Volume 2 Issue 4, April 2013

International Journal of Engineering and Advanced Technology

ISSN : 2249 - 8958
Website: www.ijeat.org

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Exploring Innovation: A Key for Dedicated Services

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1.

Authors: Asmeeta Mali

Paper Title: Investigation and Analysis of Efficient Pattern Discovery Method for Text Mining

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 attentions 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.

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2.

Authors: Shashi Kant Dargar, Himanshu Purohit, S C Mahajan

Paper Title: An Iterative Pruning Approach of Neural Network for Proficient Noise Cancellation

Abstract: For Active Noise Cancellations various algorithms run and result in standard output and better performance. Technique to pruning is related to prune nonfunctional neuron's (algorithm) from ANC network, which makes only best neurons responsible for noise cancellation. Neurons are classified as different algorithms. Performance of neurons depends upon instantaneous surrounding conditions. So a proficient novel approach for ANC has been proposed. The wiener filter based on least means squared (LMS) algorithm family is most sought after solution of ANC. This family includes LMS, NLMS, VSLMS, VSNLMS, VFXLMS, FX- sLMS and many more. Some of these are nonlinear algorithm, which provides better solution for non linear noisy environment. The components of the ANC systems like microphones and loudspeaker exhibit nonlinearities themselves. The non linear transfer function create worse situation. For example, FX-sLMS algorithm behaves well than the second order VFXLMS algorithm in conditions of non-minimum phase and most important is the mean square error. The classical approach to RBF implementation is to fix the number of hidden neurons based on some property of the input data, and estimate the weights connecting the hidden and output neurons using linear least square method.

Keywords: Least Mean Square; RBF neural network; Artificial neural Network, Filter bank design, ANC

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3.

Authors: **Surjan Singh, Dinesh Kumar, K. N. Rai**

Paper Title: **Wavelet Collocation Solution for Convective Radiative Continuously Moving Fin with Temperature-Dependent Thermal Conductivity**

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.

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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.

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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 consideration 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

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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.

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Paper Title: **Adaptive Transmission of Data over the Internet**

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.

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8.

Authors: **Maheswari G, Akiladevi R**

Paper Title: **Real-Time Group Editors**

Abstract: Group editors allow a cluster of dispersed human users to edit a communal multimedia document at the same time in excess of a computer network. In this study a standard process transformation framework is developed to professionally split the text and graphical data to the diverse users or an exacting user associated in the network. The basic idea of operation transformation is to execute any restricted operation as soon as it is produced for high local receptiveness. Remote operations are transformed against simultaneous operations that have been executed locally before its execution Operation transformation has been well conventional in group editors for achieve high local receptiveness and unconstrained collaboration. It is also well recognized method for optimistic consistency control. Operation transformation framework is recognized which formalizes two reliability criteria, causality conservation and convergence. The Operational transformation framework is developed in the projects and the weaknesses of the existing system are conquering based on the concept called operation effects relation.

Keywords: Group editor, Server, Transformation, Object Model technique, Class Responsibility, Collaborator.

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9.

Authors: **S.Sunil Kumar Reddy, V. Pandurangadu, S.P.Akbar Hussain¬**

Paper Title: **The Effect of Turbulence on the Emissions of an Insulated DI Diesel Engine With Insulted Combustion Chamber**

Abstract: The available petroleum fossil fuels are rapidly depleting and also creating much pollution. As our country is producing sugar cane more, this leads to the recognition of alcohols as an alternative fuels to diesel in diesel engines because these are derived from indigenous sources and are renewable. However due to alcohols lower cetane number and high latent heat of vaporization, it won't vaporize in the existing diesel engines ; it requires higher temperatures in the combustion chambers for the combustion. So in the present work a thermally insulated engine

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(IE) is developed which reduces the ignition delay and aids combustion. In an insulated engine, the energy loss is avoided by applying a layer of insulating material over the components (air gap piston and ceramic coated cylinder head, valve and cylinder liner) of the combustion chamber. This improved the efficiency of the engine and further reduces the emissions. Tests are conducted on a single cylinder 4-stroke water cooled 3.68 KW diesel engine with alcohol as a fuel. Due to lower viscosity of alcohol the fuel injection pressure is reduced to165 bar for the experimentation. Further the efficiency of the engine can be improved by providing turbulence in the combustion chamber. So in the present work the turbulence is provided in the combustion chamber with grooves on the piston insert. So during the experimentation brass piston with various numbers of grooves is used on the test engine with an objective to find the best one in terms of performance, emissions and other combustion parameters with alcohol as fuel. For comparison the engine is also operated with brass piston. Out of all these pistons tested, one of them (brass Piston with 9 grooves) is found to be best in terms of efficiency and emissions.

Keywords: air-gap insulation, alcohol, ceramics, grooves and Insulated engine

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10.

Authors:	**Zareen J. Tamboli, S.R.Khot**
Paper Title:	**Estimated Analysis of Radial Basis Function Neural Network for Induction Motor Fault Detection**

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 different Radial Basis Functions is shown in this paper.

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

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11.

Authors:	**Lamia Bouchhima, Mohamed Jamel Rouis, Mohamed Choura**
Paper Title:	**Engineering Properties of Wade Sand-Lime-Cement-Phosphogypsum Building Brick Grade MW**

Abstract: This study concerns the analysis of wade sand -natural hydraulic lime-cement-phosphogypsum (WS-NHL-C-PG) solid bricks grade MW. In Tunisia, for several years, a set of phosphoric acid production factories have produced a waste product such as phosphogypsum (PG) in large quantities (approximately 10 million tons per year). Currently, in Sfax (Center-East of Tunisia), the PG is stored into piles in the vicinity of the factory, by dry or wet process. The storage of PG, even though presenting a low radioactivity, causes pollution to the water table and to the soil (due to the infiltration of acid and heavy metals). After treatment, the Tunisian PG was presented in the full bricks with different mass percentages of 60, 70 and 80%. The study involved physical, chemical, mechanical and environmental tests on the obtained bricks.The obtained results showed that WS-NHL-C-PG bricks successfully

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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: hosphogypsum; Full brick grade MW; strength; Durability

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12.

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 andarea 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 imageries 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 Thorrour mandal, Warangal District, Andhra Pradesh, India. After mosaicing the Google Earth downloaded imageries of the study area, rectification of has been carried out using SOI toposheets. 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 deviation, 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 Imageries, Cadastral Map Updation.

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13.

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

Paper Title: **Performance and Kinetics of a Huasb Reactor for Treating Tapioca-Based Starch Industrial Waste Stream**

Abstract: In this paper, performance of a HUASB reactor for treating a tapioca-based starch industrial waste stream has been studied under six influent COD concentrations (ranging from about 1700-5800 mg/l) and five hydraulic retention times (HRTs) (ranging from 8 to 24 hours). The performance of HUASB reactor was evaluated based on COD removal (%) and bio-gas yield. Salient kinetic co-efficient of the HUASB reactor was determined by a modified-Monod based model and the dominant species in the sludge granules of the reactor was also identified. From an overall assessment, the better performance of HUASB reactor over the UASB reactor, for treating the above waste stream has been highlighted.

Keywords: HUASB and UASB reactors; Tapioca-based starch industrial waste stream; COD removal (%); Bio-gas yield; kinetic co-efficients and Performance evaluation.

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14.

Authors: **B. Nagu, M. Sydulu, P.V. Ramana Rao**

Paper Title: **Improvement of A C System Stability using Fuzzy Logic based HVDC Controls**

Abstract: In this paper, investigation is carried out for the improvement of power system stability by utilizing auxiliary controls for controlling HVDC power flow. The current controller model and the line dynamics are

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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

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15.

Authors:	**Omprakash Gawali, 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.

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16.

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.

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17.

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.

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18.

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.

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19.

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.

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20.

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.

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21.

Authors: **Priyanka Korde, Vijay Panwar, Sneha Kalse**

	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:** 1. M. Li, S. Yu, K. Ren, and W. Lou, "Securing personal health records in cloud computing: Patient-centric and fine-grained data access control in multi-owner settings," in SecureComm'10, Sept.2010, pp. 89–106. 2. H. L¨ohr, A.-R. Sadeghi, and M. Winandy, "Securing the e-health cloud," in Proceedings of the 1st ACM International Health Informatics Symposium, ser. IHI '10, 2010, pp. 220–229. 3. M. Chase and S. S. Chow, "Improving privacy and security in multi-authority attribute-based encryption," in CCS '09, 2009, pp.121–130. 4. S. Yu, C. Wang, K. Ren, and W. Lou, "Attribute based data sharing with attribute revocation," in ASSIACCS'10, 2010. 5. S. Yu, C. Wang, K. Ren, and W. Lou, "Achieving secure, scalable, and fine-grained data access control in cloud computing," in IEEE INFOCOM'10, 2010. 6. A. Boldyreva, V. Goyal, and V. Kumar, "Identity-based encryption with efficient revocation," in ACM CCS, ser. CCS '08, 2008, pp.417–426. 7. J. Hur and D. K. Noh, "Attribute-based access control with efficient revocation in data outsourcing systems," IEEE Transactions on Parallel and Distributed Systems, vol. 99, no. PrePrints, 2010. 8. S. Ruj, A. Nayak, and I. Stojmenovic, "Dacc: Distributed access control in clouds," in 10th IEEE TrustCom, 2011. 9. J. Bethencourt, A. Sahai, and B. Waters,"Ciphertext-policy attribute-based encryption," in IEEE S& P '07, 2007, pp. 321–334. 10. Melissa Chase "Multi-authority Attribute based Encryption," Computer Science Department Brown University Providence, RI 02912	**95-97**
22.	**Authors:**	**Ali Trabelsi, 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 N(rpm), the tool traverse rate F(mm.mn-1) and the tool pin/shoulder diameters ratio r (%) on 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 estimates has been assessed 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 based on the desirability function was employed to find out the levels setting 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:** 1. W. M. Thomas, E. D. Nicholas, J. C. Needham, M. G. Murch, S. P. Temple, C. J. Dawes, "Improvements relating to friction welding," G. B. Patent No. 9125978. 8, 1991. 2. M. P. Milles, B. J. Decker, T. W. Nelson, "Formability and strength of friction-stir-welded aluminum sheets," Metallurgical And Materials Transactions, Vol. 35A, pp. 3461-3468, 2004. 3. D. M. Rodrigues, A. Loureiro, C. Leitao, R. M. Leal, B. M. Chaparro, P. Vilaça "Influence of friction stir welding parameters on the microstructural and mechanical properties of AA6016-T4 thin welds", Materials and Design, Vol. 30, pp. 1913-1921, 2009. 4. R. S. Mishra, Z. Y. Ma, "Friction stir welding and processing", Mater. Sci. Engr., R 50, pp. 1-78, 2005. 5. R. Rai, A. De, H. K. D. H. Bhadeshia, T. DebRoy, "Review: friction stir welding tools", Science and Technology of Welding and Joining,Vol 16, pp. 325-342, 2011 6. R. Nandan, T. DebRoy, H. K. D. H. Bhadeshia, "Recent advances in friction-stir welding–Process, weldment structure and properties," Progress in Materials Science, Vol.53,pp. 1913-1921, 2008. 7. T. P. Chen, W.-B. Lin, "Optimal FSW process parameters for interface and welded zone toughness of dissimilar aluminum–steel joint", Science and Technology of Welding and Joining, Vol. 15, pp. 279-285, 2010. 8. G. H. Payganeh, N. B. Mostafa Arab, Y. Dadgar Asl, F. A. Ghasemi, M. S. Boroujeni, "Effects of friction stir welding process parameters on appearance and strength of polypropylene composite welds", International Journal of the Physical Sciences, Vol. 6, pp. 4595-4601, 2011. 9. J. Q. Li, H. J. Liu, "Effects of tool rotation speed on microstructures and mechanical properties of AA2219-T6 welded by the external non-rotational shoulder assisted friction stir welding", Materials and Design, Vol. 43, pp. 299-306, 2013. 10. A. Razal, K. Manisekar, V. Balasubramanian, "Influences of welding speed on tensile properties of friction stir welded AZ61A magnesium alloy", Journal of Materials Engineering and Performance, Vol. 21, pp. 257-265, 2012. 11. S. Lim, S. Kim, C. Lee, S. Kim, "Tensile behavior of friction-stir-welded Al6061-T651", Metallurgical and Materials Transactions, Vol. 35A, pp. 2829-2835, 2004. 12. K. Elangovan, V. Balasubramanian, "Influences of pin profile and rotational speed of the tool on the formation of friction stir processing zone in AA2219 aluminum alloy, "Materials Science and Engineering A, Vol. 459, pp. 7-18, 2007. 13. S. Rajakumar, C. Muralidharan, V. Balasubramanian, "Influence of friction stir welding process and tool parameters on strength properties of AA7075-T6 aluminum alloy joints, "Materials and Design, Vol. 32, pp. 535-549, 2011. 14. B. Parida, M. Mohapatra, P. Biswas, N. R. Mandal, "Study of mechanical and micro-structural properties of friction stir welded Al-alloy",	**98-107**

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23.

