. It is very useful for all the application which is risky for humans to measure. It maintains high resolution and accurate measurement within the system. The DsPIC30F3013 microcontroller uses RS-485 communication protocol to dialog with other devices and other peripheral for remote application. The measurement for remote application is stored in controller or communicated to the communication protocol. The data is digitized with the help of RS485 communication protocol which is interfaced to microcontroller. The microcontroller takes the data verifies it, stores it, processes and displays it on LCD (Liquid Crystal Display). Here the user need not go to the place always at different time intervals. He does not always require a computer with him; this small system does a lot of job.

Keywords: DSPIC30F3013, Pressure, RPM, RTD, RS-485.

References:

4. www.microchip.com
5. Microchip, “DSPIC30F3013 Datasheet”
7. PIC Assembly Language Programming for Complete Beginner, Michael A. Covington, Artificial Intelligence Center, The University of Georgia Athens, Georgia

Authors: R. Naveeth Kumar, S.L.Hemanth Chakkaravarthy, K.B.Pradeep, C.J.Nirmal Kumar

Paper Title: Image Fusion Techniques and Fuzzy Logic Methods Using Virtual Instrumentation

Abstract: The fundamentals of image process were laid over fifty years past, vital development occurred principally within the last twenty five years with the entrance of personal computers and today's issues area unit already very subtle and fast. This paper deals with the study of the employment of fuzzy logic ways and image fusion for image processing in LabVIEW. In this we developed a fuzzy edge detector and image fusion using various transformation. The tools for quality management is applicable in biomedical image processing field, jewelry field, satellite field.

Keywords: DWT, Image Denoising, fuzzy logic, labVIEW.

References:

5. CINTULA, P. From Fuzzy Logic To Fuzzy Mathematics. FIFI CVUT Praha, 2004 [Cit. 2011-11-05].

Authors: Janakinandan Nookala, Prudhvi Gogineni, Suresh Babu G

Paper Title: Kinematic Analysis of 3 D.O.F of Robot

Abstract: The study of motion can be divided into kinematics and dynamics. Direct kinematics refers to the calculation of end effectors position, orientation, velocity, and acceleration when the corresponding joint values are known. Inverse refers to the opposite case in which required joint values are calculated for given end effector values, as done in path planning. Some special aspects of kinematics include handling of redundancy collision avoidance,
and singularity avoidance. Once all relevant positions, velocities, and accelerations have been calculated using kinematics, this information can be used to improve the control algorithms of a robot. Most of the industrial robots are described geometrically by their Denavit-Hartenberg (DH) parameters, which are also difficult to perceive for students. Students will find the subject easier to learn if they are able to visualize in 3 dimensions. Tools that aid its learning have been developed by universities across the world as referred elsewhere. This project proposes RoboAnalyzer, a 3D model based software that can be used to teach robotics subjects to undergraduate and postgraduate courses in engineering colleges in India and elsewhere. In the present implementation, it can be used to learn DH parameters, forward kinematics of serial robots with revolute joints and allows 3D animation and graph plots as outputs.

Keywords: (DH), 3D.

References:
3. Denavit and Hartenberg, R.S,1995, A Kinematic Notations for lower pair mechanisms based on matrices
6. International Conference of Multibody Dynamics ICMBD-2011, Vijayawada,India
8. RRR-robot: design of an industrial like test facility for nonlinear robot control, A.M. Van Beek Eindhoven University of Technology(TUE)
9. ROBOT KINEMATICS- Vaclav Hlavac, Czech Technical University, Faculty of Electrical Engineering Department of Cybernetics.

Authors: Priyanka, Vijay Kumar Bohat

Paper Title: Detection of SQL Injection Attack and Various Prevention Strategies

Abstract: The internet is a demanding technology which is working its way into all aspects of our civilization. So security is the main critical part in our daily life. The requirements of information security and website security within an organization have undergone several changes in the last several decades. Security is a broad topic and covers a multitude of sins. This paper is written with the basic programmer and information security expert, explaining the concepts which are needed to read through the hype in the market place and understand the risks and how to deal with them. We go on to consider risk management, network threats, firewalls, protection from SQL Injection. SQL Injection is a web attack mechanisms which is being used by hackers to misuse the data of that website. It is hoped that this paper will help the reader to provide a wider perspective on security and better understand how to handle and manage risk related to security issues of website personally at client-end and at server-end.

Keywords: SQL Injection; SQL Injection prevention; SQL Injection detection; website security.

References:

Authors: T.R. Mohod, R.T. Saudagar, P.R. Ingle, A.M. Choube

Paper Title: Design Parameters of Pulsating/Oscillating Heat Pipe: A Review

Abstract: Closed loop pulsating heat pipe is a small heat transfer device especially suited for thermal management of electronic application. The unique feature of CLPHP compared with conventional heat pipe is that, there is no wick structure to return the condensate to the evaporator section, thus there is no counter flow between the liquid and the vapour. This paper reviews an influence of various design parameter and operational orientation on a PHP/OHP. This paper attempt theoretical and experimental investigation and scrutinized that internal diameter of tube and orientation number of turn’s evaporator length, adiabatic length affect the performance of PHP/OHP. A filling ratio of 50% of its total volume is optimum.

Keywords: CLPHP, PHP/OHP.

References:

**Authors:** P.Maruthurkarasi (alias) Rohini, C.Jayaprakash, R.Balaji Ganesh

**Paper Title:** Reliability Enhancement from http Log Files In Composite Web Services

**Abstract:** A Hybrid Reliability Model based on log analyzer is designed to evaluate the Reliability of Composite Web Services. Based on Dependability, Atomic Web Services are composed with a Central Co-ordination Function (Broker), Real Time Server Log Files are fed as input to the system. Log Analyzer reads the log entries and separates the individual response of the server along with the time stamps. Base on the Frequency of the service response are classified and the Error Rate is calculated by the difference in the Uptime and Downtime Stamps. The Broker designs and decides the acceptance of the service based on Error Rate (MTBF, MTTF, MTTR) and Fault Tolerance. As, the Error Rate and Service Reliability are inversely proportional, the server with lower error rate provides high reliability. Our Experimental Results with their groupings prove that the reliability can be evaluated using the Web Log File analysis.

**Keywords:** Composite Web Services, Error log, HTTP Status Error, Reliability, Web error.

**References:**


**Authors:** Ritesh Jain, Suraiya Parveen

**Paper Title:** Analysis of Different Wavelets by Correlation

**Abstract:** In today’s world, speech is an integral part of digital communication. The removal of noise in analog and digital communication has been a daunting task for many years. Noise is an unwanted signal that hinders communication. There are various methods to help restore a speech from noisy distortions. Wavelets have by now established themselves to be an invaluable accumulation to the analyst’s compilation of tools and go on to enjoy a rapidly increasing recognition in their brief account of the signal processing field. Wavelet analysis is of enlightening aspects of data that other signal study techniques miss. In addition, it affords a diverse view of data than those obtainable by conventional techniques. Wavelet analysis can often compress or de-noise a signal without appreciable degradation. Study in the field of Wavelets has shown that Wavelet decomposition is a capable method as other methods of denoising. In this paper, the author compares the performances of Daubechies, Coiflet and Symlet Wavelets for different values of their order for an audio signal. Further, the variation of threshold values with correlation has been investigated.

**Keywords:** Noise, Daubechies

**References:**

2. R.J.E. Merry, Prof. Dr. Ir. M. Steinbuch, Dr. Ir. M.J.G. van de Moolgaven. Wavelet Theory and Applications -A literature study, DCT 2005.53.
3. Florian Luisiera, Thierry Blua, Brigitte Forsteb and Michael Unsera a Biomedical Imaging Group (BIG), Ecole Polytechnique F’ed’erale de Lausanne (EPFL), Lausanne, Switzerland Centre for Mathematical Sciences, Munich University of Technology (TUM), Munich,Germany. Which Wavelet bases are the best for image denoising?
6. Adrian E. Villanueva-Luna, Alberto Jaramillo-Nunez,1, Daniel Sanchez-Lucero1, Carlos M. Ortiz-Lima1,1, Gabriel Aguilar-Soto1, Aaron Flores-Gil2 and Manuel May-Alarcon2, De-Noising Audio Signals Using MATLAB Wavelets Toolbox
7. Dr. Parvinder Singh, Dhinesh Singh, Deepak Seth. Reduction of Noise from Speech Signal using Haar and Biorthogonal Wavelet, ISSN: 2230-7108 JBECS Vol. 2, ISSN: 2230-7108 (Online) ISSN: 2230-9543(Print) Issue 3, Sept. 2011.

Authors: Vikas Pardesi, N. S. Raghava

Paper Title: A Two Layer Approach to Image Authentication and Encryption through ECC & Voice Features (MFCC, Pitch Value)

Abstract: Speech Processing is an area in which we can find such unique features (Mel Frequency Cepstrum Coefficients, Pitch value, zero crossing rates etc.) in voice segment for recognition of any individual and pre-processing for further synthesis. In this paper we are presenting a simplified approach to image authentication with MFCC (Mel Frequency Cepstrum Coefficients) and Pitch Value and image Encryption through Elliptic Curve Cryptography. Because of ECC great advantages (small key size, no solution to discrete logarithmic problem, less time consuming encryption, infinite time taken for brute force attack) for handheld, portable devices. Applying MFCC and Pitch with various methods on various encrypted images which is encrypted by Elliptic Curve Cryptography and at the receiver side we do reverse process of this approach for authentication and decryption of image . With this approach we can authenticate an image through voice segment which is advantageous because speech is a natural way to interact with people. Not required to sit and work with a keyboard and finally no specific training is required for end users.

Keywords: Elliptic curve cryptography, MFCC, Pitch value, public key cryptography, Speech Processing

References:

Authors: Asma Fatma Arif, Jyoti Shrivastava

Paper Title: Performance Analysis of three phases three wire Series Active Power Filter
Abstract: The aim of this paper is to investigate and study the performance analysis of the three phase three wire series active power filter. Auto-tuned filters give a better performance for harmonic mitigation, reactive power compensation and power factor correction as compared to the classic filters. This paper presents the simulation analysis to reduce the harmonic in the output voltage to improve the power quality.

Keywords: Active power filter, Harmonics, Hysteresis current control, Simulink

References:

Authors: P.Manivannan, P.Karunanidhi, S.Bharathiraja, K.Ramesh

Paper Title: A Review on Routing Protocols in MANET based on Routing Information Update Mechanism

Abstract: Mobile ad hoc networks (MANET’s) are autonomously self-organized networks without infrastructure support. In a mobile ad hoc network, nodes move arbitrarily; therefore the network may experience rapid and unpredictable topology changes. Because nodes in a MANET normally have limited transmission ranges, some nodes cannot communicate directly with each other. Hence, routing paths in mobile ad hoc networks potentially contain multiple hops, and every node in mobile ad hoc networks has the responsibility to act as a router. In recent years, several routing protocols have been proposed for mobile ad hoc networks such as proactive routing protocols, reactive routing protocols and hybrid routing protocols. This survey paper provides an overview of routing protocols in MANET based on their routing information update mechanism by presenting their characteristics, functionality, benefits and limitations. The objective is to make observations about how the performance of these protocols can be improved.

Keywords: MANET, Proactive, Reactive and Hybrid Routing Protocols.

References:
12. CHAI KEONG TOH “Associativity – Based Routing for Ad-Hoc Mobile Networks” at University of Cambridge.
Abstract: In recent years, much attention has been paid to SAW RFID research and its applications. Many methods have been proposed for coding the SAW RFID tags [1]-[4]. Among this, best provided methods for coding these devices is time position and phase encoding. The data capacity of the tags is significantly enhanced by extracting additional phase information from the tag responses [5]. However post processing of the tag in simulation and extraction of the phase from Interrogated signals of the tag is complicate and time consuming. In this work, we have proposed a simple post processing method using COMSOL Multiphysics to find the exact phase of the Interrogated signals of the tag.

Keywords: Surface acoustic wave, SAW RFID tag, Piezoelectric, IDT.

References:

Authors: H. B. Kekre, Kavita Sonawane

Paper Title: Partitioning of Modified Histograms to Generate 27 Bins Feature Vector to Improve Performance of CBIR

Abstract: Content Based Image Retrieval is motivating the researchers to devise new techniques as the rate of retrieval is definitely gaining importance as multimedia databases are increasing day by day. In order to improve the retrieval accuracy of content-based image retrieval systems, research focus is on generating new efficient algorithms to extract image features and also to achieve the dimension reduction in order to reduce the processing time. In this paper, new algorithms are proposed to extract different types of image features based on the color contents of the RGB image. The feature extraction mainly deals with the original and the modified histograms of R, G and B planes. Four different modification functions namely Equalization (EQH), Logarithmic (LOG), Polynomial expression (POLY) and Linear equations 1, 2 and 3 (LINEQ 1, 2 and 3) are proposed to modify the histogram and their performance is compared in this paper. To implement the dimensionality reduction, this paper proposes two partitioning techniques namely Linear Partitioning (LP) and Centre of Gravity (CG) partitioning to partition the R, G and B histograms in three parts so that 27 bins can be generated from it. It directly reduces the size of the feature vector based on histogram from 256 bins to 27 bins only. Experimentation for the proposed methods is carried out using 2000 BMP images of 20 different categories. Comparison of query and database image feature vectors is worked out using three similarity measures namely Euclidean distance (ED), Absolute distance (AD) and Cosine Correlation distance (CD). To compare and evaluate the performances of all the proposed approaches along with different similarity measures three performance evaluation parameters are used namely Precision Recall Cross over Point, Longest String and Length of string to Retrieve all Relevant

Keywords: About four key CBIR, Centre of Gravity, Equalization (EQH), Logarithmic (LOG), Polynomial expression(POLY), Linear Equations(LINEQ), Euclidean distance (ED),Linear Partitioning(LP), Centre of gravity(CG), Absolute distance (AD), Cosine Correlation Distance (CD), Precision Recall Cross over Point (PRCP), Longest String (LS), Length of String to retrieve all Relevant (LSRR).

References:
5. Arnold W.M. Smeulders, Senior Member, IEEE, Marcel Worying, Simone Santini, , Amarnath Gupta, , and Ramesh Jain, “Content-Based Image Retrieval at the End of the Early Years” IEEE xplor.ieee.org/iel5/34/19391/00895972.pdf

Authors: Mahsa Pournia, Morteza Fathipour

Paper Title: A Post Processing Procedure for Surface Acoustic Wave RFID Using COMSOL

Abstract: In recent years, much attention has been paid to SAW RFID research and its applications. Many methods have been proposed for coding the SAW RFID tags [1]-[4]. Among this, best provided methods for coding these devices is time position and phase encoding. The data capacity of the tags is significantly enhanced by extracting additional phase information from the tag responses [5]. However post processing of the tag in simulation and extraction of the phase from Interrogated signals of the tag is complicate and time consuming. In this work, we have proposed a simple post processing method using COMSOL Multiphysics to find the exact phase of the Interrogated signals of the tag.

Keywords: Surface acoustic wave, SAW RFID tag, Piezoelectric, IDT.
Abstract: Cloud computing refers to the use of Internet based computer technology for a variety of services like memory, storage, processing and bandwidth. In internet cloud computing plays a major role to maintain the collection IT resources which are used by the cloud providers. In this paper we have proposed the concept of virtualization, where the Storage Management and CDMI (Cloud Data Management Interface) are discussed. The CDMI gives how standard interfaces, coordinated between different organizations can meet the emerging needs for interoperability and portability of data between clouds. The Open Cloud Computing Interface (OCCI) is a free, open, community consensus driven API, targeting cloud infrastructure services.

Keywords: Cloud Computing, CDMI, OCCI, Storage Virtualization.

References:
2. www.techphilosophia.co.in/research/Virtualization & Cloud Computing.pdf

Authors: D. Padma Subramanian, Anly Abraham

Paper Title: Effect of High Wind Penetration, Grid Strengthening and Compensation on Steady State Operating Point of DFIG Interfaced Power System

Abstract: This paper presents the effect of high wind penetration, grid strengthening and compensation on steady state operating point of a power system interfaced with Doubly Fed Induction Generator (DFIG). A model of DFIG to interface with the load flow program is presented. A MATLAB program is developed and effectiveness of developed program is tested in a standard IEEE-9 bus system, interfaced with DFIG at ninth bus. The impact of varying wind velocity in cases of high wind penetration, grid strengthening and compensation on the steady state behavior of the grid connected DFIG system is studied and the results are presented.

Keywords: Doubly fed induction generator, High wind penetration, Power flow analysis,

References:

Authors: Naveen Choudhary

Paper Title: Migration of On-Chip Networks from 2 Dimensional Plane to 3 Dimensional Plane

Abstract: In spite of the higher scalability and parallelism presented by 2D-Network-on-Chip (NoC) over the conventional shared-bus based systems, it is still not an ultimate solution for future large scale Systems-on-Chip (SoCs). Recently, NoC integration in three dimensions is (3D-Network-on-Chip) proposed as a potential solution offering higher speed, low latency, lower dynamic power consumption and high parallelism. Advanced integration technologies are making feasible the extension of topology synthesis of on-chip networks from 2 dimension to 3 dimension. Studies have highlighted that 3D NoCs can significantly improve communication efficiency due to reduced communication distances in 3D space. This paper presents a brief journey of research in the domain of Network on Chip topology synthesis from 2D dimensional plane to 3 dimensional plane and highlights the major challenges and issues faced and addressed by the NoC research community in the design of 2D standard NoCs, irregular & application specific 2D NoCs and 3D NoCs.

Keywords: Application-Specific-NoC, 3D-NoC, 2D-NoC, On-Chip networks, System-on-Chip.

References:
2. M. Taylor, W. Lee, S. Amarasinghe, A. Agarwal, ”Scalar Operand Networks “, in IEEE Transactions on Parallel and Distributed Systems,
In the International reports on the design, development and fabrication of a new and orthogonal principles and practice (Second Edition), Pearson Education Asia, Sixth Indian

compact PFI system that can replace an in complexity added with high cost. This paper r
controlled v
performance and control emission effectively. It is now used widely in modern cars and some kind of sport
Paper Title:
Authors:


Authors: G.Karthikeyan, M.Ramajayam, A.Pannirselvam
Paper Title: Design and Fabrication of an Electronic Fuel Injection Kit for a Conventional Small Capacity SI Engine
Abstract: Port Fuel Injection (PFI) was developed in 1980s for automotive industry in order to improve engine performance and control emission effectively. It is now used widely in modern cars and some kind of sport motorcycles. To take advantage of electronic, the premix of air-fuel and combustion process can be programmed and controlled very precisely. Therefore, the emission and performance of the engine can be improved significantly for different working conditions. One of the main reasons for remote use of PFI technology in motorcycle is its complexity added with high cost. This paper reports on the design, development and fabrication of a new and compact PFI system that can replace an in-used carburetor easily with minimum modifications.
Keywords: Automotive; Four stroke; Gasoline; fuel retrofit kit; Spark ignition Engine.
References:

520-524

109.

525-529

110.


Authors: Nishant Kumar K., Rajul K. Gajjar

Paper Title: Inelastic Effects of Biaxial Excitation on Geometrically Asymmetric Plan Building with Biaxial Eccentricity

Abstract: Seismic analysis is generally performed by creating a structural model which is excited with forces in two orthogonal directions separately i.e. they are subjected to uniaxial excitation. But an actual earthquake will have its effect in both the directions simultaneously. Limited research has been carried out on effect of such biaxial excitation on two way geometrically asymmetric plan having biaxial eccentricity. This paper deals with the inelastic effect of biaxial excitation on non-linear performance of geometrically two way asymmetric multi-storey buildings with biaxial eccentricity using various time-histories. The angle of incidence of earthquake forces will be varying between 0 to 360 degrees. The building, having of L-shaped plan with eccentricity along each of x and y directions, has been studied. Time history analysis has been carried out using SAP2000 after validating a preliminary model with experimental results available in reference literature.

Keywords: Biaxial excitation, Multi-storey building, geometrically asymmetric plan, inelastic effects.

References:
4. Raúl González Herrera1, Consuelo Gómez Soberón, “Influence of Plan Irregularities of Buildings” by 14th World Conference on Earthquake Engineering, 2008,
14. Applicability of Non-linear Multiple-degree-of-freedom modelling for design” by NEHRP Joint venture
15. IS 1893:2002 *Criteria for Earthquake Resistant Design of Structures*

Authors: M Shanmuga Priya, Reyaz Farooq, Divyashree K, A.K Satheesh Babu, M Lakshmi Prabha, Prasad M.P

Paper Title: Pilot Scale Production of Azotobacter Biofertilizer and Its Effect on the Growth Parameters of Ocimum Sanctum

Abstract: Azotobacters are predominant in the rhizosphere of plants and they help in phosphate solubilisation. They belong to the family Azotobacteraceae and they are used as broad spectrum biofertilizers. In the present study four samples were collected from the rhizosphere regions of the plants namely Solanum lycopersicum (tomato), Zingiber officinale (ginger), Solanum melongena (Brinjal) and Allium sativum (Garlic). The collected samples were isolated and identified as isolates 1, 2, 3 and 4. Biochemical tests such as motility test, catalase test, oxidase test, starch hydrolysis, litmus milk and phosphate solubilisation were performed. The effect of culture parameters such as Incubation period, pH, Temperature and carbon source at different concentrations were carried out. Mass production of Azotobacter was carried out using batch fermenter. Further pot experiments were conducted to determine the root length, shoot length and number of leaves in Ocimum sanctum on 15th, 30th and 45th day. The results showed an increase in root length, shoot length and number of leaves in biofertilizer treated plant when compared with the control and inorganic fertilizer.

Keywords: Azotobacter, Biofertilizer, Ocimum sanctum and Rhizosphere

Abstract: A broad range of conversion technologies is currently available for generating a diverse array of energy products from sawmill wood waste. The choice of conversion technology will depend on cost of capital, the volume of wood waste available, access to energy markets, the prices for each renewable energy product and the cost of the wood waste. The purpose of this research project was to investigate the feasibility of the various options of sawmill wood waste conversion technologies at The Wattle Company’s Vumba Sawmill so as to value add sustainably in an environmentally friendly manner. The outcome favoured Briquetting as the most feasible conversion technology for the wood waste. The plant capacity will be 2.25 tonnes having an annual output of 689.04 tonnes with a target market of 9-10% regional. The Investment required was US$ 65 472.92 with Payback Period of 1 year 3 months and the Net Present Value was US$ 325 429.08. The project’s location is Manicaland Province in the Vumba Eastern Highlands of Zimbabwe.

Keywords: Bioenergy, Biofuels, Biomass, Renewable Energy, Sawmill wood waste.

References:
11. UNEP Collaborating Centre on Energy and Environment (January 1997), Implementation strategy to reduce environmental impact on energy related activities in Zimbabwe.

Cluster Based Key Revocation and Key Distribution in Wireless Sensor Network a Survey

Abstract: Key management has become a challenging issue in the design and deployment of secure wireless sensor networks. Key management includes two aspects: key distribution and key revocation. Key distribution refers to the task of distributing secret keys between communicating parties to provide secrecy and authentication. Key revocation refers to the task of securely removing compromised keys. By revoking all of the keys of a compromised sensor node, the node can be removed from the network. Compared to key distribution, Wireless sensor networks consist of sensor nodes with limited computational and communication capabilities. In this paper, the whole network of sensor nodes is divided into clusters based on their physical locations. In addition, efficient ways of key distribution among the nodes within the cluster and among controllers of each cluster are discussed. Also, inter and intra cluster communications are presented in detail. The security of the entire network through efficient key management by taking into consideration the network’s power capabilities is discussed. In this paper, we have discussed several existing methods for key revocation.

Keywords: Key distribution, Key revocation, heterogeneous atmosphere, wireless sensor node, Security Requirements, Sensor network, clusters, nodes

References:
Multiple Input Multiple Output Orthogonal Frequency Division Multiplexing (MIMO-OFDM) Based Image Transmission Using Hadamard Transform as PAPR Reduction Technique

Abstract: High data rate wireless communications demands robustness, high spectral efficiency, frequency selective fading, and low computational complexity. Orthogonal Frequency Division Multiplexing (OFDM) is one of the most promising technologies to achieve these goals. OFDM can be used in conjunction with a Multiple-Input Multiple-Output (MIMO) transceiver to increase the diversity gain and/or the system capacity by exploiting spatial domain. Because the OFDM system effectively provides numerous parallel narrowband channels, MIMO-OFDM is considered a key technology in emerging high-data rate systems such as 4G, IEEE 802.16, and IEEE 802.11n. However there is one main disadvantage of MIMO-OFDM that is the high peak-to-average power ratio (PAPR) of the transmitter’s output signal on different antennas. High Peak to Average Power Ratio (PAPR) for MIMO-OFDM system is still a demanding area and difficult issue. By now, for reducing PAPR, numerous techniques have been recommended. In this paper Hadamard Transform based Selective Level Mapping as method of PAPR reduction technique has been proposed and simulated. The whole simulation work has been tested on image signal and the results at both transmitter and receiver have been verified in terms of various graphs and plots.

Keywords: Multiple Input Multiple Out (MIMO), Peak to Average Power Ratio (PAPR), Orthogonal Space Time Block Code (OSTBC) Encoder, Hadamard Transform, Complementary Cumulative Distribution Function (CCDF).

References:


Authors: S. Nagammai, S.Latha, L.Aarifa, S.Dhidaya
**Abstract:** The typical nonlinear interacting tank process has the difficulty in controller design because of a change in system dynamics and interaction of processes. This paper deals with design methodology of state feedback with and without integral controller and the performance of which is compared with ZN tuned PID controller. A simulation is carried out using MATLAB to control the modeled nonlinear interacting tank process.