Authors: **Abhinav Bhargava, Samrat Ghosh, Savan Kumar Oad**

Paper Title: **A Multi (U) Slotted 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.

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24.

Authors: **E. Mohan, K.B. Jayarraman, U. Maheswaran, D. Sathiyaraj. 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-band 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 technique has shown superiority over the conventional image resolution enhancement techniques.

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

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25.

Authors: **Afsana Nadia, S. K. Aditya**

Paper Title: **Performance Analysis of GSM Coverage considering Spectral Efficiency, Interference and Cell Sectoring**

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-sectoring. 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 Sectoring, GSM Coverage, Interference, Spectral Efficiency.

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26.

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.

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27.	**Authors:**	**B. Veeramallu, M.Aparna**	
	Paper Title:	**Navigate In India**	
	Abstract: 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 (Indianrailgov.in) is a government web site. 6. http://www.Indiarailinfo.com (private website). 7. http://www.Erail.in (private web site). 8. http://www.railradar.trainenquiry.com (private web site). 9. http://www.irctc.co.in 10. http://www.ireps.gov.in 11. http://www..trainweb.org 12. http://www.yatra.com 13. http://www.Samit.org 14. http://www.tripadvisor.in	**124-126**
28.	**Authors:**	**Supiah Shamsudin, Azmi Ab Rahman, Zaiton Binti Haron, Lat Da A/P Ai Nam**	
	Paper Title:	**Water Level Evaluation at Southern Malaysia Reservoir using Fuzzy Composite Programming**	
	Abstract: Ranking and evaluation of properreservoir 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, flowrates, 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. The highest ranking order indicated by 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 the most optimum, advisable and appropriate water level for Layang reservoir. **Keywords:** Fuzzy Composite Programming, MCDM, Optimum water level, Reservoir **References:** 1. Christofides A.et al., (2005). Resolving Conflicting Objectives in the management of the Plastiras Lake: can we quantify beauty? ,Hydrology and Earth System Science9,507-515. 2. Markel D., U.Shamir, (2002) Monitoring Lake Kinneret and Its Watershed: Forming the Basis for Management of a Water Supply Lake: H.Rubin, et. al .Water Resources Quality .Springer-Verlag Berlin Heidelberg New York, 2002. 177-214 3. Supiah S., (2003) Non-point Phosphorus Loadings and Reduction in Layang Reservoir Systems. Universiti Teknologi Malaysia: PhD. Thesis. 4. Supiah S., Dan'azumi, S. Aris A.(2010). "Effect of Storm Separation Time on Rainfall Characteristics-ACase Study of Johor". European Journal of Scientific Research. 45(2), 62-167. 5. Dan'azumi, S., Supiah S. and Aris A. (2010) " Modeling the Distribution of Rainfall Intensity using Hourly Data" American Jour. of Env. Sciences, 6 (3), 238-243. 6. Zadeh L. (1965). Fuzzy sets, Inf. Control 8, 338-353,Bogardi I. (1992) Environmental risk analysis, water, development and the environment. J. Williams et. al. eds. Boca Raton Publishing, Boca Raton, Fla. 147-175 7. Chameau, J.L. and Santamaria, J.C.. (1987). Membership function I: Comparing methods and measurement. International Journal of Approximate Reasoning, 1: 287-301.	**127-131**

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29.

Authors: **Neethu T. Sunil, V. Tharmalingam**

Paper Title: **Distributing Confidentiality to a Visual Secret Sharing Scheme**

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.

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30.

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

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

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.

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31.

Authors: **Sabarish.S**

Paper Title: **Navigation Tool for Visually Challenged using Microcontroller**

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.

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Keywords: Sensors, Microcontroller, Vibrator, Navigation

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32.	**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.

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33.	**Authors:**	**Vikas P. Jadhao, Prakash S. Pajgade**
	Paper Title:	**Influence of Masonry Infill Walls on Seismic Performance of RC Framed Structures a Comparision 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 in-filled reinforced concrete (R/C) 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 in-filled 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.

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34.	**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.

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35.	**Authors:**	**Neelesh Kumar, Sanjeev Gupta, S.P.Phulambrikar**
	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

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validate the concept of this new topology.

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

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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 ACmotor, 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.

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37.

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.

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Authors: **Zuhair Hasnain, Naila Rozi**

Paper 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

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Authors: **Anisaara Nadaph, Vikas Maral**

Paper 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 specificquery 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

recursively to generate a multiway replicated declustering. Later by makiing use of efficient heuristics we improve the multi-way replicated declustering. The survey show that the suggested work gives bettter performance result over the existing replicated declustering schemes.

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

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Authors:	**Kushal J Masarkar, Lilesh P Wankhade, Rita Dhage**
Paper Title:	**A Memetically Optimized Weighted x^2 Based Approach for Matching Sketches with the Digital Face Images**

Abstract: 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.

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41.

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 10^0, 15^0, 20^0 and 30^0 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 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.

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42.

Authors: **J.T Liberty, A.U Dzivama**

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 e.t.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.

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43.

Authors: **Mohsen 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 an 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.

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44.	**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, aluminium, 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	**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 discharges 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.

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45.

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.

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	Authors:	**N.Pandeeswari, P.Ganesh Kumar, P.C.Rubini**
	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.

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

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	Authors:	**Himanshu Agarwal, Kaushalendra Kr. Dubey, Subhash Kamal**
	Paper Title:	**Development of Mechanical Fuel Injector Cleaning Machine in Cost Effective Manner**

Abstract: When fuel injectors get polluted, it create obstruction in fuel flow and unable to allow spray pattern for proper combustion. In the present market Fuel Injector cleaning machine is used to clean the injectors with the help of controlled gasoline spray system. We have designed and developed for the most cost effective Rs 20,500 this is 10 times less than the existing fuel injector cleaning machine. The development of this work explaining conversion of electrical fuel injection system into mechanical type fuel injection system is cost effective, manually operated, multiple flow, single man powered and equally efficient with electrical system.

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Keywords: Injector, Air cylinder, Fuel cylinder.

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48.

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 over- all 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

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49.

Authors: **U.Jyostna Sai Prasanna, M.V.D.Prasad**

Paper Title: **Automatic Fire Sensing and Extinguishig 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

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50.

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

Paper Title: **An Energy-Efficient Slotted MAC (SL-MAC) Protocol for Wireless Sensor Networks**

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

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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).

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51.

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.

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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

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Authors:	**Er.Qasim kamil Mohsin, Jyoti Shrivastava**
Paper Title:	**Ac Power Flow Control of Grid by Series D-Fact**

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

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Authors:	**S. Saravanan, A. Sureshkumar, S. Thangavel**
Paper Title:	**A New Topology of Multiple-Input Converter with Embedded Controller Based Power Management**

Abstract: This paper presents a new power conditioner topology that integrates multiple renewable energy sources to make best use of their operating characteristics and obtain better reliability than that could be obtained by single renewable energy based power supply. The proposed power conditioner uses three sources, one storage device and isolated load outputs. The proposed multiple-input converter uses intelligent closed loop control for efficient power control. The proposed power conditioner uses very limited number of switches and promises significant savings in component count and reduced losses in renewable energy power-harvesting system by reducing the on-state conduction loss and switching loss in comparison to topology like H-Bridge converters. The power conditioner houses a battery bank which is suitably connected by the controller to sink or source the input power based on the load requirement..

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

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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 carrying 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.

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Authors: **Y. T. Prabhu, K. Venkateswara Rao, V. Sesha Sai 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 particle 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.

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	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 can not 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.

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International Journal of Computer Theory and Engineering, Vol. 1, No. 5,pp 614-621,December,2009.
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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.

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59.

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

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

Abstract: Ineducational 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.

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60.

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 on 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

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	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.	
61.	**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:** 1. Stefan Axelsson. Research in Intrusion-Detection Systems: A Survey. Technical Report 98-17, Department of Computer Engineering, Chalmers University of Technology, 1998. 2. SANS Institute - Intrusion Detection FAQ. 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62.	**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	**298-300**

	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:** 1. Ueno H., Kanda, M. and Tsukino, M. "Development of Drowsiness Detection System", IEEE Vehicle Navigation and Information Systems Conference Proceedings,(1994), ppA1-3,15-20. 2. Sean Enright, Electronics Engineering Student, 506-650-3611, May 26-2011, Alcohol Gas Detector "Breathalyzer". 3. Weirwille, W.W. (1994). "Overview of Research on Driver Drowsiness Definition and Driver Drowsiness Detection," 14th International Technical Conference on Enhanced Safety of Vehicles, pp 23-26. 4. Arpit Agarwal, "Driver Drowsiness Detection System", portfolio of projects on human computer interaction, December,2010. 5. Paul Stephen Rau, National Highway Traffic Safety Administration, United States, Paper Number 05-0192 Drowsy Driver Detection and Warning System for Commercial Vehicle Drivers: Field Operational Test Design, Data Analyses and progress. 6. Mallis, M.M., et al., Bio Behavioral Responses to Drowsy Driving Alarms and Alerting Stimuli, DOT HS 809 202,February 2000. 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 11. C Programming for Embedded Systems by Kirk Zurell 12. http://en.wikipedia.org/wiki/Braille	
63.	**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.Nagamani, "Control Strategy for power flow management in a PV system supplying DC loads", IEEE,2011 2. Yazdani, and Prajna Paramita Dash, "A control methodology and characterization of dynamics for a photovoltaic system interfaced with a distribution network," IEEE., vol.24(3), 2009, pp.1538-1551. 3. Mukhtiar Singh, Vinod Khadkikar, Ambrish Chandra, and Rajiv K. Varma, "Grid interconnection of renewable energy sources at the distribution level with power-quality improvement features", IEEE.,vol.26(1), 2011, pp.307-315. 4. Benjamin Kroposki, Christopher Pink, Richard DeBlasio, Holly Thomas, Marcelo Sim˜oes, and Pankaj K. Sen, "Benefits of power electronic interfaces for distributed energy sources", IEEE.,vol.25(3), 2010, pp.901-908. 5. Enrique Romero-Cadaval, María Isabel Milanés-Montero, Eva González-Romera, and Fermín Barrero-González, "Power injection system for grid-connected photovoltaic generation systems based on two collaborative voltage source inverters", IEEE,vol.56(11), 2009,pp. 4389-4398 6. Y.K. Lo, H.J.Chiu, T.P.Lee, I. Purnama, and J.M. Wang, "Analysis and design of a photovoltaic system connected to the utility with a power factor corrector", IEEE.,vol.56(11), 2009, pp.4354-4362. 7. Jung-Min Kwon, Bong-Hwan Kwon, and Kwang-Hee Nam, "Grid-connected photovoltaic multistring pcs with pv current variation reduction control", IEEE., Vol.56(11), 2009, pp.4381-4388.	**301-304**
64.	**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.	**305-309**

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65.