**Keywords:** Interacting tank process, PID controller, state feedback controller.

**References:**
1. M. Gopal 3/e, Digital Control and State Variable Method, TMGH.

**Authors:** V. Harsha Ram Keerthi, N. Srivallika, P. Srinivasulu

**Abstract:** In the recent years the development in communication systems requires the development of low cost, minimal weight and low profile antennas that are capable of maintaining high performance over a wide spectrum of frequencies. This technological trend has focused much effort into the design of a microstrip patch antenna. The objective of this paper is to design a microstrip line fed rectangular microstrip patch antenna which operates in C-band at 5GHz. ADS supports every step of the design process—schematic capture, layout, frequency-domain and time-domain circuit simulation, and electromagnetic field simulation, allowing the engineer to fully characterize and optimize an RF design without changing tools. Therefore, method of moments based ADS software is used to design a Microstrip Patch Antenna with enhanced gain and bandwidth. Advanced Design System (ADS) continues to lead the RF EDA industry with the most innovative and commercially successful technologies, including Harmonic Balance, Circuit Envelope, Transient Convolution, Agilent Ptolemy, X-parameter*, Momentum and 3D EM simulators (including both FEM and FDTD solvers). With ADS’s Wireless Libraries and circuit-system-EM co-simulation technology, ADS provides full, standards-based design and verification within a single, integrated platform. The length of the antenna is nearly half wavelength in the dielectric it is a very critical parameter, which governs the resonant frequency of the antenna. In view of design, selection of the patch width and length are the major parameters along with the feed line dimensions. Desired patch antenna design was simulated by ADS simulator program. The entire project is being carried out at National Atmospheric Research Laboratory (NARL), ISRO.

**Keywords:** C-Band, ADS, Micro strip Patch, RADAR, Wind profiler, dual feed, NARL

**References:**
1. Srinivasulu, P., Manas R Padiy, Yasodha, P and NarayanaRao, T, 2010 "Development of UHF wind profiling radar for lower atmospheric research applications". Conference paper at NARL.

**Authors:** N.Gopi Chand, K.Ravi Teja, M.Sridevi

**Abstract:** In this paper, we presented how to extract maximum efficiency out of a solar panel using two combined techniques. The first one we have to implement is a micro-controller based solar-tracking system. The system checks the position of the sun and controls the movement of a solar panel so that radiation of the sun comes normally to the surface of the solar panel and the second is to install an MPPT charge controller which makes the inverter to work at maximum power point. So that under any climatic conditions maximum power is extracted. This way we make efficient use of both solar panel and solar-energy from sun.

**Keywords:** MPPT(Maximum power point tracking), Charge Controller, Micro-controller, Solar Tracking.

**References:**
A Survey on AODV Protocol Performance with Black Hole Node in MANET

Security is a main concern in any network communication. Because of MANETs special characteristics, it becomes vulnerable to security attacks. MANET has no fixed infrastructure and any centralized system. It has a dynamic topology which randomly changes itself. There are different kinds of security attacks in MANETs. In this we have discussed an attack known as Black Hole attack. In MANETs, AODV is the commonly used routing algorithm, in which black hole attack can easily take place. Black hole attack takes advantage of route discovery process in it and provide wrong route to the source node in MANETs. Many researchers have given different solutions for preventing and detecting this attack. We have discussed some of the proposed solutions in this survey.

Keywords: AODV, MANETs, Collaborative black hole attack, Single black hole attack.

References:
2. IRSHAD ULLAH SHOAIB UR REHMAN "Analysis of Black Hole Attack on MANETs Using Different MANET Routing Protocols"
Abstract: In this study, an appropriate commercial biomass briquetting machine suitable for use in rural communities was designed and constructed, and the performance evaluation carried out using sawdust. The physical and combustion properties of the briquette were determined at varying biomass-binder ratios of 100:15, 100:25, 100:35 and 100:45 using cassava starch as the binding agent. Both the physical and combustion properties of the briquette were significantly affected by the binder level (P < 0.05). The optimum biomass-binder ratio on the basis of the heating value was attained at the 100:25 blending ratio having a compressed density of 0.7269g/cm3 and a heating value of 27.17MJ/kg while the optimum blending ratio on the basis of the heating value was attained at the 100:35 blending ratio with a compressed density of 0.7028g/cm3. It was concluded that the heating values at the optimum biomass-binder ratios were sufficient to produce heat required for household cooking and small scale industrial cottage applications. The biomass briquetting machine had a production capacity of about 43kg/hr.

Keywords: Appropriate technology, biomass, briquetting, binder level.

References:

Abstract: Labour productivity is one of the least studied areas within the construction industry. Productivity improvements achieve higher cost savings with minimal investment. Due to the fact that profit margins are small on construction projects, cost savings associated with productivity are crucial to becoming a successful contractor. The chief setback to improving labor productivity is measured labor productivity. The main objective of this study is to find critical factors affecting labour productivity. A survey was carried out in south Gujarat region cities, oncivil contractors. Total 51 feedbacks were analyzed through the Analytic hierarchy process (AHP) and Relative Importance Index (RII) techniques. Five most crucial factors in descending order from RII Technique are Delay in payments, Skill Of Labour, Clarity Of Technical Specification, Shortage Of Materials, and Motivation Of Labour. According to AHP Technique first 5 crucial factors in descending order are High/Low Temperature, Rain, High Wind, Motivation Of Labour, and Physical Fatigue. Contractors shall act on these factors to improve labour productivity in construction projects.

Keywords: Labour productivity, Construction contractor, India, Relative importance index, Analytic Hierarchy Process, rank.

References:
12. BOOKS
13. Building construction by B. C. Punamya
14. Construction project management by K.K.CHITKARA
15. Estimating and costing in a Civil engineering book by B.N.DUTTA
16. Labour Productivity In Indian Industries Book By M. K. Singh

Authors: N. Durga Indira, K. Nalini, Habibulla Khan

Paper Title: Design of Interdigital Bandpass Filter

Abstract: The purpose of this paper described about the design of microwave interdigital bandpass filter at different frequencies. A microwave filter is two port network used to control the frequency response. This paper presented the simulation of interdigital bandpass filter and chebyshev bandpass filter with lumped elements using ADS (Advanced Design System Software). In this filters RT-DUROID substrate is used with 0.5mm thickness.

Keywords: Interdigital, bandpass filter, lumped elements.

References:
Spam Mail Visualization through Open Relay On Firewall Gateway

Abstract: A picture is able to tell one thousand words. Pictorial representation of any matter is clearer than text. Present time security is more challengeable task in the computer field. No one can say any model/algorithms/idea can’t be crack. This paper is basically an idea to visualise the spam mail send by spammer through open relay. Email log file has many information. A lot information can be extracted from a log file. In this paper, two types of log files are described. These are email and firewall logs. This paper shows how a log file is able to visualize the information, attack, and protection against spammer/attacker. This paper described different method for visualizing the attack through open relay via firewall gateway. Spam mail is a great problem on the email server. Many attack are done on this server via open relays. Firewall may be a great idea to protect the sever/ system by the block or pass the spam mail. This paper also describes the forensic analysis of different attacks via log file on the email server. It is able to visualize worm, virus, dictionary attack, man in the middle attack from log files. Basically this paper represents an idea about the answers of the “wh” words on the email server. Those are “who”(Source and destination), “when”(time), “where”(port and address), “what”(visualization of different activity).

Keywords: Log files, MTA, SMTP, Email, Spam, Directory harvest, Firewall, Virus, Worm, Firewall Ruleset

References:
6. Tobias Eggendorfer Jörg Keller, Preventing Spam By Dynamically Obfuscating Email-Addressess, IEEE, 200
10. Wei-Jen Li , Shlomo Hershkop, Salvatore J. Stolfo, Email Archive Analysis Through Graphical Visualisation , VizSEC/DMSEC’04, October 29, 2004, Washington, DC, USA.
12. Olu Akindeinde,Security Analysis and data Visualization, October 16,2009
14. Richard Blum, Open source Email security, Sam publication, 2002

DWT Based Invisible Watermarking Technique for Digital Images

Abstract: The two most aspects of any image based steganographic system are the quality of the stego-image & the capacity of the cover image. A lossless data hiding scheme is presented based on quantized coefficients of discrete wavelet transform (DWT) in the frequency domain to embed secret message. Using the quantized DWT based method, we embed secret data into the successive zero coefficients of the medium-high frequency components in each reconstructed block for 3-level 2-D DWT of cover image. The procedures of the proposed system mainly include embedding & extracting. The original image can be recovered losslessly when the secret data had been extracted from stego-image.

Keywords: DWT, Haar Wavelet, Information Hiding, PSNR, Security,

References:
2. Cui-ling JIANG“A Steganographic Method based on the JPEG Digital images” Institute of Information, East China University of Science and Technology,2011
5. Mohammad Reza Soheili “A Robust Digital image Watermarking Scheme Based on DWT” Journal of Advances in Computer Research, m2(2010) 75-82.1
8. Guorong Xuan, Yun Q. Shi & Chengyuan Yang “Lossless Data Hiding Using Integer Wavelet Transform and Threshold Embedding Technique” 0-7803-9332-5/05/$20.00 ©2005 IEEE

Authors: Priyanka Asrani
Paper Title: Mobile Cloud Computing
Abstract: Together with rapid growth in mobile applications and cloud computing technology, mobile cloud computing has been introduced as a potential technology for mobile services. As mobile cloud computing is still in an early stage of development, it is necessary to have a thorough understanding of the technology in order to point to the direction of future research. With this aim, this paper presents a review on the background and principles of mobile cloud computing: principle, architecture and challenges along with the possible solutions. It also gives brief account about mobile and cloud computing. Applications like M-commerce, M-healthcare and M-gaming have been presented to discuss the possible applications of mobile cloud computing. The paper concludes with the authors view about the future of this technology.

Keywords: Cloud computing, Mobile cloud computing, Mobile computing.

References:

Paper Title: Privacy Preserving Scalar Product Computation for Mobile Healthcare Emergency
Abstract: The cost of health care has become a national concern. Recent advances in wireless communication networking and IT have made it possible to monitor and overhaul the outcomes across diverse healthcare environment. Here we make use of the sensors and smart phones to provide continuous monitoring of the individuals without the need for them to be hospitalized. Based on the health conditions of the patients’, the dedicated sensors are provided to monitor the patients’ after which the sensed data is transmitted to the healthcare center using their smart phones. However the smartphone which are used for various purpose when is not available to transmit the data due to some reasons, we make use of opportunistic computing where the data is transmitted using a neighbours’ Smartphone. The m-healthcare still faces many challenges which include Information security and privacy preservation. To overcome the above shortcomings we use a encryption technique to preserve the privacy of users’ health information.

Keywords: About four key words or phrases in alphabetical order, separated by commas.

References:

Authors: Aparnna.V, Jabisha Arul, Nandhini. S, Vishnu Kumar. A
Paper Title: Multi Attribute Based Technique in Key Generation System
Abstract: The main objective of this paper is to improve the security and the efficiency while sharing the data between data owner and the users. Based upon the attributes of the users we are going to share the data. One of the most challenging issues in confidential data sharing systems is the enforcement of data access policies and the support of policies updates. Cipher text policy attribute based encryption (CP-ABE) is becoming a promising cryptographic solution to this kind of problem. It enables data owners to define their own access policies over their user attributes and enforce the policies on the data to be distributed. However, the advantage of the system comes...
with a major drawback which is known as a key escrow problem. The key generation center might decrypt any kind of messages addressed to specific users by generating their private keys. This is not suitable for data sharing typical scenarios where the data owner would like to make their private data only accessible to designated users. In addition, applying CP-ABE in data sharing system introduces another challenge with regard to the user revocation. From this study, we propose a novel CP-ABE scheme for a data sharing system by exploiting the characteristic of the system architecture. The performance and security analysis indicate that the proposed scheme is efficient to securely manage the data distributed in the data sharing system.

**Keywords:** Attribute Based Encryption, Escrow Free Key Issuing Protocol, Ant Colony Algorithm, Revocation.

**References:**

**Authors:** Aparna Madhavrao Harale, J.S.Chitode

**Paper Title:** Analyze performance of Median Filter and Center Weighted Median Filter for Efficient Removal of Impulse Noise Using ARM

**Abstract:** A methodology based on median filters for the removal of Salt and Pepper noise by its detection followed by filtering in both binary and gray level images has been proposed in this paper. Linear and nonlinear filters have been proposed earlier for the removal of impulse noise; however the removal of impulse noise often brings about blurring which results in edges being distorted and poor quality. Therefore the necessity to preserve the edges and fine details during filtering is the challenge faced by researchers today. The proposed method consists of noise detection followed by the removal of detected noise by median filter using selective pixels that are not noise themselves. The noise detection is based on simple thresholding of pixels. Computer simulations were carried out to analyze the performance of the proposed method and the results obtained were compared to that of conventional median filter and center weighted median (CWM) filter.

**Keywords:** Improved median filter; conventional median filter; center weighted median (CWM) filter; Impulse noise; Salt and pepper; Image denoising; Non linear filters.