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.

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66.

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

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	and coordinate tasks, energy-efficient modules to infer user activities and compose them.These applications combine sensing from the device and the coordination between all sensors. **Keywords:** Framework, Triggers, Actions, Sensors, Events **References:** 1. Blackberry location-based reminder http://whenimclose.com/ 2. OnX. http://www.onx.ms/ 3. Lenin R., Arvind T., Hari B., Samuel M.;"Code In the Air", MIT CSAIL, USA Jan 2012. 4. Won-Jae Yi, Weidi J., Saniie J; "Mobile Sensor Data Collector using Android Smartphones", IEEE August 2012 5. Yong-Hua Cheng, Wen-Kuang Kuo, Szu-Lin Su; "An Android system design and implementation for telematics services", IEEE ICIS 2010 6. Sean J., Miguel A., Philip L, Nevine L.; "A General Architecture in Support of Interactive, Multimedia, Location-Based Mobile Applications", IEEE Communications Magazine Nov 2006	
67.	**Authors:**	**N.Nandhini, SU.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 tri axial accelerometer and MEMS. It extends to the control of an anthropomorphic 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 anthropomorphic 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 undersea recovery. **Keywords:** accelerometer, inertial sensors, MEMS, motion sensing, robotic arm. **References:** 1. Huiyu Zhou, Huosheng Hu, Reducing drifts in the inertial measurements of wrist and elbow positions. IEEE Trans vol.59,no.3 (2010) 2. Tao Liu *, Yoshio Inoue, Kyoko Shibata, "Development of a wearable sensor system for quantitative gait analysis". Journal (2009) 978-988 3. KunLiu,TaoLiu,KyokoShibata,YoshioInoue,RenchengZheng, "Novel approach to ambulatory assessment of human segmental orientation on a wearable sensor system". Journal (2009) 2747-2752 4. Huiyu Zhou, Thomas Stone, Huosheng Huc,, Nigel Harris "Use of multiple wearable inertial sensors in upper limb motion tracking", IPEM (2008) 123-133 5. Shumei Zhang Æ Huosheng Hu Æ Huiyu Zhou "An interactive Internet-based system for tracking upper limb motion in home-based rehabilitation", Med Biol Eng Comput (2008) 46:241-249 6. Liu, Kun, Liu, Tao, Shibata, K., Inoue, Y., Zheng, Rencheng, 2008. Novel approach for lower limb segment orientation in gait analysis using triaxial accelerometers. IEEE/ASME International Conference on Advanced Intelligent Mechatronics 2008, 488-492. 7. Huiyu Zhou and Huosheng Hu, "Inertial sensors for motion detection of human upper limbs," Sensor Review, vol. 27, no. 2, pp. 151-158, 2007. 8. Zhou H, Hu H, Harris ND (2006a) Applications of wearable inertial sensors in estimation of upper limb movements. J Biomed Signal Process Control 1:22-32 9. Zhou H, Hu H, Tao Y (2006b) Inertial measurements of upper limb motion. J Med Biol Eng Comput 44(6):479-487 10. George S. Doukas, Kleanthis C. Thramboulidis, Yannis C. Koveos"Using the Function Block Model for Robotic Arm Motion Control", IEEE 2006 11. Dejnabadi, H., Jolles, B.M., Casanova, E. and Fua, P. (2006), "Estimation and visualization of sagittal kinematics of lower limbs orientation using body-fixed sensors", IEEE Transactions of Biomedical Engineering, Vol. 53 No. 7, pp. 1385-93. 12. Tao, Y., Hu, H. and Zhou, H. (2007), "Integration of vision and inertial sensors for home-based rehabilitation", International Journal of Robotics Research, Accepted subject to revision. 13. Zhou, H., Hu, H. and Harris, N. (2006a), "Wearable inertial sensors for arm motion tracking in home-based rehabilitation", Proceedings of the 9th International Conference on Intelligent Autonomous Systems, Tokyo, Japan, March, pp. 930-7. 14. Chai, L., Hoff, W.A. and Vincent, T. (2002), "Threedimensional motion and structure estimation using inertial sensors and computer vision for augments reality", Journal of Presence, Vol. 11 No. 5, pp. 474-92. 15. Luinge H. Inertial sensing of human movement. PhD thesis. The Netherlands: Twente University; 2002. 16. Barbour N, Schmidt G. Inertial sensor technology trends. IEEE Sensors J 2001;1:332-9.	**318-320**
68.	**Authors:**	**Vilas S. Gaikwad, Suyog.V.Patil, Rohan.G.Patil, Vaibhav.D. Darwadkar Sandip.M. Ambulkar, Ranjit.R.More**
	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 on computer 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 operations related to 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:** 1. Awodele Oludele,Adamo David, Kadiri Kamal-Deen,Orekoya Morolake,"SMS Based Microcomputer Control System for Computer Automation and Security" International Journal of Information Sciences and Computer Engineering, Vol. 1, No. 2, (2010) 15–20. 2. Amit Chauhan,Reecha Ranjan Singh, Sangeeta Agrawal , Saurabh Kapoor, S. Sharma, "SMS based Remote Control System" International Journal of Information Sciences and Computer Engineering,Vol. 11, Issue 02, Aug 2011. 3. Chaitali Navasare, Deepa Nagdev and Jai Shree, "PocketDroid - A PC Remote Control" 2012 InternationalConference onInformation and Network Technology (ICINT 2012,)IPCSIT vol. 37 (2012). 4. Dr. Khanna SamratVivekanand Omprakash, "Concept of Web based SMS messaging server with mobile"international Journal of Advanced Research in Computer Science and Software Engineering Volume1,Issue-1,Dec-2011 5. E. R. Adagunodo, O. Awodele, and O. B. Ajayi, "Sms user interface result checking system," Issues Informing Science and InformingTechnology,vol.6,2009. [6] Amir Rajabzadeh, Ali Reza Manashty, and Zahra Forootan Jahromi "A Mobile Application for Smart House Remote Control System "World Academy of Science, Engineering and Technology 62 2010.	**321-323**

68.	**Authors:**	**Lamyaa Moulad, Hicham Belhadaoui, Mounir Rifi, Reda Filali hilali**	
	Paper Title:	**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:** 1. Houngbadji, Thérence (2009) Réseaux ad hoc : système d'adressage et méthodes d'accessibilité aux données. Thèse de doctorat. 2. I. F. Akyildiz et al, "Wireless Sensor Networks: a survey, " Computer Networks, Vol. 38, pp. 393-422, March 2002. 3. H. Karl and A. Willig, "A short survey of wireless sensor networks" Technical Report TKN-03-018, Telecommunication Networks (2004). 4. andrien Van Den Bossche (2007),proposition d'une nouvelle méthode d'accès déterministe por un reseau personnel sans fil a forte contraintes temporelles. 5. D.mohammadi & H.jadidoleslamy 'comparison of the attacks on the link layer in wsn ' 2011 6. JA Stankovic 'DOS in WSN ' . 7. W. Stallings 'Cryptography and network security' 2003. 8. 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70.	**Authors:**	**Y.Madhuri, B.Suresh**	
	Paper Title:	**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:** 1. Liu, Y., D. Fu, and S. Gong, "A novel model for analyzing the radar cross section of microstrip antenna," Journal of Electromagnetic Waves and Application, Vol. 17, No. 9, 1301-1310, 2003. 2. Cui, G., Y. Liu, and S. Gong, "A novel fractal patch antenna with low RCS," Journal of Electromagnetic Waves and Application, Vol. 21, No. 15, 2403-2411, 2007. 3. Yuan, H.-W., S.-X. Gong, X. Wang, and W.-T. Wang, "Scattering analysis of a printed dipole antenna using PBG structures," Progress In Electromagnetics Research B, Vol. 1, 189-195, 2008. 4. Wu, T., Y. Li, S. -X. Gong, and Y. Liu, "A novel low RCS microstrip antenna using aperture coupled microstrip dipoles," Journal of	**328-331**

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71.

Authors: **J.Prathyusha, B.Suresh**

Paper Title: **Radiation Pattern Analysis of a Fractal Micro-Strip Patch Antenna**

Abstract: 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 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

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5. IFS Tool for Fractal Microstrip Patch Antenna Analysis azdra, P.; Capek, M.; Dept. of Electromagn. Field, Czech Tech. Univ., Prague
6. A Wideband Aperture-Coupled Microstrip Patch Antenna Employing Spaced Dielectric Cover for Enhanced Gain Performance Meagher, C.J.; Sharma, S.K.; Electr. & Comput. Eng. Dept., San Diego State Univ., San Diego, CA, USA

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72.

Authors: **Manish Rai, Sandeep Kumar, Jayanta Ghosh**

Paper Title: **Design & Analysis of Microstrip Antenna with Multi-frequency Operations**

Abstract: 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.

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73.

Authors: **K. Mathevan Pillai, G.Selvam, P.K.Kumaresan**

Paper Title: **Continuous Time Markov Chains–An Optimization on Used Vehicle Sales**

Abstract: 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 (CMTC) 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.

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74.	**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:** 1. P. Jax and P. Vary, ―Bandwidth extension of speech signals: A catalyst for the introduction of wideband speech coding?,‖ IEEE Commun.Mag., vol. 44, no. 5, pp. 106–111, 2006. 2. P. Jax and P. Vary, ―On artificial bandwidth extension of telephone speech, Signal Process., vol. 83, no. 8, pp. 1707–1719, 2003. 3. Peter jax and Peter vary, ―An upper bound on the quality of artificial bandwidth extension of narrowband speech signals,‖ in Proc. of ICASSP, vol. 1, Orlando, FL, USA, 2002, pp. 237–240. 4. Eko Pryadi, Kuniwati Gandi, Herman Kanalebe. "Speech Compression Using CELP Speech Coding Technique In GSM AMR", IEEE Conference, 2008A. 5. Xiao Jianming, Li Xun, Wan Lei, "Software Simulation in GSM Environment of Federal Standard 1016 CELP Vocoder", International Conference on Communication Technology, Oct. 22-24, 1998, Beijing, China 6. ETSI, Channel coding (GSM 05.03 version 8.9.0 (2005-01), release 1999), pp. 12-19 & 98. 7. D. Malkovic, ―Speech Coding Methods in Mobile Radio Communication Systems‖, 17th International Conference on Applied Electromagnetics and Communications, Oct-2003, Croatia. 8. ITU-T 2000, ―Perceptual evaluation of speech quality (PESQ), and objective method for end-to-end speech quality assessment of narrowband telephone networks and speech codecs‖, ITU-T Rec. P. 862, 2001. 9. K.Jarvinen "Standardization Of the Adaptive Multi Rate Codec", IEEE Conference 2000. 10. Bernd Geiser and Peter Vary, ―Backward Compatible Telephony in Mobile Networks: CELP Watermarking & Bandwidth Extension‖, International Conference on Audio and Speech Signal Processing, 2007. 11. Hannu Pulakka and Paavo Alku, "Bandwidth Extension of Telephone Speech Using a Neural Network and a Filter Bank Implementation for Highband Mel Spectrum" , IEEE traransactions on audio, speech, and language processing, vol. 19, no. 7, september 2011 12. http://www.repository.voxforge1.org/downloads/SpeechCorpus/Trunk/ Audio/Original/16kHz_16bit/	**342-347**
75.	**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. 2. Harpreet Kaur, "Artificial Intelligence: Bringing expert knowledge to computers", Discovery Journal 3. Mark Stamp "Information Security- Principles and Practise" pp 197-198 4. Heuristic Classifications 5. http:// www.formal.stanford.edu/jmc/whatisai/node3.html	**348-350**
76.	**Authors:**	**Gajula RajyaLakshmi, CH.Phani Krishna,Vemu 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		**351-355**

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.