**References:**

**Authors:** M. Divya

**Paper Title:** Bit Error Rate Performance of BPSK Modulation and OFDM-BPSK with Rayleigh Multipath Channel

**Abstract:** In this paper Bit Error Rate performance of BPSK modulation and OFDM -BPSK System over Rayleigh fading channel is analyzed. The performance of BER of BPSK over AWGN and Rayleigh channel is compared. OFDM is a orthogonal frequency division multiplexing to reduce inter-symbol interference problem. Simulation of BPSK signals is carried with both AWGN and Rayleigh channel. Finally simulations of OFDM signals are carried...
with Rayleigh faded signals to understand the effect of channel fading and to obtain optimum value of Bit Error Rate (BER) and Signal to noise ratio (SNR). The simulation results show that the simulated bit error rate is in good agreement with the theoretical bit error rate for BPSK modulation.

Keywords: BPSK, BER, OFDM, Rayleigh fading channel etc.

References:

Authors: K.Tanveer Alam, B.Rama Murthy, Mahammad D.V, U. Sunitha and P.Thimmaiah

Paper Title: Low Cost Ethernet Based Data Acquisition System in Linux Platform

Abstract: This paper reports on the Low cost Ethernet based Data Acquisition System in Linux Platform. Due to the high cost of Ethernet based Data Acquisition Systems (DAQ) in market, an attempt has been made to develop and implement a low cost, high speed, portable and easy make DAQ which suit for general purpose instrumentation systems. In present work Linux operating system, GCC C and g++ compiler used for software development. For hardware, IC MAX197 is interfaced with Personal computers’ Parallel port, which works with 12-bit resolution, 8 single ended channels and 100Ksps at 2MHz clock rates. And the temperature sensor LM35Z is connected to zero channel of ADC for evaluation of system performance. Server is the main core to control the DAQ circuitry while Ethernet controller TCP/IP protocol has the responsibility of transmitting data among the client PCs. The system has been tested for different clients and is highly scalable in size and performance.

Keywords: Ethernet, parallel port, DAQ, server, client, Linux, Qt4, MySQL.

References:

Authors: Mohamed A Aboubakar, Eshmaiel Ganjian, Homayoon Pouya, A M Akash, H M Abdussalam

Paper Title: Influence of Treatment Tarot Kaolin by Thermal Method on Hard and Fresh Properties of Cement Mortar

Abstract: In the last year at Libya the cost of the cement going up and lack has impacted unenthusiastically on the delivery of reasonably priced accommodation and infrastructural growth, for solve this problem we looking for new material for replacement with cement. This paper investigated the use of natural clay (kaolin) from Tarout town in south Libya, after treatment by thermal method, as partial replacement of Portland cement in the production of concrete. By The Scanning Electron Microscope (SEM) imaging and particle size distributions (PSD) to understand the mechanism of pozzolanic improvement of the Libya clay after treatment by thermal method (calcined at 800 OC for 2 hour).The Mortar mixes cubes measuring 50mm x 50mm x 50mm were made by using treated Tarout natural clay to replace 0%, 10%, 15%, and 20% of Portland cement by mass. The workability of the fresh cement mortar mixes were evaluated using the slump test, while compressive strengths of cement mortar cubes were evaluated at 3, 7 and 28 days. The maximum compressive strength at all ages of testing was obtained at 10% replacement, corresponding to an increase of 11% compared to 28-day compressive strengths. The result show Workability decreased with an increase in replacement percentage. Pozzolan can be used to partially replace ordinary Portland cement in the production of concrete without compromising strength.

Keywords: thermal treatment, pozzolan, mortar, compressive strength, slump.
References:

Authors: A.Gpoichand, R.Mohanrao, N.V.S Sankar, G.Rama Balaji, P.Sandeep Kumar

Paper Title: Design and Analysis of Copper Honeycomb Sandwich Structure

Abstract: The honeycomb sandwich construction is one of the most valued structural engineering innovations developed by the composite industry. Used extensively in many industries like aerospace, transportation rails, etc. In this study a stainless steel chosen a face sheet and copper is a core material. Honeycombs are most often an array of hollow hexagonal cells with thin vertical walls Copper Honeycomb is low density permeable material with numerous applications. The defining characteristic of these Honeycombs is a very high porosity; typically 75-95% of the volume consists of void spaces. Static three-point bending tests were carried out in order to investigate load and deflection variations. The theoretical load and deflections in copper honeycomb sandwich panel values is adapted and compared with experimental and simulation results. Metallic Honeycombs have found a wide variety of applications in heat exchangers, energy absorption, flow diffusion and lightweight optics. Copper honeycomb is used in numerous engineering and scientific applications in industry for both porosity and strength.

Keywords: copper honeycomb sandwich structure, FEA,Three point bending test,

References:
12. HexWebTM Honeycomb sandwich design technologies, Hexel Composites, URL:
14. Honeycombstructure.URL: http://en.wikipedia.org/wiki/Honeycomb_structureCopper honeycomb, URL:

Authors: SaumyaDubey, Deepak Tiwari, O.P.Singh. K.K. Singh

Paper Title: Speckle Noise Removal and Enhancement of SAR Images

Abstract: Synthetic Aperture Radar (SAR) images are mostly corrupted by speckle noise and this type of noiseisproduced due to the coherent nature of scattering phenomenon, so the removal of speckle noise from the SAR images without the loss of structural features and textural information becomes very necessary. This paper presents the de-noising of SAR image and enhancement techniques for providing good visual quality to the SAR images. Here the wavelet thresholding technique is applied to noisy SAR image then Contrast Enhancement Techniques and finally morphological operation is implemented on de-noised SAR image. In this paper the implementation of de-noising technique with the enhancement techniques as a whole is the proposed method. The experimental results show the proposed method outperforms. The tabulated results of all techniques are shown in terms of Peak Signal to Noise Ratio (PSNR) and Mean Square Error (MSE) parameters. The proposed approach provides better visualization effectiveness and improvement in both parameter values. All the simulation is done with the help of MATLAB R2010a environment.

References:
Keywords: SAR, DWT, ContrastEnhancement, Morphological Operation, PSNR, MSE.

References:
10. ISN : 2 2 0 3 : 7 - 1 0 1 9 .

Authors: D.Bhanuprakash, A.Gopichand, M.Padmalatha, R.V.S.Lakshmi, P.S.N.Raju

Paper Title: Modeling and Analysis of Puma Robot Using Mat Lab

Abstract: The PUMA Programmable Universal Machine for Assembly, more popularly known as PUMA is an industrial robot arm. The main objective of this paper is determination of end effectors position for the modified Robot which is same as PUMA robot with different link twist angles usingMATLAB. Mat lab program is developed for different link angles with the help of robot tool kit developed by pectorcere. Trajectory of the modified robot is also done using Mat lab. Forward kinematics values are compared with the mat lab values. Modeling of PUMA robot is also done using PRO-E soft ware.

Keywords: D-H notations, PUMA Robot, MAT LAB, Pro-E, Trajectory planning.

References:
5. R.P. Paul and H.Zhang, Computationally efficient kinematics for manipulators and spherical wrists based on the Homogeneous Transformation Representation, the International journal of robotics research 7 1 0 9.
6. R.K Mittal I J Nagrath Robotics and control system Book
7. Introduction to robotics saeed.B.Niku
9. R.Pratap Getting started with MATLAB:A Quick introduction to scientists and Engineering
10. SPRINGER HANDBOOK OF ROBOTICS EDITED BY BRUNO SICILIANO, OUSSAMA KHATI
11. www.tech.plym.ac.uk/sme/cad/pdf/ProE/proe_01.

Authors: Ajinkya S. Jamdar, Atul V. Shah, D. D. Gavali, S. L. Kurkute

Paper Title: Edge Adaptive Steganography Using DWT

Abstract: The least-significant-bit (LSB)-based approach is a popular type of Steganography algorithms in the spatial domain. The least-significant-bit (LSB)-based approach is a popular type of steganographic algorithms in the spatial domain. However, we find that in most existing approaches, the choice of embedding positions within a cover image mainly depends on a pseudorandom number generator without considering the relationship between the image content itself and the size of the secret message. Thus the smooth/flat regions in the cover images will inevitably be contaminated after data hiding even at a low embedding rate, and this will lead to poor visual quality and low security based on our analysis and extensive experiments, especially for those images with many smooth regions. In this paper, we expand the LSB matching revisited image steganography and propose an edge adaptive scheme which can select the embedding regions according to the size of secret message and the difference between two consecutive pixels in the cover image. For lower embedding rates, only sharper edge regions are used while keeping the other smoother regions as they are. When the embedding rate increases, more edge regions can be released adaptively for data hiding by adjusting just a few parameters. The experimental results evaluated on 6000 natural images with three specific and four universal steganalysis algorithms show that the new scheme can enhance the security significantly compared with typical LSB-based approaches as well as their edge adaptive ones, such as pixel-value-differencing-based approaches, while preserving higher visual quality of stego images at the same time.

Keywords: D-H notations, PUMA Robot, MAT LAB, Pro-E, Trajectory planning.

References:
5. R.P. Paul and H.Zhang, Computationally efficient kinematics for manipulators and spherical wrists based on the Homogeneous Transformation Representation, the International journal of robotics research 7 1 0 9.
Keywords: LSB, DWT, Secret Message, Pixel.

References:

1. Wei-Qiu Luo, Fangqiang Huang and Jiwu Huang, “Edge Adaptive Image Steganography Based on LSB Matching Revisited,” IEEE TRANSACTIONS ON INFORMATION SECURITIES AND SECURITY, VOL. 5, NO. 2, JUNE 2010

Authors: Vaibhav Kumar J. Mistry, Mahesh M. Goyani

Paper Title: A literature survey on Facial Expression Recognition using Global Features

Abstract: Facial Expression Recognition (FER) is a rapidly growing and ever green research field in the area of Computer Vision, Artificial Intelligent and Automation. There are many application which uses Facial Expression to evaluate human evaluate, feelings, judgment, opinion. Recognizing Human Facial Expression is not a simple task because of some circumstances due to illumination, facial occlusions, face color/shape etc. In these paper, we present some method/techniques such as Principal Component Analysis (PCA), Linear Discriminate Analysis (LDA), Gabor Filter/Energy, Line Edge Mapping (LEM), Neural Network, Independent Component Analysis (ICA) which will directly or/and indirectly used to recognize human expression in various condition.

Keywords: Facial Expression, Expression Recognition, Gabor Filter, Gabor Energy, Principal Component Analysis, Neural Network, Eigenface.

References:

3. JAFFE Dataset “Japanese Female Face Expression Database”;
4. Anastassias C. Koulitas, Dimitrios I. Fotiadis “A Region Based Methodology for Facial Expression Recognition” page 1
8. Cai-feng Shang, Shaogang Gong and Peter W. McOwan, “Robust Facial Expression Recognition Using Local Binary Patterns” 0-7803-9134-9/05, IEEE.
Abstract: The role of cryptography in today’s world is increasing day by day. Information is flowing from one place to another on the network. One most common cryptography technique is substitution cipher. Play fair is most common substitution cipher. In this paper, we present an overview of existing playfair ciphers. Encryption/decryption is a very popular task. We also explain the fundamentals of sequential cryptography. We describe today’s approaches for play fair cipher. Their strengths and weaknesses are also investigated. It turns out that the behavior of the algorithms is much more similar as to be expected.

Keywords: Cryptography, Network Security, Symmetric Key, Playfair cipher and substitution

References:
15. Harshavardhan Kayarkar, “Classification of Various Security Techniques in Databases and their Comparative Analysis”

Authors: Hirak Patel, Khushbu C. Panchal, Chetan S. Jadav

Paper Title: Structural Analysis of Truck Chassis Frame and Design Optimization for Weight Reduction

Abstract: Automotive chassis is an important part of an automobile. The chassis serves as a frame work for supporting the body and different parts of the automobile. Also, it should be rigid enough to withstand the shock, twist, vibration and other stresses. Along with strength, an important consideration in chassis design is to have adequate bending stiffness for better handling characteristics. So, maximum stress, maximum equilaterial stress and deflection are important criteria for the design of the chassis. This report is the work performed towards the optimization of the automotive chassis with constraints of maximum shear stress, equivalent stress and deflection of chassis. Structural systems like the chassis can be easily analyzed using the finite element techniques. A sensitivity analysis is carried out for weight reduction. So a proper finite element model of the chassis is to be developed. The chassis is modeled in PRO-E. FEA is done on the modeled chassis using the ANSYS Workbench.

Keywords: optimization, sensitivity, deformation, stress.