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77.	**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.

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78.	**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:** 1. Ramesh K.Shah, D. P. (2003). "Fundamental of Heat Exchanger Design". New Jersey: John Wiley& Sons. 2. S. Kakac, H. Liu, "Heat Exchanger Selection, Rating and Thermal Design". Second Edition, United State of America, CRC press, 2002. 3. L.Wang, B. Sunden, R.M.Manglik." Plate heat exchangers Design, Application and Performance". Billerica: United State of America, WIT Press, 2007. 4. T. Kuppan. (2000), "Heat Exchanger Design Handbook". New York: United State of America. 5. Anthony Cooper and J. Dennis Usher," Heat Exchanger Design Handbook". Hemisphere Publishing Corporation, 1983.Washington: United State of America. 6. F. Akturk, G. Gulben, S. Aradag, N. Sezer Uzol, S. Kakac, "Experimental investigation of the characteristics of a chevron type Gasketed plate heat exchanger", 6th International Advanced Technologies Symposium (IATS'11), 16-18May2011, Elazıg, Turkey.pp.172-178. 7. Masoud Asadi, Dr Ramin Haghighi Khoshkho, "Thermodynamical optimization a plate and frame heat exchanger for microturbine applications", Journal of American Science 2012;8(9) (ISSN: 1545-1003).pp. 716-723. 8. Prabhakara Rao Bobbili , Bengt Sunden, Sarit K. Das,"An experimental investigation of the port flow maldistribution in small and large plate package heat exchangers", Applied Thermal Engineering 26 (2006).pp. 1919–1926. 9. F.S.K.Warnakulasuriya, W.M. Worek, "Heat transfer and pressure drop properties of high viscous solutions in plate heat exchangers", International Journal of Heat and Mass Transfer 51 (2008).pp.52–67. 10. A Bhanu Prakash, B Sridhara Rao and Prof. R.C. Sastry, "Heat Recovery Studies of Process Fluids in Corrugated Plate Heat Exchangers", International Conference on Chemical, Biological and Environment Sciences (ICCEBS'2011) Bangkok Dec., 2011.pp.324-328. 11. Lieke Wang, Bengt Sunden, "Optimal design of plate heat exchangers with and without pressure drop specifications", Applied Thermal Engineering 23 (2003).pp. 295–311. 12. Mohammad S. Khan, Tariq S. Khan, Ming-C. Chyu, Zahid H. Ayub, "Experimental investigation of evaporation heat transfer and pressure drop of ammonia in a 30o chevron plate heat exchanger", International Journal of refrigeration 35(2012).pp. 1757-1765. 13. P.Naratarukasa, R.Ponpai," Thermal design Algorithm of three-stream plate and frame heat exchanger with two thermal communications", The Journal of KMITNB.,vol.13,No.3,Jul-sep,2003. 14. A.A. Fahmy, M.M. EL Fawal and B.M. Taher, "Prediction of Thickness and Fouling Rate in Plate Heat Exchanger of MTR Reactor", Journal of American Science, 2012; 8(3) (ISSN: 1545-1003).pp. 377-383. 15. Jorge A.W. Gut, J. M. Pinto, "Optimal configuration design for plate heat exchangers", International Journal of Heat and Mass Transfer 47 (2004).pp. 4833–4848. 16. Khan T.S., Khan M.S., Chyu Ming-C., Ayub Z.H.,(2010)" Experimental investigation of single phase convective heat transfer coefficient in a corrugated plate heat exchanger for multiple plate configurations", Applied Thermal Engineering 30 ,pp1058–1065. 17. Lin J.H., Huang C.Y., Su C.C., 2007 Dimensional analysis for the heat transfer characteristics in the corrugated channels of plate heat exchangers, International Communications in Heat and Mass Transfer 34 ,pp 304–312.	**362-369**
79.	**Authors:**	**G.Nagarjuna Reddy, MahendraVucha**	
	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 efficient & 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 computational complexity and reduced memory. As the DWT traditionally been implemented by convolution which demands both a large number of computations and a large storage features that are not desirable for either high-speed or low-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:** 1. C. Christopoulos, A. Skodras, and T. Ebrahimi, "TheJPEG2000 Still Image Coding System: An Overview"IEEE Trans. Consumer Electronics, vol. 46,no. 4, pp.1103-1127, Nov. 2000. 2. C. Chrysafis and A. Ortega, "Line-Based, Reduced Memory, Wavelet Image Compression," IEEE Trans. Image Processing., vol. 9, no. 3, pp. 378-389, Mar.2000. 3. P. Wu and L. Chen, "An Efficient Architecture for Two-Dimensional Discrete Wavelet Transform," IEEE Trans. Circuits and Systems for Video Technology, vol. 11, no. 4, pp. 536-545, Apr. 2001. 4. Daubechies and W. Sweldens, "Factoring Wavelet Transforms intoLifting Steps," J. Fourier Analysis and Applications, vol. 4, no. 3, pp. 247-269,1998. 5. M. Grangetto, E. Magli, M. Martina, and G. Olmo, "Optimization and Implementation of the Integer Wavelet Transform for Image Coding," IEEE Trans. Image Processing, vol. 11, no. 6, pp. 596-604, June 2002. 6. H. Liao, M.K. Mandal, and B.F. Cockburn, "Efficient Architectures for 1Dand 2D Lifting-Based Wavelet Transform," IEEE Trans. Signal Processing, vol. 52, no. 5, pp. 1315-1326, May 2004.	**370-373**

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80.

Authors: **Vedgupt Saraf, D.S. Rao**

Paper Title: **Devnagari 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 Devnagari 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.

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

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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 a comparative study of different types of noises at different level are done. We have determined qualitative and quantitative analysis using Laboratory Virtual Instrumentation Engineering Workbench.

Keywords: Noises, Angiography, LabVIEW

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3. denoising of medical images using total Variational method by V N Prudhvi Raj1 and Dr T Venkateswarlu
4. A comparison of the multiscale Retinex with other Image Enhancement Techniques by Zia- ur Rahman, Glenn A. Woodell and Daniel J. Jobson.
5. An intelligent approach to image denoising by Tanzila Saba, Amjad Rehman and Ghazali Sulong
6. A non-local algorithm for image denoising by Antoni Buades, Bartomeu Coll, Jean-Michel Morel

82.

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

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

	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:** 1. E. Cohen and S. Shenker, "Replication Strategies in Unstructured Peer-to-Peer Networks," Proc. ACM SIGCOMM '02. pp. 177-190, 2002. 2. H. Shen, Y. Shu, and B. Yu, "Efficient Semantic-Based Content Search in P2P Network," IEEE Trans. Knowledge and Data Eng., vol. 16, no. 7, pp. 813-826, July 2004 3. R.A. Ferreira, M.K. Ramanathan, A. Awan, A. Grama, and S.Jagannathan, "Search with Probabilistic Guarantees in Unstructured Peer-to-Peer Networks," Proc. IEEE Fifth Int'l Conf. Peer to Peer Computing (P2P '05), pp. 165-172, 2005. 4. S. Robertson, "Understanding Inverse Document Frequency: On Theoretical Arguments for IDF," J. Documentation, vol. 60, pp. 503- 520, 2004. 5. P. Reynolds and A. Vahdat, "Efficient Peer-to-Peer Keyword Searching," Proc. ACM/IFIP/USENIX 2003 Int'l Conf. Middleware (Middleware '03), pp. 21-40, 2003. 6. D. Li, J. Cao, X. Lu, and K. Chen, "Efficient Range Query Processing in Peer-to-Peer Systems," IEEE Trans. Knowledge and Data Eng., vol. 21, no. 1, pp. 78-91, Jan. 2008. 7. I. Stoica, R. Morris, D. Karger, M.F. Kaashoek, and H.Balakrishnan, "Chord: A Scalable Peer-to-Peer Lookup Service for Internet Applications," Proc. ACM SIGCOMM '01, pp. 149-160, 2001. 8. J.P.C. Jie Lu, "Content-Based Retrieval in Hybrid Peer-to-Peer Networks," Proc. 12th Int'l Conf. Information and Knowledge Management (CIKM), pp. 199-206, 2003. 9. E.M. Voorhees, "Overview of Trec-2009," Proc. 16th Text Retrieval Conf. (TREC-11), 2009. 10. A. Broder and M. Mitzenmacher, "Network Applications of Bloom Filters: A Survey," Internet Math., vol. 1, no. 4, pp. 485-509, 2004.	**383-385**
83.	**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:** 1. www.wikipedia.org\robots.html. 2. Handbook of Industrial Robotics, 2nd Edition, edited by Shimon Nof, 1998 3. Idustrial robots by Sanjib Pohit 4. Ravani, B., and West, T. (1991). Applications of Robotics and Automation in Highway Maintenance Operations. In Proceedings of 2nd International Conference on Applications of Advanced Technologies in Transportation Engineering (pp. 61-65) 5. Anonymous (1986). Toward the 'smart' rail maintenance system. Railway Tract. Struct., 82 (11), pp 21-24. 6. Ali, M., Puffer, R., and Roman, H. (1994). Evaluation of a multifingered robot hand for nuclear power plant operations and maintenance tasks (pp. MS94-217-1-10). Proceedings of the 5th World Conference on Robotics Research. Dearborn, MI: Robotics International of the Society of Manufacturing Engineers. 7. Aracil, R., Penin, L., Ferre, M., Jimenez, L., Barrientos, A., Santamaria, A., Martinez, P., and Tudun, A. (1995). ROBTET: A New Teleoperated System for Live-Line Maintenance. Proceedings of the 7th International Conference on Transmission and Distribution Construction and Live Line Maintenance, Columbus, Ohio, pp 205-211. 8. Birch, S. and Trego, L. E. (1995). Aircraft stripping and painting. Aerospace Engineering, 15, pp. 21-23. 9. Dunlap, J. (1986). Robotic Maintenance of Overhead Transmission Lines. IEEE Transactions on Power Delivery, PWRD-1 (3), pp 280-284. 10. Edahiro, K. (1985). Development of "underwater robot" cleaner for marine live growth in power station. In Teleoperated Robotics in Hostile Environments, by H. L. Martin and D. P. Kuban (eds.), (Robotics International of the Society of Manufacturing Engineers, Dearborn, MI), pp. 108-118. 11. Najafi, F. T., and Naik, S.m. (1989). Potential Applications of Robotics in Transportation Engineering. Transportation Research Record, 1234, 64-73.	**386-390**
84.	**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.	**391-393**

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

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3. ACM-Based Automatic Liver Segmentation from 3D CT Images by Combining Multiple Atlases and Improved Mean Shift Techniques by Hongwei Ji*, Jiangping He, Xin Yang, Rudi Deklerck, 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.
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6. A 3D Live-Wire Segmentation Method for Volume Images Using Haptic Interaction by Filip Malmberg1, Erik Vidholm2, and Ingela Nystr¨om21 Centre for Image Analysis, Swedish University of Agricultural Sciences, Uppsala,Sweden 2 Centre for Image Analysis, Uppsala University, Uppsala, Sweden {filip, erik, ingela}@cb.uu.se by A. Kuba, L.G. Ny´ul, and K. Pal´agyi (Eds.): DGCI 2006, LNCS 4245, pp. 663–673, 2006. c_Springer-Verlag Berlin Heidelberg 2006
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8. Automatic Segmentation of the Pulmonary Lobes From Chest CT Scans Based on Fissures, Vessels, and Bronchi IEEE TRANSACTIONS ON MEDICAL IMAGING, VOL. 32, NO. 2, FEBRUARY 2013.
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85.