References:
7. Han Quan-li,Tian Lin-Hong,Qu Ling-Jin. “Research on Optimization Design of Heavy-duty Truck Frame Based on the Sensitivity”. 2010 IEEE

Authors: N.V.SaiSwaroop, A.V.S.S.T.Siddharatha, A.SriNath, S.Vandana, G.Shanthi

Paper Title: 3-D Image Reconstruction from 2-D Image Using Lab VIEW

Abstract: Traditionally, ophthalmologists and neurologists are depending on 2-D images for detection of retinopathy and fractures in the skull and their diagnosis. Analysis using 2-D images has certain limitations such as intensity and color of the same physical positions may vary considerably across consecutive images. Secondly, the shape of retinal fundus is almost planar, which makes the estimation of depth more difficult. Analysis of the skull is also complex by viewing it from single two dimensional view. So, objective of our paper is 2-D registration, depth extraction and 3-D reconstruction of an image.3-D reconstruction system is needed, which enables the ophthalmologists and neurologists to monitor the depth variations from the desktop itself. In this paper, a 3-D depth extraction and reconstruction system is designed and developed to estimate the depth variations as well as identify the defects of the images. This paper has enumerated the use of Lab VIEW to implement a complex 3-D depth extraction and shape reconstruction system which is of lower cost and of acceptable performance.

Keywords: 2-D registration, Depth Extraction, 3-D reconstruction, Lab VIEW.

References:
1. Ted Shultz, Luis A. Rodriguez.: 3-D Image Reconstruction From two 2-D Images, Issued Pages: 50-65, October 2010, Cornell University, Research Centre, USA.
4. S.Dogdan. V.Pattinson: 3-D Reconstruction and Evaluation of Tissues by using CT, MRI Slices and digital images, Ondokuz Mayis University, Engineering faculty, Dept of Geodesy and Photogrammetry, 55 139 Kurupelit, Samsun, Turkey, January 2011.
on Pattern analysis and Machine Vision, DOI 10.2.10.

Authors: Rajnish Kumar, Praneet Kumar Gaurav, Swati Shahi, Amol Sitaram Kardel

Paper Title: Payment Card Fraud Identification

Abstract: This paper introduces the defensive methods and procedures to identify the payment card fraud. Payment card means credit/debit card which is used for payment purpose over internet. With the rapid advancement in internet, almost all the transaction are being offered by internet as online such as railway ticket booking, mobile recharge, paying the electricity or telephone bill, shopping and etc. this is very good thing because we save our time, we have multi option while shopping but when we transact over internet then chances of fraud also exists. In existing system, we know the fraud happened only when the transaction has been occurred. Sometimes, it become very difficult to identify the fraudulent and hence regarding loses occurs. In this article, we proposed a model namely Advanced Hidden Markov Model which will identify the fraud during transaction. This model is different from Hidden Markov Model. In this Advanced Hidden Markov Model, We used some other set of finite states which is linked through probability distribution states and not visible to user. This model first detect whether it is fraudulent or not and after then it process further so chances of fraud can be minimized using advanced hidden markov model.

Keywords: PC, AHMM, FIS, FP, PCFI

References:

Authors: Bhavesh Mathur, Satish Kumar Nath

Paper Title: Quantifying Portability of an Aspect Oriented Software Using Fuzzy Logic

Abstract: The quality of the software is measured in terms of its capability to fulfill the needs of the users and also its ability to achieve the developer’s goal. Quality is mainly studied by quality model. In this paper an attempt has been made to quantify the portability of aspect oriented software using ISO/IEC 9126 Model. Due to the unpredictable nature of software quality attributes, the fuzzy multi criteria approach has been used to evolve the quality of the software.

Keywords: Aspect Oriented Programming (AOP), Cross Cutting Concerns, ISO/IEC9126 Model, Portability

References:
Most internal combustion engines are fluid cooled using either air (a gaseous fluid) or a liquid coolant run through a heat exchanger (radiator) cooled by air. In air cooling system, heat is carried away by the air flowing over and around the cylinder. Note that fins are cast on the cylinder head and cylinder barrel which provide additional conductive and radiating surface. In water-cooling system of cooling engines, the cylinder walls and heads are provided with jacket through which the cooling liquid can circulate. An internal combustion engine produces power byburning fuel within the cylinders; therefore, it is often referred to as a “heat engine.” However, only about 25% of the heat is converted to useful power. What happens to the remaining 75%? Thirty to thirty five percent of the heat produced in the combustion chambers by the burning fuel are dissipated by the cooling system along with the lubrication and fuel systems. Forty to forty-five percent of the heat produced passes out with the exhaust gases. If this heat were not removed quickly, overheating and extensive damage would result. Valves would burn and warp, lubricating oil would break down, pistons and bearingwould overheat and seize, and the engine would soon stop. The necessity for cooling may be emphasized by considering the total heat developed by an ordinary six cylinder engine. 

Keywords: Forty to forty-five percent of the heat produced passes out with the exhaust gases. If this heat were not removed quickly.

References:
2. www.google.co.in
4. Internal Combustion Engines by H.N. Gupta

Authors: R. Regan, D. Muruganandam, K. Rajagopal

Paper Title: Novel Routing Approaches for Wireless Ad Hoc Networks

Abstract: In wireless ad-hoc networks, a new routing scheme is proposed; it is called Novel Routing Approach-NRA. This method adopts reinforcement learning framework to route the data from source to Destination in the network.
absence of detailed knowledge of entire channel. In this method, an every node itself determines the efficient way to transmit data and utilizes the network opportunity. Also this approach addresses the network congestion problem and improves the throughput that minimizes the delay. This paper examines the traffic flow of a wireless Ad hoc network; congestion occurs due to elastic traffic that degrades the performance of the entire network. In order to predict the future congestion situation, a relevant estimation is designed for each forwarder node and our proposed algorithm Agent Based Congestion Control(ABCC) Routing Protocol which possess the estimation function. Hence our proposed work can minimize the amount of congestion and delay in opportunistic routing models than the existing ones.

**Keywords:** maximization, Wireless, ad-hoc networks, Agent Based congestion control Routing Protocol.

**References:**
22. Adaptive Opportunistic Routing for Wireless Ad Hoc Networks. Abhiheet A. Bhorkar, Mohammad Naghshtavar, Student Member, IEEE, Tara Javidi, Member, IEEE, and Bhaskar D. Rao, Fellow, IEEE.

**Authors:** J. Suganya Shesathri, S.K.Yaamini

**Paper Title:** A Robust Digital Video Watermarking

**Abstract:** Watermarking describes that hide information in digital media such as images, audio and video. This work mainly focuses on invisible and robust watermark schemes for video sequences. A major requirement for the video watermarking schemes is the possibility of invisible watermarking and decoding with no access to the original signal. Piracy and copyright production is a major area of the Digital video asset management system. Encryption, Steganography, cryptography watermarking techniques was already adopted to maintain piracy and security in Digital Media such as images, audio and video. Most of the watermarking techniques focus on embedding hidden message into the Digital Media to product the ownership of the video contents. Here, we propose an algorithm to claim the ownership of Digital Video using Dynamic watermarking techniques. This involves selection of key frames from the given Digital Video based on rgb values. Pair of key frames is analyzed for horizontal jagged noise around the edges using interlaced scanning. Finally, Spread Transform-Scalar Costa Scheme is applied over the order pair of key frames to generate watermark signal.

**Keywords:** watermarking, Steganography, Cryptography, Spread Transform, Scalar Costa Scheme

**References:**
4. Qibin Sun and Shih-Fu Chen,”A Robust and Secure Media Signature Scheme for JPEG Images” Special Issue for MMSP, may 2002
6. Raphael C.-W. Phan • Bok-Min Goh • Geong-Sen Poh •Jongsung Kim”Analysis of a Buyer–SellerWatermarking Protocol for Trustworthy


14. xinyu tang, 1 bonnie kirpatrick,2 shawna thomas,1 guang song,3and nancy m. amato," using motion planning to study unfolding kinetics" Journal Of Computational Biology volume 12, number 6, 2005


Authors: **R. Regan, D. Muruganandam, S. Senthil**

**Paper Title:** Privacy Preserving USOR Protocol Using Mobile Adhoc Networks

**Abstract:** Privacy protection of mobile ad hoc networks is critical issue, compared to wired networks due to the mobility of wireless media. The attacker needs an appropriate transceiver to receive the wireless signal. In wired networks; all the devices are always stable and do not move to any place. Hence in wired network, it’s not that much difficult to protect the environments. Collection of nodes that forms a network without the aid of any infrastructure or centralized administration. All the nodes are having limited transmission range. There are two issues plays the critical role for the Mobile ad hoc network i.e Privacy and Routing. Stronger privacy is needed for mobile ad hoc networks. An unobservable secure on demand routing protocol used to provide complete unlinkability and unobservability for all packets. It uses the combination of ID based encryption and Group signature for route discovery. USOR provides security against both inside and outside attackers.

**Keywords:** ID, USOR.

**References:**


8. J. Ren, Y. Li, and T. Li, in Proc. IEEE IMS, 2009, Providing source privacy in mobile ad hoc networks”


Authors: **Manmeet Kaur, Richa Sapra**

**Paper Title:** Classification of Patents by Using the Text Mining Approach Based On PCA and Logistics

**Abstract:** Analysis of patent data is important tool for industrial research. Patent analysis has been used in many research fields and applied for rich topics in technology management. Patents are often used as the source of inspiration for new ideas. Patents contain detailed technical information about technical problem and the preferred technical solution. This information can be used for example to assess the state of the art or as a basis to identify possible gaps in a technology field. But often it is a very time consuming process to analyze the information provided by patents, because huge amounts of patents have to be considered. This paper proposes an intelligent system for classification based on Principle component analysis (PCA) and logistics. The intelligent system is designed to extract the features from the patents database and classify them according to the predefined categories as software, biological, business and chemical. Three different stages are designed to classify the content of patents such as (1) text pre-processing (2) PCA based features extraction and (3) classification using logistics. The main advantage of this approach is that the user need not to read whole patent documents but able to retrieve the relevant parts of the text in short time for further analysis process.

**Keywords:** Classification, Data mining, Logistics, PCA, Text mining.
References:


Authors: R. Padmanaban, M. Dharmendira Kumar, P.B. Sakthivel, N.S. Elangoovan

Paper Title: A Case Study on Chemical Properties of Ground Water in Madurai District, Tamil Nadu, India

Abstract: A case study has been conducted by the present authors to analyze the chemical parameters of ground water in Madurai district, Tamil Nadu, India. The data on ground water has been collected for this study purposes from the Government Department of Tamil Nadu for all the seven Taluks of the Madurai district during the period of 2001-2011 and compared with B.I. Standards 10500-1991. Most of the parameters found in the water samples like Total Hardness (TH), Ca2+, Mg2+, Na+ and F are within the allowable limits. But the abnormal levels of chemicals like Potassium found in ground water is hazardous to human health and will also bring an adverse effect on agricultural products. Remedial measures have been brought out in this paper.

Keywords: Ground water, Chemical properties, Hazard, Human Health, Agriculture

References:

10. IS 10500 – 1991, Bureau of Indian Standards, India

Authors: P.Anil kumar, V.Narasimha Nayak, Fazal Noorbasha


Abstract: Financial transactions are specified in decimal arithmetic. Until the introduction of IEEE 754-2008, specialized software hardware routines were used to perform these transactions but it incurred a penalty on performance. There is a need for accurate analysis of these solutions on representative DFP benchmarks. This Work uses a single precision evaluation of decimal numbers .In this paper we are taking decimal numbers and converting them into to normalization form and then finally to floating point in order to do our calculation like [addition, subtraction, multiplication, division] by using this method there is a scope of increasing accuracy of evaluation of decimal numbers, we also presented the performance analysis that gives the average number of cycles for common DFP operations and the total number of each DFP operation in each benchmark, and highlights the trade-offs between using 64-bit and 128-bit DFP operands for both binary and decimal significant encodings.

Keywords: Decimal Floating Point (DFP), Field Programmable Gate arrays (FPGA), Floating Point (FP).
An optical amplifier is a device that amplifies an optical signal directly, without the need to first convert it to an electrical signal. An optical amplifier may be thought of as a laser without an optical cavity, or one in which feedback from the cavity is suppressed. Optical amplifiers are important in optical communication and laser physics. There are several different physical mechanisms that can be used to amplify a light signal, which correspond to the major types of optical amplifiers. In doped fiber amplifiers and bulk lasers, stimulated emission in the amplifier's gain medium causes amplification of incoming light. In semiconductor optical amplifiers (SOAs), electronic-holcombination occurs. In Raman amplifiers, Raman scattering of incoming light with photons in the lattice of the gain medium produces photons coherent with the incoming photons. Parametric amplifiers use parametric amplification. Almost any laser active gain medium can be pumped to produce gain for light at the wavelength of a laser made with the same material as its gain medium. Such amplifiers are commonly used to produce high power laser systems. Special types such as regenerative amplifiers and chirped-pulse amplifiers are used to amplify ultrashort pulses.
Abstract: Increasing the performance of an internal combustion engine requires the transformation of total fuel energy to useful energy at the highest as possible. Increase of inner cylinder heat plays important role in the increase of engine performance and decrease of exhaust emissions. It is understood that coating combustion chamber elements with thermal barriers contributes a lot to the increase of inner cylinder heat. This study includes an evaluation of experimental studies and its results carried out upon the methods applied on coating with thermal barrier in diesel engines, the effects of coating on the performance of engine using rice bran oil biodiesel blends of B10, B20, B40, B100 with the diesel fuel. By using rice bran biodiesel blends with diesel fuel, the result showed that brake thermal efficiency and mechanical efficiency of different blends with diesel fuel were less as compared to conventional diesel. Fuel consumption was increased with blending percentage in the engine. Emission level of HC decreased (40-50%) with blending percentage increased with all type of fuel modes. NOx, CO also decreased with blending percentage increased with diesel fuel.