Authors: **Kilaru Kalyan, Shaik Avaes Mohsin, Angadi Suresh**

Paper Title: **Transmission of 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 in sustainable moderate range. The coupling consists of an inductor along with a capacitor with its own resonating frequency. In any system of coupled resonators there often exists a so-called "strongly coupled" regime of operation. If one ensures to operate in that regime in a given system, the energy transfer can be very efficient. Another technique includes transfer of power through microwaves using rectenna. 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.

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86.

Authors: **Prathamesh Dinkar, Abhishek Gulavani, Sourabh Ketkale, Pratik Kadam, Sheetal Dabhade**

Paper Title: **Remote Health Monitoring using Wireless Body Area Network**

Abstract: A body area network is a wireless network of biomedical sensors that are attached to a human body. The aim of wireless body 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

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tablet 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.

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Authors:	**P.B. Alappanavar, Dhiraj Patil, Radhika Grover, Srishti Hunjan, Yuvraj Girnar**
Paper Title:	**An Ameliorated Approach towards Automating the Relational Database Normalization Process**

Abstract: In the field of database systems in general and relational systems in particular, database design problem is of utmost importance as it helps to decide on a suitable logical structure for a given data to be represented in a database and concentrates on the fact that which relations are needed and what their attributes should be. Designing a database is a complex task and the normalization theory is a useful aid in the design process. In this paper, a tool is presented which aims to handle the normalization process up to third normal form(3NF) and even imparts the normalized relations to its users in different formats. The objective of the system is to provide an effective and efficient e-Learning system to individuals to learn normalization in an easy and quick manner and an impeccable solution for organizations dealing with excessive data.

Keywords: Database, Database Management System, Functional Dependencies, Normalization, Relations, Relational Model.

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88.

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 chemicals 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.

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Authors: **V.Umachitra, N.Chandrasekaran**

Paper Title: **A Fuzzy Logic Control Based Novel Fast Charging Scheme for Electric Vehicle with Hybrid Energy Storage System**

Abstract: Recently electric vehicles are gaining more attention. The major factor to be noted in the development of electric vehicle 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 which 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).

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90.

Authors: **Rakhi Bhardwaj, Vikas Maral**

Paper Title: **Dynamic Data Storage Auditing Services in Cloud Computing**

Abstract: Cloud based data storage systems have many complexities regarding critical/confidential/sensitive data of client. The trust required on Cloud storage is so far had been limited by users. The role of the paper is to grow

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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.

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91.

Authors: **Debanjan 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 matlab7.5 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 SIMULATOR .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.

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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

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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

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Authors: **Taslim Shaikh, Ninad Sikchi, 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.

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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.

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96.

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,

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	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:** 1. Angles, J, 2003, Fundamentals of Robotics Mechanical Systems, Springer-verlag, NY. 2. Introduction to Robotics, S K Saha, 2009. 3. Denavit and Hartenberg, R.S,1995, A Kinematic Notations for lower pair mechanisms based on matrices 4. Robo Analyzer,(http://www.roboanlyzer.com) 5. Mat Works,(http://www.mathworks.com) 6. International Conference of Multibody Dynamics ICMBD-2011, Vijayawada,India 7. Peter I.corke, Dec.2008, Robotics tool box for matlab. 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.	
97.	**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:** 1. A Tajpour, A., Masrom, M., Heydari, M.Z., and Ibrahim, S., SQL injection detection and prevention tools assessment. Proc. 3rd IEEE International Conference on Computer Science and Information Technology (ICCSIT'10) 9-11 July (2010), 518-522 2. Khaleel Ahmad, Jayant Shekharand, K.P. Yadav(2010)," Classification of SQL Injection Attacks" VSRD technical and non-technical journal 3. Shubham Shrivastava, Rajeev Ranjan Kumar Tripathi, Attacks Due to SQL injection & their Prevention Method for Web-Application, International Journal of Computer Sciecne and information technologies, Vol 3 (2), pp.3615-3618, 2012. 4. Chad Dougherty (2012) "Practical Identification of SQL Injection Vulnerabilities" United States Computer Emergency Readiness Team (US-CERT October 25, 2012) 5. Parveen Kumar (2013) "The Multi-Tier Architecture for Developing Secure Website with Detection and Prevention of SQL-Injection Attacks" International Journal of Computer Applications (0975 – 8887)Volume 62– No.9, January 2013 6. https://www.owasp.org/index.php/SQL_Injection 7. http://www.imperva.com/docs/hii_monitoring_hacker_forums_2012.pdf 8. http://www.acunetix.com/websitesecurity/sql-injection/ 9. http://www.verizonenterprise.com/resources/reports/rp_data-breach-investigations-report-2012-ebk_en_xg.pdf 10. http://www.imperva.com/docs/hii_monitoring_hacker_forums_2012.pdf	**457-460**
98.	**Authors:** **T.R. Mohod, R.T. Saudagar, P.R. Ingole, 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 numbers 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:** 1. Moore.g, 1965, Cramming More components onto Integerated Circuits, Electronics, 1965 38(8). 2. G.Smyrnov, US Patent number 6672373B2 ,2004 3. H. Akachi, US Patent, Patent Number 4921041, 1990. 4. S.khandekar, Manfred. Groll and Vivak Luckchoura,"An introduction to pulsating heat pipes" Electronic cooling volume 9, no2 May 2003. 5. S.Khandekar and Manfred .G, "Pullsating heat pipe:Attractive entrants in the family of closed passive two- phase systems"Journal of Energy and MassTransfer,Vol.26, , March-December 2004 pp99-115.	**461-463**

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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 low 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.

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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 competent 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

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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 information 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

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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

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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.

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104.

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.

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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).

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Authors: **Vijay. G.R, A.Rama Mohan Reddy**

Paper Title: **Cloud Data Management Interface based Storage Virtualization Mechanism for Cloud Computing**

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 Virtualization 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,.

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Authors: **D. Padma Subramanian, Anly Abraham**

Paper Title: **Effect of High Wind Penetration, Grid Strength- ening 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,

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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.

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Authors: **Ramakrishna Das, Saurabh Dutta**

Paper Title: **An Approach of Private-Key Encryption Technique Based on Multiple Operators And Nth Even or Odd Term For Even or Odd Bit Position's Value of A Plain Text's Character**

Abstract: Private-key cryptography is a cryptographic system that uses the same secret key to encrypt and decrypt messages. The problem with this method is transmitting the secret key to the person that needs it without it being intercepted Here, we have proposed an idea to increase the security of private-key encryption technique. We have focused on the secret procedure to retrieve secret value from the private-key rather than securing the actual private-key value. The encryption is done by the secret value derived from the private-key. The secret value is being derived by making arithmetic operation between two decimal values. Those decimal values are derived by taking the binary values from even and odd bit position of a plain text's character respectively. The operators are supplied by the user. As the formations of '0' and '1' are different for each distinct character in the plain text file, so we get different or may be distinct secret private-key value for each of the distinct character in the plain text. Thus the security is increased.

Keywords: Even or odd bit position, Nth Even or Odd term, Private-key Encryption, Stream Cipher.

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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.

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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: Biaixial excitation, Multi-storey building, geometrically asymmetrical plan, inelastic effects.

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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, Biofertlizer, Ocimum sanctum and Rhizosphere

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Authors: **Rajesh Kumar Verma, P. K. Singhal**

Paper Title: **U - Slot Loaded Broadband Rectangular Microstrip Antenna**

Abstract: To enhance the bandwidth, a new design of rectangular microstrip antenna is presented. The proposed geometry consists of an E – shaped ground plane structure, a truncated radiating patch layer and a U- slot loaded patch layer. The radiating patch layer and U slot loaded patch layer are separated using a thick air substrate (10 mm) to enhance the bandwidth. The two major impedance BWs determined are 40 % at centre frequency 3815 MHz and 29 % at centre frequency 5995 MHz. The microstrip antenna is fed by a coaxial probe. The proposed geometry provides a band of 1530 MHz (3.05 GHz to 4.58 GHz) and of 1750 MHz (5.12 GHz to 6.87 GHz) that is suitable for certain frequencies of S band as well as of C band applications. Also, the proposed geometry provides a peak directivity 6.59 dBi, gain 4.78 dBi, axial ratio 42.46 dB, aperture efficiency 85.7 %, radiation efficiency 89 % for a band (3.05 GHz to 4.58 GHz) whereas for a band of (5.12 GHz to 6.87 GHz) the proposed geometry provides a peak directivity 6.22 dBi, gain 4.32 dBi, axial ratio 70.9 dB, aperture efficiency 68.8 %, radiation efficiency 70 %. All the simulations are carried out using Zeland IE3D simulation software for a dielectric substrate with dielectric constant 4.4 and loss tangent 0.02.

Keywords: Broadband, RMSA, Truncated.

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Authors: **Kunatsa T, Musademba D**

Paper Title: **Feasibility of Biomass Energy Conversion Technologies For The Wattle Company's Vumba Sawmill Wood Waste**

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.

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Authors: **Nimisha C. Chaudhari**

Paper Title: **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

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Authors: **Mehboob ul Amin, Randhir Singh, Javaid.A.Skeikh**

Paper Title: **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) transreceiver 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).

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117. **Authors:** **S. Nagammai, S.Latha, I.Aarifa, S.D.Idhaya**