Keywords: Rice bran biodiesel, TBC engine, Brake thermal efficiency, Mechanical efficiency, Heat balance sheet, Exhaust emission.

References:
easily generated the signature instead of unique signer in fraud way so we need a signature identification system. The signature identification can be done either offline or online manner. Here we used the image processing technique for offline signature identification here no dynamic feature are available in offline identification. Neural network is used as a classifier for this system. Here we propose an intelligent neural network that work on the feature like pixel density method, angular method and mix both methods together. And compared these methods and see that which one method is provides the better result and accuracy.

**Keywords:** Angle method, FAR, FRR, Neural Network, Pixel Density.

**References:**
4. Debasish Jena1, Banshidhar Majhi2, Saroj Kumar Panigrahy3, Sanjay Kumar Jena4” Improved Offline Signature Verification Scheme Using Feature Point Extraction Method” irsia’ India
5. Prabir Kumar Misra Mukti Ranjan Sahoo “ Offline Signature Verification Scheme” national institute of technology, rourkela.

**Authors:** S.Sharon Ranjini, G.Shine Let

**Paper Title:** Security-Efficient Routing For Highly Dynamic MANETS

**Abstract:** The Goal of Position-based Opportunistic Routing (POR) is to solve the problem of delivering data packets for highly dynamic mobile adhoc networks in a timely manner. The protocol (POR) takes the property of Geographic routing. Here, the data packets are sent out from the source node and some of the neighbor nodes will be the forwarding candidates, if the best forwarder did not forward the packet in a particular period of time; the forwarding candidates will forward the packets. By using Virtual Destination-based Void Handling (VDHV) Scheme, the communication hole is avoided. In the existing system, the geographic routing property is used, the problem of delivering data packets for highly Dynamic mobile adhoc networks is solved. But there is a limitation that the nodes that is selected as the best forwarder is not checked whether it is secured or not. To overcome this problem a Security-efficient routing is proposed in which the nodes which have the higher trust value is considered as the best forwarder. The Selfish and normal nodes is differentiated by using the RREQ algorithm. The Selfish nodes do not forward the request. It will check the trust value, whether it is friend or stranger or acquaintances. In this approach, From the RREQ algorithm, $X_f$, $X_r$, $X_s$ are the threshold values set for friends, acquaintances and strangers, as per the requirements of the application software. Random waypoint model is chosen as the movement.

**Keywords:** Mobile Adhoc Networks, RREQ algorithm, Random waypoint model, Routing.

**References:**
Authors: Niyanta Panure, Sharvari Joshi, Swapnal Jawale, Minal Rathod, D.G. Bhalke

Paper Title: Imperium Management

Abstract: The proposed system is based on image processing and embedded to develop a system in the seminar hall / classroom in order to reduce electricity wastage. There is no need of a centralized control room as the system will be automatic. In this direction of controlling the wastage of power will be reduced. The methods that are used in this project are designed the circuit, write a code, simulation, synthesis and implement in hardware. In this project, AVR studio Software is chosen to write assembly C coding and MATLAB is used to write code for DIP part. We have designed a system which automatically operates the AC/fan, light and manages the power. Using CCTV / webcam we will capture the image of hall/classroom and using Camshift algorithm human will be detected and this will be given as input to atmega16. Different temperature and light sensors are used. The controller will then check them and later the connection to relay will be done accordingly, which will turn on the Fan/ AC, lights automatically if necessary. This whole system will help in reduction of the power wastage thus saving the electricity. This system is economical.

Keywords: AVR algorithm, CAMSHIFT algorithm, faces detection, and object detection.

References:
6. Gary R. Bradski,Intel Corporation, Microprocessor  Computer Research Lab “Real time face & object tracking as a component of perceptual user interface” 0-8186-8606-5/9988 IEEE
7. Jianyu Li , Feng Li , Min Zhang “A Real-time Detecting and Tracking Method for Moving Objects Based on Color Video” 2009 Sixth International Conference on Computer Graphics, Imaging and Visualization

Authors: Sasidhar B, Ramesh Babu D R, Bhaskarao N, Basheer Jan

Paper Title: Automated Segmentation of Lung Regions and Detection of Lung Cancer in CT scan

Abstract: Automated segmentation and detection of lung cancer is important to assist radiologist. In this paper, there are two steps involved: a. Automated Segmentation of lung regions b. Automated Detection of lung cancer. To speed up the process of detecting lung cancer, segmentation of lung region plays an important role.

Keywords: Lung Regions, Lung Cancer, Connected Components, Thresholding

References:
2. Eng, Michael Samir Labib Habib,“A computer aided diagnosis system (CAD) for the detection of pulmonary nodules on CT scans”,systems and biomedical engineering department,faculty of engineering,cairo university,Giza,Egypt,2009.
Abstract: Transient stability analysis has recently become a major issue in the operation of power systems due to the increasing stress on power system networks. This problem requires evaluation of a power system's ability to withstand disturbances while maintaining the quality of service. Many different techniques have been proposed for transient stability analysis in power systems, specially for a multimachine system. These methods include the time domain solutions, the extended equal area criteria, and the direct stability methods such as the transient energy function. However, the most methods must transform from a multi-machine system to an equivalent machine and infinite bus system [1][3]. This paper introduces a method as an accurate algorithm to analyze transient stability for power system with an individual machine. It is as a tool to identify stable and unstable conditions of a power system after fault clearing with solving differential equations. [5][6].

Keywords: multimachine power system, matlab Simulink, transient stability, damping

References:
8. Power system stability by Mرنال K Pal

Abstract: This paper deals with Power flow, which is necessary for any power system solution and carry out a comprehensive study of the Newton-Raphson method of power flow analysis with and without UPFC. Controlling power flow in modern power systems can be made more flexible by the use of recent developments in power electronic and computing control technology. The Unified Power Flow Controller (UPFC) provides a promising means to control power flow in modern power systems. In this paper the Newton-Raphson is used to investigate its effect on voltage profile with and without UPFC in power system. Simulations have been implemented in MATUB and the IEEE 30-bus system has been used as a case study. Simulations investigate the effect of voltage magnitude with and without UPFC on the power flow of the system. This survey article will be very much useful to the researchers for finding out the relevant references in the field of Newton-Raphson power flow control with UPFC in power systems.

Keywords: Newton-Raphson, Power flow control, Three phase fault, UPFC (Unified Power Flow Controller).

References:

Abstract: Green Fuel, also known as Biofuel is a type of fuel distilled from plants and animal materials. It is believed by most of the people to be more environmentally friendly than the widely used fossil fuels. Green fuel has evolved as a possible fuelling option as the world drains out its possible energy resources. It has a big role to play in the future as far as the replacements to the already existing fossil fuels are concerned. We, as a group, aim at evaluating the performance and combustion characteristics of one of the biofuels, bio diesel. The performance of biodiesel can be evaluated by an index called as cetane number. Cetane number is a measurement of combustion quality of diesel fuel during compression ignition. It is a significant expression of diesel fuel quality among a number of other measurements that determine overall diesel fuel quality. Data has been collected from the experiments done and comparison is drawn between the performance of diesel engine filled with biodiesel and diesel.
This report also focuses on the manufacturing process of biodiesel, the different types of cetane improvers available and their effect on the performance of diesel engine

**Keywords:** It is a significant expression of diesel fuel quality among a number of other measurements that determine overall diesel fuel quality.

**References:**
**Paper Title:** An ECG Data Compression Method Via Local Maxima and ASCII Character Encoding

**Abstract:** The electrocardiogram (ECG) compression method presented in this paper is based on ASCII character encoding. In this compression methodology, at first individual standard deviation of each part of the signal is calculated. For the region of high deviation, local maxima are extracted. To achieve a strict lossless compression in regions of high standard deviation and a tolerable lossy compression in rest of the signal, two different compression algorithms have been developed. The compression algorithm has been evaluated with the MIT-BIH Arrhythmia Database which revealed that this proposed algorithm can reduce the file size significantly with almost negligible loss of information. By using the reversed logic for reconstruction the data can be reconstructed preserving the significant ECG signal morphology.

**Keywords:** creating difference array, local maxima, standard deviation, replacement of critical numbers.

**References:**
1. W.J. Tompkins, Editor “Biomedical Digital Signal Processing”.

**Authors:** Goutham Solasa, Nariganani SD Satadeep, T.Raghu Krishna Prasad, G.Suresh Babu

**Paper Title:** Modal Analysis of Chassis

**Abstract:** Project is aimed at finding the characteristics of mode (and vibrational) responses of heavy vehicle chassis at particular frequency inputs. The chassis dimensions are taken from an automobile workshop , is developed in pro-E media and has been imported to ANSYS commercial software to perform the modal analysis. Modal analysis determines the vibration characteristics (natural frequencies and mode shapes) of a structure or a machine component during free vibration. The natural frequency and mode shapes are important parameters in the modal analysis of any component. Given suitable conditions with some excited input (frequency), mode shapes are obtained. We followed block lanzcos method in modal analysis. By analysing the mode shapes, we can able to detect the defects in the component. So changing the natural frequency or other parameters can fix the damage. So, using the ‘Modal Analysis’ feature of ANSYS we come to know of the mode shapes and their changes according to the frequencies. This is the way we get to know of unwanted vibrations and eliminate by further respective processes. In this paper we have shown only mode shapes and their results, in the next step we will do the analysis of mode shapes.

**Keywords:** ANSYS.

**Authors:** Upwinder Kaur, Rajesh Mehra

**Paper Title:** Low Power CMOS Counter Using Clock Gated Flip-Flop

**Abstract:** The synchronous designs operates at highest frequency that derives a large load because it has to reach many sequential elements throughout the chip. Thus clock signals have been a great source of power dissipation because of high frequency and load. Clock signals do not perform any computation and mainly used for synchronization. Hence these signals are not carrying any information. So, by using clock gating one can save power by reducing unnecessary clock activities inside the gated module. A new counter using clock gated flip-flop is presented in this paper. The circuit is based on a new clock gating flip flop approach to reduce the signal’s switching power consumption. It has reduced the number of transistors. The proposed flip-flop is used to design 10 bits binary counter. This counter has been designed up to the layout level with 1V power supply in 90nm CMOS technology and
have been simulated using Microwind simulations. Simulations have shown the effectiveness of the new approach on power consumption and transistor count

**Keywords:** Clock gating, master-slave configuration, power consumption, and switching activity.

**References:**


**Authors:** Satyanarayana B.S., Padmaja K. V., Apoorva M. Kalgal

**Paper Title:** Capacitive Micromachined Ultrasonic Transducer (CMUT): Review

**Abstract:** Ultrasound imaging (sonography), which uses high-frequency sound waves to view soft tissues such as muscles and internal organs, is a powerful and cost-effective diagnostic technique. The vital and the cost-deciding unit in the design of ultrasound imaging system is the ultrasound transducer. Hence, micromachined ultrasonic transducers (MUTs) are one application of MEMS where miniaturization is expected to offer significant advantages overall the current bulk piezoelectric ultrasonic transducers. Capacitive micromachined ultrasonic transducer (CMUT) is an attractive alternative to the more traditional, expensive, piezoelectric transducers as they offer advantages like sensitivity, transduction efficiency, wide bandwidth, high temporal and axial resolution, enables batch fabrication process as well as integration with electronics. This is a review work to study the materials and construction details, fabrication processes, dimensional parameters and performance parameters of CMUT.

**Keywords:** Capacitive micromachined ultrasonic transducer (CMUT), polyvinylidene fluoride (PVDF), ultrasound imaging.

**References:**


**Authors:** Charan Singh Chandna, Shourabh Dave

**Paper Title:** State of The Art in Software Size & Effort Estimation

**Abstract:** In this paper, we present an overview of existing size and effort estimates for software. All these estimates are described more or less on their own. Size & effort estimation is a very popular task. We also explain the fundamentals of size & effort estimation. We describe today’s approaches for size & effort estimation. From the broad variety of size & effort estimation models that have been developed we will compare the most important ones. Their strengths and weaknesses are also investigated. It turns out that the behavior of the size & effort estimates is
much more similar as to be expected.

Keywords: COCOMO-II, Project planning and Software size & Estimation.