	Paper Title:	**Analytical Design of State Feedback Controllers for a Nonlinear Interacting Tank Process**	
	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 processes. **Keywords:** Interacting tank process, PID controller, state feedback controller. **References:** 1. M. Gopal 3/e, Digital Control and State Variable Method, TMGH. 2. M.S.Ramli,,M.F. Rahmat,,M.S. Najib 'Design and Modeling of Integral Control State-feedback Controller for Implementation on Servomotor Control', 6th WSEAS International Conference on circuits, systems, electronics, control & signal processing, Cairo, Egypt, Dec 29-31, 2007 2008 3. S.Nithya,AbhaySinghGour, N.sivakumaran, T.K.Radhakrishnan T.Balasubramanianand,N.Anantharaman"Intelligentcontroller implementation in real time for a non linear process " International Journal of Applied Engineering Research 3(4), 491-503, 2008. 4. G.Sakthivel,T.S.Anandhi,S.P.Natarajan, "Design of Fuzzy Logic Controller for a Spherical tank system and its Real time implementation" International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622Vol. 1, Issue 3, pp.934-940,2011	**554-558**
118.	**Authors:**	**V.Harsha Ram Keerthi, N.Sri pravallika, P.Srinivasulu**	
	Paper Title:	**Design of C-Band Square Microstrip Patch Antenna with Dual Feed for Radar Applications Using ADS**	
	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 an 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 Padhy, Yasodha. P and NarayanaRao. T, 2010 "Development of UHF wind profiling radar for lower atmospheric research applications". Conference paper at NARL. 2. Srinivasulu. P, Yasodha. P, Rajendra Prasad. T and Narayana Reddy. S 2010 "Development of 1280 MHz Active Array RADAR at NARL". Conference Paper at NARL DRAWS-2010. 3. C.T.P.Song, P.S.Hall and H.G.Shiraz, "Multiband Multiple Ring Monopole Antennas" IEEE Trans. on Antennas and propagation, vol. 51,No.4 pp. 722-729, April. 2003. 4. Karaboga, D., K. Guney, S. Sagiroglu, and M. Erler, \Neural computation of resonant frequency of electrically thin and thick rectangular microstrip antennas," IEEE Proceedings | Microwaves, Antennas and Propagation, Vol. 146, No. 2, 155{159, Apr. 1999. 5. Mishra, R. K. and A. Patnaik, \Neural network-based CAD model for the design of square-patch antennas," IEEE Trans. on Antennas Propagat., Vol. 46, No. 12, 1890{1891, Dec. 1998. 6. Patnaik, A., R. K. Mishra, G. K. Patra, and S. K. Dash, \An arti¯cial neural network model for e®ective dielectric constant of microstrip line," IEEE Trans. on Antennas Propagat., Vol. 45, No. 11, 1697, Nov. 1997. 7. R. G. Voughan. 1988. Two-port higher mode circular microstrip antennas. IEEE, Trans. Antennas Propagat.36(3): 309-321. 8. D.D.Sandu, O.Avadanei, A.Ioachima, G.Banciua, P.Gasner. Microstrip Patch Antenna with dielectric substrate. Journal Optoelectronics and Advanced Materials Vol. 5, No. 5, 2003.	**559-563**
119.	**Authors:**	**N.Gopi Chand, K.Ravi Teja, M.Sridevi**	
	Paper Title:	**Proposed Ways to Extract Maximum Efficient Power Out Of a Solar Panel**	
	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:** 1. L. Piegari, R. Rizzo, "Adaptive perturb and observe algorithm for photovoltaic maximum power point tracking," Renewable Power Generation, IET, vol. 4, no. 4, pp. 317-328, July 2010. 2. Tat Luat Nguyen, Kay-Soon Low, "A Global Maximum Power Point Tracking Scheme Employing DIRECT Search Algorithm for	**564-568**

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Authors: **M. Kalyanasundaram, Merin P. George, S.Suresh Kumar**

Paper Title: **Unified Power Quality Conditioner (UPQC) for the Mitigations of Power Quality Problems in Distribution System**

Abstract: The Unified Power Quality Conditioner (UPQC) is a versatile device which could function as both series filter and shunt filter. The main concern in this paper is to introduce a new concept of UPQC for mitigating different power system problems. The new concept is known as the UPQC-S, in which the series inverter of UPQC is controlled to perform the simultaneous voltage sag/swell compensation and load reactive power sharing with shunt inverter. The reference voltage signal for controlling the series inverter is generated using the UPQC controller based on PAC approach. The Active Power Control approach is integrated with the theory of Power Angle Control approach to perform the two functions simultaneously. The controlling of shunt inverter of UPQC-S is done using PSO based fuzzy logic controller. Computer simulation by MATLAB/ SIMULINK has been used to support the developed concept.

Keywords: Power Angle Control (PAC), power quality, reactive power compensation, Active power filter (APF), unified power quality conditioner (UPQC), voltage sag and swell compensation, PSO(Particle Swarm Optimization), VAloading, Fuzzy Logic Controller.

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Authors: **Alok Rao, Narendra Upadhyay, Vivek Kumar Rai**

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

Abstract: 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.

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

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Authors: **Obi, O. F., Akubuo, C. O., Okonkwo, W. I.**

Paper Title: **Development of an Appropriate Briquetting Machine for Use in Rural Communities**

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 compressed density was attained at the 100:25 blending ratio having a compressed density of 0.7269g/cm3 and a heating value of 27.17MJKg-1 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.

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Authors: **Mistry Soham, Bhatt Rajiv**

Paper Title: **Critical FactorsAffecting Labour Productivity InConstruction Projects: Case Study of South Gujarat Region of India**

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 factorsin descending order from RII Technique areDelay 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, andPhysical Fatigue. Contractors shall act on these factors to improve labour productivityin construction projects.

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

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16. Labour Productivity In Indian Industries Book By M. K. Singh

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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.

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Authors: **Shashank Shekhar, Gurpreet Singh**

Paper Title: **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

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Authors: **Pallavi Patil, D.S. Bormane**

Paper Title: **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,

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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 to be 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.

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Authors: **Aparnaa.M, Sacred HeartAmir.C, Vigneshwari. K, VishnuKumar.A**

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 Smart phone 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 neighbors' 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.

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Authors: **Aparna.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

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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.

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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.

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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

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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.

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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.

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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.

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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 honey comb 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 defections in copper honey comb 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,

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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.

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

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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.AMat lab program is developed for different link angles with the help of robot tool kit developed by petercorke. 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.

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137.

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.

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Keywords: LSB, DWT, Secret Message, Pixel.

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Authors: **Vaibhavkumar 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 nature, 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.

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Authors: **Jitendra Choudhary, Ravindra Kumar Gupta, Shailendra Singh**

Paper Title: **A Survey of Existing Playfair Ciphers**

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

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Authors: **Jasdeep Singh Bhalla**

Paper Title: **A Database Encryption Technique to Enhance Security Using Hill Cipher Algorithm**

Abstract: Data security has become one of the major challenges of the digital world. Security, privacy and integrity of data are required in every operation that is performed on the Internet. Therefore, in this paper, our focus will be on Database Security, as databases are considered as the storehouses of data. Generally, data of an organization or a company is stored in databases and is very crucial to the organization. Today, most of the organizations allow their clients to use their services (online banking, online shopping etc) by accessing their databases. This leads to a requirement of high level security to deal with information attackers. An information attacker tries to illegally acquire or modify the highly confidential data of the organization. In this paper, a new technique is being proposed for securing the database data items using Hill Encryption Algorithm which is being implemented in fortifying and strengthening the database. Database Security has become one of the most important challenges in database research. A lot of research is going on in building of new techniques for protecting database records.

Keywords: Database Security, Database Encryption, Hill encryption, Database Protection.

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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 equilateral 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.

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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.

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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

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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 quantifying 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

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Authors: **Jay J. Bhavsar, V K. Matawala, S.B.Dixit**

Paper Title: **Performance Analysis of Spiral Tube Heat Exchanger**

Abstract: In the present study, the performance of the spiral tube heat exchanger can be carried out. The heat exchanger consists of a shell and tube unit. Each coil is fabricated by bending a 12 mm diameter straight copper tube into a spiral coil tube of four turns. Cold water and hot oil are used as working fluids in shell side and tube side, respectively. The experiments are done at the cold water and hot oil mass flow rates ranging between 0.075 and 0.25 kg/s, and between 0.008 and 0.04 kg/s, respectively. The inlet temperatures of cold and hot water are between 29 and 37 °C, and between 70 and 56 °C, respectively. The cold water entering the heat exchanger at the shell inlet side and outer from the shell outside. The hot water enters the heat exchanger at the inner tube side and flows along the outside of the tube. The effects of the inlet conditions of both working fluids flowing through the test section on the heat transfer characteristics are discussed..

Keywords: A spiral tube heat exchangers, Result and Discussion

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Authors: **Gogineni. Prudhvi, Gada.Vinay, G.Suresh Babu**

Paper Title: **Cooling Systems in Automobiles & Cars**

Abstract: 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. Here 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 oftenreferred to as a "heat engine." However, only about25% of the heat is converted to useful power. Whathappens to the remaining 75 percent? Thirty to thirtyfive percent of the heat produced in the combustionchambers by the burning fuel are dissipated by thecooling system along with the lubrication and fuelsystems. Forty to forty- five percent of the heatproduced passes out with the exhaust gases. If this heatwere 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 soonstop.The necessity for cooling may be emphasized byconsidering the total heat developed by an ordinary six-cylinder engine.

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

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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

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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.

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21. Performance Analysis on Mobile Agent Based Congestion Control Using AODV Routing Protocol Technique with Hop by Hop Algorithm for Mobile Ad-hoc Network .Mr.Vishnu Kumar Sharma1 and Dr. Sarita Singh Bhadauria2.
22. Adaptive Opportunistic Routing for Wireless Ad Hoc Networks. Abhijeet A. Bhorkar, Mohammad Naghshvar, 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**	

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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 in Digital 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 in applied over the order pair of key frames to generate watermark signal.

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

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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 unobservablitiy 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.

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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.

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

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

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

Paper Title: **FPGA Modeling of IEEE754-2008 Standard for Financial Transactions**

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 Program-mable Gate arrays (FPGA), Floating Point(FP).

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Authors: **S. Badshah**

Paper Title: **Mixed Numerical-Experimental Identification Based on Modal Testing**

Abstract: The discrete mass distribution of metallic foam causes discontinuities in their local properties. Mechanical properties of metallic foams depend on their relative densities. A mixed numerical-experimental identification technique is used to identify elastic behavior of Aluminum Foam. The developed identification technique is based on experimental modal model, measured computer tomography density distribution data and FE model. Experimental and numerical eigen values and their corresponding mode shapes are used for identification of elastic behavior. A set of error functions based on measured and numerical eigen frequencies and corresponding mode shapes was developed in MATLAB. The aim of this work is to develop and validate a mixed Numerical-experimental technique for identification of elastic behavior of Aluminum foam.

Keywords: MNET, ANSYS, Identification technique, Inverse Problem, Modal testing.

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Authors: **B.Bala Subbanna, L.P.Divya Meenakshi**

Paper Title: **The Role of Optical Amplifiers in Optical Fiber Communication**

Abstract: An optical amplifier is a device that amplifies an opticalsignal 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), electron-holerecombination occurs. In Raman amplifiers, Raman scattering of incoming light with phonons 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 ultra-short pulses.

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	Keywords: Amolifier, EDFA, SOA **References:** 1. OPTICAL FIBER TELECOMMUNICATIONS IIIA by IVAN P. KAMINOW 2. Lucent Technologies, Bell Laboratories ,Holmdel, New Jersey and THOMAS L. KOCH 3. Iucent Technologies.Bell Laboratories, Holmdel. New Jersey. 4. OPTICAL FIBER TELECOMMUNICATIONS IV B SYSTEMS AND IMPAIRMENTS 5. IVAN P. KAMINOW ,Bell Laboratories (retired),Kami nowLight waveTechnology, Holmdel, New Jersey, and TINGYE LI,AT&T Labs (retired),.Boulder, Colorado. 6. Barry, R. A. 1993. Wavelength routing for all-optical networks. Ph.D. diss., Massachusetts 7. Institute of Technology, Electrical Engineering and Computer Science Department. 8. Chang, G.-K., G. Elian's, J. K. Gamelin, M. Z. Iqbal, C. A. Brackett. 1996. Multiwavelength 9. reconfigurable WDMIATMISONET network testbed. J. LightwaveTech. 14(6):1320-1340, 10. Frigo. N. J., P. P. Iannone, P. D. Magill, T. E. Darcie, M. M. Downs, B. N. Desai,U. Koren. T. L. Koch, C. Dragone, H. M. Presby, and G. E. Bodeep. 1994. A 11. wavelength-division multiplexed passive optical network with cost-shared components. 12. IEEE Photon. Tech. Lett. 6:1365-1367. 13. H. Winters, "Reducing the effects of transmission impairments in digital fiber 14. optic system," IEEE Comm. Mag., pp. 68-76, June 1993. 15. W. D. Grover, "Forward error correction in dispersion-limited lightwave systems," 16. IEEE Journal ofLightwave Tech., vol. 6, pp. 643-654, May 1988. A. F. Elrefaie, R. E. Wagner, D. A. Atlas, and D. G. Daut, "Chromatic dispersion 17. limitations in coherent lightwave transmission systems," IEEE Journal ofLightwave Tech., vol. 6, p. 704, May 1988.	
155.	**Authors:**	**Sunil I. Patel, Dipak C. Gosai, Vandana Y. Gajjar**
	Paper Title:	**Performance and Exhaust Emission Analysis of Thermal Barrier Coated Diesel Engine Using Rice Bran Oil Biodiesel**
	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:** 1. T. Ratna Reddy, M.V.S. Murali Krishna, Ch. Kesava Reddy and P.V.K.Murthy "Performance evaluation of a medium grade low heat rejection diesel engine with Mohr oil based bio-diesel," International Journal of Recent advances in Mechanical Engineering (IJMECH), 2012, pp 1-17. 2. A P Sathiyagnanam, C G Saravanan and S Dhandapani "Effect of thermal-barrier coating plus fuel additive for reducing emission from di diesel engine," Proceedings of the World Congress on Engineering WCE, London, U.K., Vol 2, 2010, pp 978-988. 3. Palaniswamy E, Manoharan N., "Ceramic coated combustion chamber for improving I.C. engine performance,". International Journal on Design and Manufacturing Technologies, Vol.2, No.1, 2008, pp 22-25. 4. T. Venkateswara Rao, G. Prabhakar Rao, K. Hema Chandra Reddy., "Experimental Investigation of Pongamia, Jatropha and Neem methyl esters as biodiesel on C.I. Engine," Jordan Journal of Mechanical and Industrial Engineering, Vol. 2, 2008, pp 117- 122. 5. G. Venkata Subbaiah, K. Raja Gopal, Syed Altaf Hussain, B. Durga Prasad, K. Tirupathi Reddy., "Rice bran oil biodiesel as an additive in diesel- ethanol blends for diesel engines," IJRRAS, Vol. 3, 2010, pp 334- 342. 6. Kandukalpatti Chinnaraj Velappan, "Less NOx biodiesel: CI engine studies fuelled with rice bran oil biodiesel and its five blends," Journal of Scientific & Industrial Research, Vol. 66, 2007, pp 60- 71. 7. Murat Ciniviz, Performance and energy balance of a low heat rejection diesel Engine operated with diesel fuel and ethanol blend, Transactions of the Canadian Society for Mechanical Engineering, Vol. 34, No. 1, 2010, pp 93-104. 8. A. Siva Kumar, Dr. D. Maheswar, Dr. K . Vijaya Kumar Reddy, Analysis of LHR extended expansion engine with variable speed operation for different compression ratios, International journal of advanced engineering sciences and technologies, Vol No. 11, Issue No. 1, 2011 pp 121 - 128. 9. International journal of advanced engineering sciences and technologies, Vol No. 11, Issue No. 1, 2011 pp 121 - 128. 10. Ekrem Buyukkaya, Tahsin Engin, Muhammet Cerit, Effects of thermal barrier coating on gas emissions and performance of a LHR engine with different injection timings and valve adjustments, Energy Conversion and Management 47, 2006, pp 1298- 1310. 11. P. Lawrence, P. Koshy Mathews and B. Deepanraj, Experimental Investigation on Performance and Emission Characteristics of Low Heat Rejection Diesel Engine with Ethanol as Fuel, American Journal of Applied Sciences, 2011, pp 348-354. 12. Murthy P.V.K, Murali Krishna M.V.S., Sitarama Raju A, Vara Prasad C.M., Srinivasulu N.V., Performance Evaluation of Low Heat Rejection Diesel Engine with Pure Diesel, International journal of applied engineering research, Dindigul, 2010, pp 428-451. 13. Vinay Kumar Domakonda, Ravi Kumar Puli, Application of Thermal Barrier Coatings in Diesel Engines: a Review, Energy and Power, 2012, pp 9-17. 14. Dr. R. Yadav., "Internal Combustion Engines and Air Pollution," Central publishing house, Allahabad, 2011, pp 451- 506. 15. R. K. Rajput "Internal Combustion Engines," Laxmi Publication ,New Delhi, 2013,. pp 537- 605.	**734-739**
156.	**Authors:**	**Rahul Verma, D.S. Rao**
	Paper Title:	**Offline Signature Verification and Identification Using Angle Feature and Pixel Density Feature And Both Method Together**
	Abstract: Today the human signature of a person is used as an identification of person because we are all know that the each person has distinct signature and every signature has its own physiology or behavioral characteristics. So the human signature used as a identification of person in various work like bank checks etc. The fraud person can	**740-746**

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.

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13. Rahul Sharma , manish shrivastav "an offline singnature verification using neural network based on angle and energy density"international Journal on Emerging Technologies 2(2): 84-89(2011)
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157.	**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 (VDVH) 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, Xrf, Xra, Xrs 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.

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158.

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.

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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

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160.	**Authors:**	**Devender Kumar, Balwinder Singh Surjan**	
	Paper Title:	**Transient Stability of a Multi Machine Power System**	
	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 analyse 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:** 1. La Van Ut: Analysis and Control Stability for Power System, Science and Technology Press, 2000. 2. Ho Van Hien: Transmission and Distribution of Power System, National University of HoChiMinh City Press, 2003. 3. Prabha Kundur: Power System Stability and Control, McGraw-Hill International Editions, 1994. 4. Hadi Saadat: Power System Analysis, McGraw-Hill International Editions, 1999. 5. John J. Grainer, Willam D. Stevenson JR: Power System Analysis, McGraw-Hill International Editions, 1999. 6. Carson W. Taylor: Power System Voltage Stability, McGraw-Hill International Editions,1994. 7. I. J. Nagrath and D. P. Kothari "Modern Power System Analysis" Tata McGraw-Hill, 2003 8. Power system stability by Mrinal K Pal	**759-762**
161.	**Authors:**	**Amit Debnath, Champa Nandi, Joseph Rualkima Rante**	
	Paper Title:	**Voltage Profile Analysis for IEEE 30 Bus System Incorporating with UPFC**	
	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:** 1. L. Gyugyi, C. D. Schauder, S. L. Williams, T. R. Rietman, D. R. Tagerson, and A. Edris, "The unified power flow controller: A new approach to power transmission control."IEEE Trans. no Power Delivery, Vol.10,no. 2, pp. 108s-1097, pp 1999. 2. Acha, E, C.R. Fuerte-Esquivel, H. Ambriz-Perez and C. Angeles-Camacho, FACTS Modeling and simulation in power networks. 1st Edn., John Wiley and Sons Inc., New York, ISBN: 978-0470852712, 2004. 3. Ch. Chengaiah, G. V. Marutheswar and R. V. S. Satyanarayana, "control setting of unified power flow controller through load flow calculation" ARPN, Vol. 3, no. 6, December 2008 4. M. Noroozian, L. Angquist, M. Ghandhari, G. Anderson "use of upfc for optimal power flow control" ieee transactions on power delivery, vol. 12, no. 4, october 1997. 5. Mr.N.K.Sharma, Prof.P.P.Jagtap ""Modelling and application of Unified Power Flow Controller (UPFC)" 978-0-7695-4246-1/10,IEEE DOI 10.1109/ICETET.2010.169, 2010 6. L. Gyugyi, "A unified power flow control concept for flexible AC transmission systems," IEE Proc.-C, vol. 139, pp. 323-333, July 1992. 7. A. J. F. Ken, A. S. Mehrahan, X. Lombard, A. A Edris, 'Vnified Power Flow Controller (WFC): Modeling and analysis," IEEE Transactions on power deliver, vol. 14, N0.2, pp. 648-654, April 1999. 8. D. J. Gotham, G.T. Heydt, "Power flow control and power flow studies for systems with FACTS devices," IEEE Transactions on power systems, vol. 13, NO.l, pp. 60-65, February 1998. 9. W. L. Fang, H. W. Ngan. Control setting of Unified Power Flow Controllers through a robust load flow calculation. IEEE proceedings on generation, transmission, distribution. Vol. 146. July 1999. 10. A.Edris, C.D. Schauder, D.R. Torgerson, L.Gyugyi, S.L.Williams and T.R. Rietman, "The Unified Power Flow Controller: A New Approach to Power Transmission Control", IEEE Trans. Power Del., Vol.10, no.2, pp. 1085-1097, Oct. 1995 11. C. D. Schauder, L. Gyugyi etc. "Operation of the unified power flow controller (UPFC) under practical constraints," IEEE Transactions on 12. Power Delivery, vol. 13, pp. 630-639, April 1998.	**763-768**
162.	**Authors:**	**Goutham Solasa, Nariganani SD Satadeep, T.Raghu Krishna Prasad, G.Suresh Babu**	
	Paper Title:	**Diesel Engine Perormance Improvement by Using Cetane Improver**	
	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.	**769-776**

This report also focuses of 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.

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3. Comparison of Diesel Engine Performance and Emissions from Neat and Transesterified Cotton Seed Oil by A. Siva Kumar, D. Maheswar, K. Vijaya Kumar Reddy.
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5. The Effect of Cetane Number Increase Due To Additives on NOx Emissions from Heavy-Duty Highway Engines - Final Technical Report-40.
6. Karanja Oil – Its Potential and Stability as a Biodiesel by Sudipta Choudury.

163.

Authors: **S. K. Himanshu, A. K. Singh, S. Kumar, P. Kalura**

Paper Title: **Response of Broccolli to Irrigation Scheduling and Methods under Drip, Sprinkler and Surface Irrigation**

Abstract: The aim of this study was to identify the best irrigation method and scheduling that will help in the development of vegetable industry. Field study was carried out during the winter crop growing season of 2009-2010 (December to March) on clay loam soil in Allahabad of India in order to evaluate the effect of irrigation methods and schedules on marketable yield, irrigation production efficiency and economic return of broccoli under semi arid climate. The irrigation during corp growing season was applied when sum of the daily USWB class A open pan reached approximately the predetermined value of 16.3 mm after accounting the rainfall. Irrigation at 150% of pan evaporation replenishment resulted in higher marketable yield of primary and secondary flowers, but irrigation production efficiency was higher with irrigation at 50% of pan evaporation replenishment. The drip irrigation method resulted in slightly higher marketable yield of primary flowers, and irrigation production efficiency as compared with micro-sprinkler irrigation method. The surface irrigation method gave considerably lower yield of primary and secondary flowers and irrigation production efficiency. The irrigation at 150% of pan evaporation replenishment resulted in higher gross return, net return and benefit cost ratio for micro-sprinkler followed by drip and surface irrigation methods. The seasonal water applied/ irrigation schedules and gross return, net return and benefit cost ratio for different irrigation methods exhibited strong quadratic relationship which in-turn can be used for optimizing economic return under limited water resource condition. In spite of higher initial investment, the micro irrigation system (drip and micro-sprinkler) is highly economical for broccoli production in this region.

Keywords: Drip irrigation, Sprinkler irrigation, Surface irrigation, Lateral spacing, Irrigation schedule, Marketable yield, Irrigation production efficiency, Pan Evaporation.