References:

Authors: Ahmed Ayad Abdalhameed

Paper Title: Detecting and Eliminating Rogue Access Points in IEEE-802.11 WLAN Based on Agents Terminology and Skew Intervals: A Proposal

Abstract: The existence of rough access points in the network is now days becoming very serious security threat for networks line WLAN. The presence of such network threats always resulted into the important information leakage or damage. Previously already many tools are developed by different research groups, however they are coming with some limitations which we have to discuss and address in this research proposal. Here the agent based approach is present not only to detect the rough access points but also their elimination from the wireless networks efficiently and with minimum cost involvement. The master agent and slave agents are generated automatically, which are as major components for providing the security to wireless networks. These agents are continuously doing the process of networks scanning to capture the rough access points and eliminate them. This scanning is scheduled based on clock skews which are playing important role. This Methodology has the following outstanding properties: (1) it doesn’t require any specialized hardware; (2) the proposed algorithm detects and completely eliminates the UAPs from network; (3) it provides a cost-effective solution; (4) due to multiple master agents possibility of network congestion or delays is reduced. The proposed technique can block UAPs as well as remove them from the networks both in form of Unauthorized APs.

Keywords: Fake Access Points, clock skew, master, slave, wireless networks.

References:

Authors: Akhil Gupta, Randhir Singh, Parveen Lehana

Paper Title: Effect of Microwaves Treated Soil on Growth of Mustard Plants

Abstract: Over the past few decades with the growth in cellular services all over the world; a noticeable observation comes in front regarding the life span of birds and growth of crops. This is because of obvious reason of increase in microwave presence in our atmosphere. The cellular phones mostly work at 945 MHz frequency. The objective of this study is to investigate the changes in growth rate and germination of mustard plants after exposure of different amount of microwaves in power and duration. The observations for a period of ten days using microwaves treated and untreated soil were carried out. The other control variables such as temperature, humidity,
sun light and level of gases (CO₂, N₂, and O₂) were maintained almost same for all the observations. The investigations have shown that the plants grown with microwave exposed soil behaved differently.

**Keywords:** Mustard, microwave (MW) effects, soil.

**References:**

**Authors:** Suvarna Lattha Kakara, M V Seshagiri Rao

**Paper Title:** Study On Stress – Strain Behaviour of Hardened Concrete with HVFA, GGBS AND GBS as Partial Replacement Materials

**Abstract:** Concrete is the most widely used construction material developed by man. Because of its superior specialty of being cast in any desirable shape, it has replaced stone and brick masonry. Inspite of all this, it has some serious deficiencies which, but for its remarkable qualities of flexibility, resistance and ability to redistribute stress, would have prevented its use as a building material. Prediction of concrete strength and stress strain behaviour of concrete is an important issue in the concrete industry, since the traditional laboratory approach to determine the strength of concrete attracts some drawbacks such as manual involvement, time consumption and chances of creeping of human error. This paper reports the results of an experimental study, conducted to evaluate the stress strain behaviour of hardened concrete by partially replacing the concrete by partially replacing the cement by Ground granulated blast furnace slag and High volume fly ash (GGBS and HVFA) by 0%, 10%, 20%, 30%, 40%, 50%, 60% and 70% for each grade of concrete M20, M40 and M60 at different ages of 28 days. By taking grade of concrete percentage replacement of GGBS and water cement ratio as the controlling parameters. Another experimental study is also carried out by replacing the sand with Granulated Blast Furnace Slag (GBScoarse) which confirming to zone- II category by 0% to 70% for each grade of concrete M20, M40 and M60 at 28 days. From these study analytical equations for the stress – strain curves were plotted. The experimental and theoretical stress strains are shows good correlation.

**Keywords:** GBS (coarse) zone-II, Ground Granulated Blast Furnace Slag (GGBS), Hardened concrete, HVFA, Saenz’s model equation.

**References:**

**Authors:** Amey G Badar, Sagar B Bangar, Vinayak Sudalai

**Paper Title:** Use of Side Door Intrusion Test Facility for TYRE Strength Test

**Abstract:** For the certification of any tyre to be declared legal and safe to be used on roads it is mandatory that it is tested at an accredited homologation lab. One of the mandatory test for this purpose is the plunger test where the tyre is tested for its strength. Also present in homologation labs is the side door intrusion test which is in use less...
Keywords: Adaptor, Automotive Certification, Plunger Test, Side-door Intrusion test, Tyre strength test.

References:
4. ‘Design of Machine Elements’ – V.B.Bhandari
5. ‘SKF Catalogue’- www.skf.com/india/products
6. ‘Masta Catalogue SN series’ - www.masta.com
7. ‘GTR-Tyres’- working paper No: TYREGtr-02-04 (Plunger Energy)
8. ‘NBC technical Catalogue’- www.nbc.com

Authors: Mohamed El Zeweidy, Mohamed Mounir

Paper Title: Identifying Performance Criterion of Software Projects That Leads To Increasing Project Productivity and Software Quality (A Pilot Study)

Abstract: The identified major problems in software production centers are those related to nonstandard management system. There are much repeated works, rapid changes of requirements, lack of training, latency of software (S/W) delivery, and large number of defects detected after the delivery of software. This article aims to identify the performance criterion of software projects that leads to increasing project productivity, and software quality. The results shows that improving the performance of software productivity can be achieved by applying the Dynamic Forms, Queries, and Reports techniques through the criteria Application type, Functional size measurement approach, Project size, Language type, Team size, Development platform. While improving the performance of Software quality value (SQV) is achieved by applying other criteria such as the use of the six forms of testing collectively (Unit, New function, and Performance, Regression, System, and Acceptance tests) and full documentation.

Keywords: software benchmark, software quality, software production centers, software productivity.

References:
13. Total metrics, 2007. How to Decide which Method to Use,

Authors: M. Dhanalakshmi, P. Premchand, A. Govardhan

Paper Title: Tongue Diagnosing With Sequential Image Enhancement Methods

Abstract: Tongue diagnosis is one of the important area in traditional diagnosing techniques and it has more significance among the experts. Tongue diagnosing is usually carried out by visually understanding the tongue, but the processing of tongue image is not an easy task to carry out. The difficulty strikes because of the irregular shape of the tongue, overlapping of colours, dominance of saliva on cracks and buds etc. In this paper, we proposed image enhancement methods for processing the tongue image to get the required features of the tongue. The method mainly consists of two techniques; first, contrast enhancement with edge detection in grey scale for highlighting the shape, cracks, buds and pimples; second, colour enhancement for identifying the true nature of colours and coating on different parts of the tongue. The aim of our method is to reduce the complexity in tongue understanding. The experimental results revealed that our methods produced significant result for the tongue diagnosis.

Keywords: Tongue diagnosis, Image Processing, Image enhancement.

References:
4. WANG X, ZHANG D, “AN OPTIMIZED TONGUE IMAGE COLOR CORRECTION SCHEME”, IEEE TRANSACTIONS ON
Abstract: In this paper design and analysis of capacitively fed wideband microstrip antenna suspended above the ground plane is presented. It is demonstrated that the proposed antenna can be used for wideband application with impedance bandwidth of about 51.13% at center frequency 7.255 GHz with a good gain in various microwave bands (C and X band). This antenna has utilized the concept of capacitive coupling for bandwidth enhancement. Suspension of structure above ground plane has also been utilized for the enhancement of bandwidth. In this proposed antenna probe feeding is provided to the feed strip and the parasitic patch is excited by the capacitive coupling. The antenna configuration can be used where unidirectional radiation patterns are required over a wide bandwidth. All the simulation work is done using IE3D software.

175. Keywords: Microstrip antennas, Capacitive fed, Wideband, Absolute gain, Efficiency.

References:

Authors: K. Srinivasa Rao, V. N. S. Surendar Reddy, M. Sunil Kumar, B. Abhi Ram

Abstract: The paper proposes introducing a new operation to reduce rejections in a recognised automotive industry. This industry manufactures cylinder liners by using the updated technologies & principles in the market. The problem lies in the operation process i.e., when machining due to compressive and shear forces by the tool on the liner, residual stresses are developed in the beneath the collar of the liner. The liners are passing the quality inspection but when the liner goes to assembly section at the customer end it fails by developing a crack beneath the collar. The main objective of this paper is to reduce the rejections for that particular reason in the cylinder liner manufacturing industry. This can be done by application of introducing a new operation in the process named deep rolling. By performing this operation the inner grains of the liner at that particular area will be aligned by the concept of cold strengthening & burnishing.

176. Keywords: cold working, deep rolling, manufacturing, process addition, crack elimination, burnishing, stress removal

References:
3. DEEP ROLLING - THE PAST, THE PRESENT AND THE FUTURE I. Altenberger University of Kassel, Institute of Materials Engineering, Monchebergstrasse 3, 34125 Kassel, Germany

Authors: M. Varun Kumar, B. Ashiwin Kumar

Abstract: Rotor dynamics is the study of vibrational behavior in axially symmetric linear rotating structures. Devices such as engines, motors, disk drives and turbines all develop characteristic inertia effects that can be analyzed to improve the design and decrease the possibility of failure. At higher rotational speeds, the inertia effects of the rotating parts must be consistently represented in order to accurately predict the rotor behavior and to decrease possibility of failure.

In this mini project we are going to design a rotor model using finite element analysis (FEA) in ANSYS as per standard dimensions. After modeling in ANSYS we are going to perform the modal analysis in ANSYS using commands by using sub structuring and super element generation.

If the frequency of any harmonic component of a periodic phenomenon is equal to (or) approximates the natural frequency of any mode of rotor vibration, a condition of resonance may exist. If resonance exists at a finite speed, that speed is called a critical speed. An important part of the inertia effects is the gyroscopic moment introduced by the precession motion of the vibrating rotor as it spins. This gyroscopic is accounted in the modal analysis in
Abstract: Apart from issues like population rise, unemployment, illiteracy and political governing factors, one of the most important problems developing countries like India are facing today is in power sector. In terms of fuel, coal-fired plants account for 57% of India's installed electricity capacity, compared to South Africa's 92%; China's 77%; and Australia's 76%. After coal, renewal hydropower accounts for 19%, renewable energy for 12% and natural gas for about 9%.[1] In the last few decades various methods have been developed to use renewable source of energy, especially solar and wind energy. Wind power, as the good alternative to conventional fuels, is plentiful, renewable, widely distributed, clean, produces no greenhouse gas emissions during operation and uses little land. This paper describes that how we can use the wind available to us from exhaust fans, previously which was wasted. A solution to energy problems for any developing nations.

Keywords: Projects, Power generation, Wind turbine, Exhaust air

References:
4. Design of machine elements by V.R.Bhandari.
5. Designfoil demo
6. SOLID EDGE

Authors: Dhaval K. Patel, Mistry Ashvin Kumar Paramanand, Chandra Abhinesh Shyamsaran, Kahar Subhash Harinam, Shirish K. Patel

Paper Title: Design of System for the Power Production from Waste Air of Exhaust Fans at Industries & Buildings

References:
2. http://www.michigan.gov/careers/0,1607,7-170-46398-64748--,00.html
5. We refer Investigating ANSYS Rotor dynamics by Jerome Montgomery(a paper published)
6. We refer Rotor dynamic analysis of 3D-modeled gas turbine by Joakim Samuelsson.
9. https://confluence.cornell.edu/display/SIMULATION/ANSYS+11+++Crank#ANSYS11-Crank-Step%3A3Meshgeometry
11. www1.ansys.com/customer/content/documentation/120/ans_rot.pdf

Authors: Mona Bakharaei Nia, Tanko Ishaya, Mehdi Shajari

Paper Title: An Application of SOBI Architecture for Cross-selling in Telecoms Industry

Abstract: Mobile market is becoming saturated and competitive in telecoms industry. To diversify their business, mobile operators are moving away from traditional voice communication to mobile value-added services (VAS), which are new services to generate more average revenue per user (ARPU). Therefore, it is important to find the relationship between some products in order to sell appropriate products or services to appropriate customers at an appropriate time. This is why cross-selling is critical for mobile telecom operators to expand their revenue and profit. In this study, we investigate the application of a Service Oriented Business Intelligence (SOBI) architecture by aggregating subscriber usage data from multiple sources, including transactional call data records (CDR), recharge records, billing systems and VAS service usage records towards helping operators to identify a wide range of service usage patterns of Telecoms operations. The extended architecture assists analytics-driven marketing solutions for operators to not only develop Upsell & Cross sell strategies to maximize customer's revenue but would also serve as a basis decision-making required to optimize product combination and selling settlement issues. The architecture integrates data from heterogeneous data sources of the organization.

Keywords: Service oriented architectures; SOBI; CRM; VAS; Cross-Selling; CDR; Data mining

References:
16. Levin, S. (2002), Lessons in CRM: It’s time to caring for customers, telecom firms need to wise up. Here's a primer of best practices, compiled from a roster of CRM experts - Telecom Corporate, Telecom Asia, Available at http://findarticles.com/p/articles/mi_m0FGI/is_10_13/ai_54010951/, accessed [8th July 2012].

Authors: G. Lokheshwara Gupta, M. Anil Kumar
Paper Title: Algorithm for Testing NAND Flash Random Access Memory

Abstract: This paper presents an overview of the problem of testing semiconductor random access memories (RAM’s). An important aspect of this test procedure is the detection of permanent faults that cause the memory to function incorrectly. Functional-level fault models are very useful for describing a wide variety of RAM faults. Several Fault models are discussed throughout the paper, including the stuck-at-0/1 faults, coupled-cell faults presented and their fault coverage and execution times are discussed.