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164. **Authors:** **Raj Kumar, Sandeep Kumar, Manish Rai, Sanket Kumar**

	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". 2. S. M. S. Jalaleddine, C.. G. Hutchens, R. D. Strattan, and W. A. Coberly, "ECG data compression techniques a unified approach," IEEE Trans, Biomed. Eng., vol. 37, pp. 329-343, 1990. 3. A.A.Shrouf, M.A.Zahhad, S.M.Ahmed, A novel compression algorithm for electrocardiogram signals based on the linear prediction of the wavelet coefficients, Digital Signal Process. 13(2003)604–622. 4. M.L.Hilton Wavelet and wavelet packet compression of electrocardiograms. IEEE Trans Biomed Eng 1997;44(5):394–402. 5. A.Djohan, T.Q.Nguyen, W.J.Tompkins, ECG compression using discrete symmetric wavelet transform. In: IEEE International conference on Engineering in Medicine and Biology Society, vol. 1.1995. p. 167–8. 6. Z.Lu, D.Y.Kim, W.A.Pearlman. Wavelet compression of ECG signals by the set partitioning in hierarchical trees (SPIHT) algorithm. IEEE Trans Biomed Eng 1000;47(7):849–56. 7. S. K. Mukhopadhyay, M. Mitra, S. Mitra, "A lossless ECG data compression technique using ASCII character encoding", Computers and Electrical Engineering 37 (2011) 486–497. 8. S.K. Mukhopadhyay, M. Mitra, S. Mitra, "An ECG signal compression technique using ASCII character encoding", Measurement 45 (2012) 1651–1660. 9. S.K. Mukhopadhyay, M. Mitra, S. Mitra,"ECG data compression via ASCII character encoding and feature extraction using hilbert transform based approach",Consumer Electronics Times,vol.2.2013.iss-1,pp 56-67. 10. John P. Abestein and Willis J. Tompkins, "A new data reduction algorithm For real time ECG analysis",IEEE Trans Biomed Eng vol.BME 29 1982,pp 43-48 11. Brian Bradie, "Wavelet Packet Based Compression of Single Lead ECG",IEEE Trans Biomed Eng ,vol.43 1996,pp 493-501. 12. Sateh M. S. Jalaleddine,Chris G. Hutchens, Robert D. Strattan and William A Coberly,"ECG data compression techniques-A unified approach",IEEE Trans Biomed Eng, vol 37 1990,pp 329-341. 13. V. Kumar, S.C. Saxena, V.K. Giri, D. Singh, "Improved modified AZTEC technique for ECG data compression: effect of length of parabolic filter onreconstructed signal", Comput. Electr. Eng. 2005; 31(4–5):334–44. 14. M.L. Hilton, "Wavelet and wavelet packet compression of electrocardiograms", IEEE Trans Biomed Eng 1997; 44(5):394–402. 15. A. Djohan, T. Q.Nguyen, W. J. Tompkins, "ECG compression using discrete symmetric wavelet transform", IEEE international conference on engineering in medicine and biology society, Montreal, Que, Canada, vol. 1. p. 167–168. 16. Z. Lu, D.Y. Kim, W.A.Pearlman, "Wavelet compression of ECG signals by the set partitioning in hierarchical trees (SPIHT) algorithm", IEEE Trans Biomed. Eng. 1000; 47(7), pp-849–856. 17. A.A. Shrouf, M.A. Zahhad, S.M. Ahmed, "A novel compression algorithm for electrocardiogram signals based on the linear prediction of the wavelet coefficients". Digital Signal Process 2003, 13, pp-604–22. 18. C.M.D. Rodrigo, M.M. Fabrizia, V.B. Leonardo, "Near-lossless compression of ECG signals using perceptual masks in the DCT domain", CLAIB 2007, IFMBE Proceedings, vol.18, Margarita Island, Venezuela, 2007, pp. 229–231. 19. C.M. Fira, L. Goras,"An ECG signals compression method and its validation using NNs", IEEE Trans Biomed Eng 55 (4) (2008), pp-1319 1326.	**783-788**
165.	**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.	**789-795**
166.	**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	**796-798**

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.

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

Paper Title: **Capacitive Micromachined Ultrasound 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 over the current bulk piezoelectric ultrasound 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 ultrasound transducer (CMUT), polyvinylidene fluoride (PVDF), ultrasound imaging.

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168.

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

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much more similar as to be expected.

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

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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 acts 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 skews, master, slave, wireless networks.

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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 soul were carried out. The other control variables such as temperature, humidity,

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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.

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Authors:	**Suvarna Latha 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 at28 days. From these study analytical equations for the stress– strain behaviour of hardened concrete has been arrived and 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.

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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

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frequently. This paper deals with the design, fabrication and testing of an adapter assembly by which we are able to increase the utility of the side door intrusion test facility by using it to conduct the tyre strength test. This project was conducted at the Homologation lab at The Automotive Research Association of India (ARAI), Pune. The ARAI is a Research Institute of the Automotive Industry with the Ministry of Heavy Industries & Public Enterprises, Government of India.

Keywords: Adaptor, Automotive Certification, Plunger Test, Side-door Intrusion test, Tyre strength test.

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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.

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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.

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Authors: **Sandeep Kumar, Manish Rai, Raj Kumar, Jayanta Ghosh**

Paper Title: **Analysis and Design of Capacitive Coupled Wideband Microstrip Antenna in C and X band**

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.

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

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176.

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

Paper Title: **Operation to Reduce Rejection in Cylinder Liners Manufacturing**

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.

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

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Authors: **M. Varun Kumar, B. Ashiwini Kumar**

Paper Title: **Model Analysis of Axially Symmetric Linear Rotating Structures**

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

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ANSYS.

Keywords: Vibrations, Bearings, gyroscopic effect, Campbell diagram

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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**

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

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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

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Authors:	**G. Lokheshwara Guptha, 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

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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.

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Authors: **Akhilesh Kumar, Ritesh Kumar Mishra**

Paper Title: **Performance Evaluation of MANET Routing Protocol for Varying Number of Nodes**

Abstract: 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 throughput 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

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183.

Authors: **Ila.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 1368x768.we have generated the shapes of coordinate 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,

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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).

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Authors:	**Pratishtha Gupta, G.N Purohit, Sweta Pandey**
Paper Title:	**Traffic Load Computation for Real Time Traffic Signal Control**

Abstract: 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.

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Authors: **Prakash Waghamode, Vilas Gaikwad, Pravin Kamble**

Paper Title: **Malicious Android Applications in market place: How Do We Fix It?**

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

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187.

Authors: **Arvind Kumar Jaiswal, Anil Kumar, Shailendra Kumar Shukla, Saurabh Sharma**

Paper Title: **Designing and Optimization of Hetrojunction Bipolar Transistor**

Abstract: This paper deals with the simulation of Si-Ge HBT structures using SILVACO TCAD with various parameters. HBT structure has been generated through DevEdit and device simulation was carried out using Atlas. Base width and Ge profile are very important parameter for HBT. In view of this, the effect of variation of base width and Ge profile on the parameters like Ic, current gain (β), fT andfmaxhas been studied. Our simulation results show that decreasing base width with graded Ge profile in the base region increases both fTand fmax due to decrease in transit time. Effect of boron out diffusion from base is studied next. In this case, the base profile was considered to be Gaussian in nature. Effect on various parameters and parasitic barrier has been studied when the base dopant profile Δx is varied. The simulation shows that as Δx is increased fT,fmaxis decreased due to parasitic barrier formation on both the junction i.e. base collector and base emitter heterojunction.

Keywords: HBT,SILVACO,Bipolar Transistor

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188.

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.

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Authors: **Jyoti Kaurav, Kaushik Ghosh**

Paper Title: **Secure Data Aggregation for Energy Efficient Wireless Sensor Networks**

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

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Authors: **M. Shanmuga Priya, Divyashree K, Chiranjeeb Goswami, M Lakshmi Prabha, A.K Satheesh 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, Tarmarindus 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, Methly red, and Evans blue. . P. chrysosporium 787 removed 94.8 per cent of acid orange 7 50 µM concentration. In S .commune removed 96.7 per cent 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 per cent 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 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

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191.

Authors: **Vinay Babu Gada, Janakinandan Nookala, Suresh Babu G**

Paper Title: **The Impact of Cutting Conditions on Cutting Forces and Chatter Length for Steel and Aluminum**

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 staring point lengths.

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192.	**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 an 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 penetratingly 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:** 1. Xiaolong Li, Bin Yang Tienyong Zeng "Efficient Reversible Watermarking Based on Adaptive Prediction-error Expansion and pixel selection" IEEE Tans.on image processing, vol.20,No.12,December.2011 2. L.Luo,Z.Chen,M.Chen,X.Zeng and Z. Xiong "Reversible image watermarking using interpolation thechique",IEEE Trans.Inf.Foren-sics Security, vol1.5,No.1,pp.187-193,Mar.2010. 3. Y.Hu.H.K.Lee and J,Li,"DE based reversible data hiding with improved overflow location map",IEEE Trans.Circuits Syst,Video Technol., vol.19, no.2, pp.250-260,Feb.2009. 4. W.Hong, T.S.Chen, and C.W.Shiu, "Reversible data hiding for high quality images using modification of prediction errors",J.Syst.Softw.vol. 82, N0.11, pp.1833-1842,Nov.2009. 5. D.M.Thodi and J.J.Rodriguez,"Expansion embedding techniques for reversible watermarking "IEEE Trans.Image Process., vol.16,No.3.pp.721-730,Mar.2000 6. J.Hwag, J.Kim and J.Choi,"A Reversible watermarking based on histogram shifting",in proc.IWDW,2006.vol.4283,pp.1321-1324. 7. S.K.Lee, Y.H.Suh and Y.S.Ho,"Reversible image authentication based on watermarking," in proc.IEEE ICME,20006,pp.132-1324 8. Nambakhsh, M.S and Ghaamim M.;Dilmaghani, R.S.;Karimi-Farod,S."A Novel Bild Watermarking of ECG Singnals on Medical Images Using EZW Algorithm" Engineering in Medicine and BiologySociety, 2006.EMBS'06,28thAnnual International Conference of IEEE. 9. A.M.Alattar,"Reversible watermak using the difference expansion of a generalized integer transform",IEEE Trans.Image Process.,vol.13,no.8,pp.1147-1156,aug.2004 10. Jerome M.Shapiro "Embedded image coding using Zerootrees of wavelet coeffiecents",IEEE Trans. Signal Process.vol.14.No.20.Dec 1993 11. Shrikant S.Khaire and Dr.Sanjay L.Nalbalwar "Review: Steganography-Bit Plane Complexity 12. Segmentation (BPCS) Technique" Shrikant Khaire et.al/International Journal of Engineering Science and Technology vol.2(9),2010,4860-4868. 13. J.Tain, "Reversible data embedding using a difference expansion" IEEE Trans.Circuits Syst. Video Technol.,vol.13,no.8,pp.890-896, Aug.2003. 14. W.Hong,T.S Chen, and C.W.Shiu,"Reversible data hiding for high quality images using modification of prediction errors",J.Syst.Softw.,vol82,no.11,pp.1833-1842,Nov.2009		**925-929**
193.	**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:** 1. Fawaz Alsaade, "Fast and accurate template matching algorithm based on image pyramid and sum of absolute difference similarity measure". Research Journal of information Technology Vol. 4, No.4, pp.204-211, 2012. 2. Shou-Der Wei and Shang-Hong Lai," Fast template matching algorithm based on normalized cross correlation with adaptive multilevel winner update", IEEE Transactions on Image Processing, Vol. 17, No. 11, Nov. 2008. 3. Jignesh N Sarvaiya, Dr. Suprava Patnaik, and Salman Bombaywala," Image Registration by Template Matching using Normalized Cross Correlation", International Conference on Advances Computing, Control, Telecommunication Technologies, pp. 819-822, 2009. 4. Minoru Mori and Kunio Kashino, "Fast Template Matching based on Normalized Cross Correlation using Adaptive Block Partitioning and Initial Threshold Estimation" IEEE International Symposium on Multimedia, pp. 196-203, 2010. 5. Satoh, Shin'ichi ; Katayama, Norio "An efficient evolution and implementation of robust face sequence matching", International		**930-934**

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