Keywords: Algorithms, Reliability, Checking experiments, Fault detection

References:

Authors: J.S. Lather, Neeraj Garg, S.K. Dhurandher
Paper Title: Intelligent Memory Augmentation and Pervasive Computing Techniques for Current Reminders, Recalls

Abstract: Context-awareness is becoming an essential feature of services in smart environments in which various computing and sensing devices and position technologies are involved. Location, the most essential part of contextual information, is useful in many applications for determining position, navigation, routing, and tracking of person but if we embed memory recall activities with that particular location for that particular user like if a person had visited earlier to same place etc., then this can be called location with personal touch feel for user. Similarly remembering some works and getting notifications via some electronic gazette or getting reminder through that particular location database is also a big relief. This paper will try to cover all those existing works and applications which tried to relieve a user from tension to remember things or to do works as it was made possible via application. This paper will also open different ideas with some methodologies to fulfill it to large number of researchers who are working in associative memory or cues for memory augmentation research works.

Keywords: Memory cue, Associative memory, Context descriptor, Thought, Augmentation etc.
Ad hoc network is a network formed without any central administration which consists of nodes that use a wireless interface to send packet data. Since the nodes in a network of this kind can serve as routers and hosts, they can forward packets on behalf of other nodes and run user applications. The ease of deployment and the infrastructureless nature of Mobile Ad hoc Networks (MANETs) make them highly desirable for present communication technology. MANET is probably the most well-known example of this networking paradigm being developed around for over twenty years. Furthermore, the multi-hop ad hoc networking paradigm is often used for building sensor networks to study, control, and monitor events and phenomena. Though there has been considerable research in this area. In this paper, we are analyzing the performance of AODV, DSR and DSDV routing protocol based on throughputs of receiving packets and Average End-to-End Delay via increasing number of nodes and
observing its effect on Quality of Service (QoS) of Mobile Adhoc Network. For our simulation we had used a discrete event simulator known as NS2.

Keywords: AODV, DSDV, DSR, MANET, NS2

References:
7. Suresh Kumar, R K Rathy and Diwakar Pandey, “Traffic pattern based performance comparison of two reactive protocols for ad hoc networks using NS2”, © 2009 IEEE

Authors: Hla.Nagarjuna, Pillem. Ramesh

Paper Title: An FSM Based VGA Controller with 640×480 Resolution

Abstract: Picture caught more attention than verbal voice. A video graphic adapter provides interface between the computer and monitor. The main purpose of this project is to design and implement VGA controller on FPGA. The proposed VGA controller is written based on the block diagram using verilog HDL. Also functions required for the VGA controller are included in the verilog code and test bench is created to test the functions written to ensure the FPGA VGA works correctly and accurately without an errors. This design has display capability supported by a virtually every video adapter on the market, and can be extendable up to 1368×768. We have generated the shapes of coordinates geometry to get in motion, any moving geometric objects can be implemented. The motion can be generated using finite state machines (FSM), with raster pattern from left to right and top to bottom, many shapes can be generated and motion can be in zigzag. We used FILE OUT operations, so that the generated object can be verified before it gets implemented, no need of storage devices like FIFO (leads to complexity with FIFO depth calculations), More economic, we can even check the implementation results without FPGA in static image format. Cadence tool is used for observation and verification in terms of performance. And the code coverage of the design is achieved.

Keywords: Xilinx 12.3, modelsim SE 6.3f, spartan3E,

References:

Authors: Ashutosh, Deepak Sharma

Paper Title: Image Encryption Using Discrete Fourier Transform and Fractional Fourier Transform

Abstract: Growing with the fast evolution of digital data exchange, security information becomes much important in data storage and transmission. Due to the increasing use of images in industrial process, it is essential to protect the confidential image data from unauthorized access. The security system based on the fractional Fourier transform (FRFT) is protected by only a certain order of FRFT. In this paper, we proposed a novel method to encrypt an image by using Discrete Fourier Transform (DFT) and Fractional Fourier Transform (FRFT). In this paper, we analyze the image encryption using DFT and FRFT based on double random phase matrix. The implementation of both techniques has been realized for experimental purposes. Detailed results in terms of security analysis and implementation are given. Comparative study with traditional encryption algorithms is shown the superiority. The proposed encoding scheme significantly enhances the data security in comparatively than DFT and FRFT.

Keywords: Discrete Fourier Transform (DFT), Decryption, Encryption, Fourier Transform (FT), Fractional Fourier Transform (FRFT).

References:
Traffic load computation for real time traffic signal control system has become a challenging problem as well as the need of hour to make road traffic decent, safe, less time and fuel consuming. CCTV Cameras can prove to be a robust and sufficient solution in this direction. Images of the traffic captured with the help of CCTV Camera, can be processed to retrieve the required output about current traffic. This document presents a model to count the traffic load by some parameters such as edge detection, histogram equalization, labeling and removing the noise with the help of median filter. The load computed can then be used to control the traffic signals.

Keywords: Image processing, MATLAB simulation, Traffic load computation.

References:
Abstract: Android Smartphone applications are getting tremendously popular in various fields like business, social, media, health, scientific, and even military. On one hand, enterprises can take the benefit of Android applications to support their business needs. On the other hand, Android devices contain rich sensitive data—e.g., GPS location, photos, calendar, contacts, email, and files—which is critical to the enterprise and unauthorized access to this sensitive data can lead to serious security risks. In this paper, we describe the nature and sources of sensitive data, what malicious applications can do to the data, and possible enterprise solutions to secure the data and mitigate the security risks. The purpose of this paper is to raise employees’ and enterprises’ awareness against such security threats and risk.

Keywords: Android, Security Risk

References:

Authors: Shruthi Shree, Sudha H
Paper Title: The Scaling-Free CORDIC Using Generalized Micro-Rotation Selection
Abstract: This paper presents an CORDIC algorithm that completely eliminates the scale-factor. By suitable selection of the order of approximation of Taylor series the proposed CORDIC circuit meets the accuracy requirement, and attains the desired range of convergence. Besides we have proposed an algorithm to redefine the elementary angles for reducing the number of CORDIC iterations. A generalized micro-rotation selection technique based on high speed most-significant-1-detection obviates the complex search algorithms for identifying the micro-rotations. The proposed CORDIC processor provides the flexibility to manipulate the number of iterations depending on the accuracy, area and latency requirements.

Keywords: CORDIC.
References:
Abstract: Wireless Adhoc and Sensor Networks (WASNs) provide easy, effective and cheaper solutions for real life multidisciplinary problems as in military, robotics, weather forecasting and medical sciences. The energy constraint and security issue comes directly in mind while talking of WASN. As the areas of WASNs are increasing, security and energy needs special attention so that the network does not results in a failure. While talking about energy there are three major areas of WASN which can be worked upon to improve their efficiency. They are: battery, circuitry & topology and routing protocols used. Here we are working only on the protocols with certain assumptions for the node hardware. In order to ensure energy efficiency by reducing number of transmissions, data aggregation is a widely used technique. We thus, implement a secure data aggregation scheme which ensures reduced total energy consumption of the network as well.

Keywords: Data Aggregation, Energy efficiency, lifetime, security, WSN

References:
7. Bo Yu, Jianzhong Li, Yingshu Li “Distributed Data Aggregation Scheduling in Wireless Sensor Networks” IEEE Communications Society, IEEE INFOCOM 2009 proceedings

Authors: M. Shammuga Priya, Divyashree K, Chiranjeeb Goswami, M Lakshmi Prabha, A.K Sattheesh Babu

Paper Title: Bioremediation of Textile Dyes by White Rot Fungi Isolated From Western Ghats Area

Abstract: Lignin degrading white rot fungi, Phanerochaete chrysosporium, Schizophyllum commune and Lenzites eximia were isolated from the logs of Acacia nilotica, Tamarindus indica, Eucalyptus grandis from the Western Ghats region of Karnataka, India. The fungi were used for the decolourization of azo dyes such as Acid orange 7, Methyl red, and Evans blue. P. chrysosporium 787 removed 94.8% of acid orange 7 500 μM concentration. In S. commune removed 96.7% of acid orange 7 from aqueous solution. When the dye was treated with L. eximia maximum (95.5 %) dye removal was observed. For methyl red, P. chrysosporium 787 treatment maximum of 92.2 % per cent dye was removed. In S. commune treatment, 98.5 % of methyl red was removed. The per cent of methyl red removal from aqueous solution by L. eximia was observed up to 96.0 per cent. In Evans blue, P. chrysosporium 787 treatment, resulted in 90.2 % of per cent dye was removed. When the dye was treated with S. commune, 97.4 % per cent dye was removed. In L. eximia treatment, the per cent of dye removal was observed 95.5 per cent. All the above results were obtained on fourth day of incubation. Maximum decolourization of azo dyes and mycelium growth of all the three test fungi were favoured on fourth day of incubation. The fungus S. commune efficiently removed acid orange 7 (96.7%), methyl red (98.50%) and Evans blue (97.4%) from the effluent when compared with the other two fungi.

Keywords: Acid orange 7, Methyl red, Evans blue and Effluent

References:
Abstract: In the present study, an attempt has been made to investigate the effect of primary cutting parameters (cutting speed, feed and depth of cut) and tool overhang length on cutting forces and chatter starting point lengths in finish turning of EN8 steel, EN24 steel, mild steel and aluminum. Machining test cuts are conducted using sharp tool and the effect of cutting conditions and tool overhang length are also studied. Here experiments are conducted on four work piece materials at different cutting parameters and different overhang lengths. The chatter starting point is measured from the free edge of the work piece and graphs were plotted between overhang length verses cutting forces and chatter starting point lengths.
Keywords: Cutting Parameters

References:

Authors: G.S.Raman, C.Surya, R.Balaji Ganesh

Paper Title: Reversible Watermarking Based on Prediction Error Expansion and Pixel Selection on Color Image

Abstract: Reversible watermarking enables embedding of valuable information in a host signal with no loss of host information. The conventional PEE exploit the similar inherent in the neighborhood of pixel that the difference expansion scheme. In our proposed system, the PEE technique is further investigated and a resourceful reversible watermarking scheme is deduced by incorporating in PEE two new techniques, namely, adaptive embedding and pixel selection. PEE technique embeds data consistently, using Embedded Zerotree Wavelet (EZW), Bit-plan Complexity Segmentation (BPCS) based embedding is applied to embed on natural images. This avoids expanding pixels with huge prediction errors likewise it also reduces embedding impact by diminishing the maximum modification to pixel values. We as well put forward to selecting pixels of smooth area for data embedding and leave the rough pixels unchanged. In our method a more penetratively effective method for data embedding and a better visual quality of watermarked image is observed.

Keywords: Pixel selection, Prediction error expansion, EZW, BPCS, Reversible watermarking

References:

Authors: C. Saravanan, M. Surender

Paper Title: Algorithm for Face Matching Using Normalized Cross-Correlation

Abstract: Face matching is the most important and crucial procedure in face recognition. It is difficult to achieve robust face matching under a wide variety of different image capturing conditions, such as lighting changes, head- pose or view-angle variations, expression variations, etc. Robust face matching is essential to the development of an illumination insensitive face recognition system. This paper proposes a face matching algorithm that allows a template called extracted face of person which is the Region of Interest from one image and start search for matching with the different image of same person taken at different times, from different viewpoints, or by different sensors using Normalized Cross-Correlation (NCC). The algorithm is implemented in MATLAB. The experimental results show that developed algorithm is robust for similarity measure.

Keywords: Face Matching, Normalized Cross-Correlation (NCC), Region of Interest (ROI).

References:
5. Satoh, Shin’ichi ; Katayama, Norio “An efficient evolution and implementation of robust face sequence matching”, International
Authors: Vidyasaraswathi H N, Veena H S

Paper Title: Design and Implementation of SPI IP core for ARM based SoC

Abstract: The Serial Peripheral Interface (SPI) is a full duplex, serial data link that is standard across several processors and peripherals. It enables data communication between processor and a peripheral or between processors. This 4-wire protocol has MISO, MOSI, SCLK and slave select pins. The master can transmit data at different baud rates. AHB (Processor Interface) is the proprietary bus standard of ARM. It is high-bandwidth full duplex systems interconnect with parallel transfer capability. It also provides several configurable options. Now a days System design becomes more and more complex. SoC design plays most predominant role in current silicon market. Advantages of SoC include the conservation of on-chip space, reduced parasites, and savings on package costs. ARM processor is widely used in SoC design. SPI protocol is essentially preferable in SoC Design, used for serial communication between inter blocks and also outside the block. To meet timing constraint, companies will prefer readily available IP cores for their design. IP cores save both time and cost. This work mainly focuses on such one IP core SPI-AHB bus for ARM based SoC design.

Keywords: AMBA (Advanced Microcontroller Bus Architecture), AHB (Advanced High Performance Bus), ARM, SPI (Serial Peripheral Interface), SoC(system on chip).

References: