International Journal of Engineering and Advanced Technology

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Authors: Rajesh Kumar, Rituraj Chandrakar

Paper Title: Overview of Green Supply Chain Management: Operation and Environmental Impact at Different Stages of the Supply Chain

Abstract: This paper emphasizes upon the application of Supply Chain Management and adding the `Green ` component to it so as to stress upon the need of environment friendly systems. The growing importance of GSCM is driven mainly by the escalating deterioration of environment. The waste and emissions caused by the supply chain have become one of the main sources of serious environmental problems including global warming and acid rain. One of the key aspects to green supply chains is to improve both economic and environmental performance simultaneously throughout the chains by establishing long-term buyer–supplier relationships. Efforts have been made by the authors to study the supply chain of the systems with the focus on its optimization and implementation.

Keywords: Green supply chain management (GSCM), Environmentally Preferable, Environmental Impact, Reverse logistic, Eco-design (ECO), Investment Recovery (IR).

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Authors:	**Ali Akbar Motie Birjandi, Saeed Rahimi Gholami**	
Paper Title:	**Comparison between learning mechanism and pattern presentation techniques in voltage stability assessment**	

Abstract: In this paper we compare learning mechanism and pattern presentation techniques in voltage stability assessment. In this way we use multilayer perceptron and classifiers models for assessing power system voltage stability margin in unstable point. In this paper we consider voltage magnitudes and phase angles as input and voltage stability margin as target of ANNs. Simulation was carrying out on IEEE-14 bus test system and numerical results show that minimum rule in combination gives better results rather than other models. Also be specified that use learning mechanism lead to better results than apply pattern presentation techniques.

Keywords: Artificial Neural Network, Combination of Classifiers,Voltage Stability, Voltage Stability Margin

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Page range for item 2: **7-11**

Authors:	**Pratibhadevi Tapashetti, Ankur Gupta, Chandrashekhar Mithlesh, A.S Umesh**	
Paper Title:	**Design and Simulation of Op Amp Integrator and Its Applications**	

Abstract: The Integrator is an essential circuit component in any analog circuit that performs mathematical operation of Integration mainly in solving differential equation. The integrator also used as a storage element in analog computing. It is used in that type of circuits where initial condition is of great importance which affects the future calculations. The present study purposes to find the basic use of integrator circuits in engineering design & simulation using the simulation software Edvin Xp. In this paper we have concentrated on the history of opamp development, the basics of opamp, integrator design and simulation and lastly few of the major integrator applications are discussed.

Keywords: Operational amplifier (OPAMP), Analog to digital converter (ADC), I/O(input output)

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Page range for item 3: **12-19**

Authors:	**Sita Gupta, Vinod Todwal**	
Paper Title:	**Web Data Mining & Applications**	

Abstract: With an enormous amount of data stored in databases and data warehouses, it is increasingly important to develop powerful tools for analysis of such data and mining interesting knowledge from it. Data mining is a process of inferring knowledge from such huge data. The main problem related to the retrieval of information from the World Wide Web is the enormous number of unstructured documents and resources, i.e., the difficulty of locating and tracking appropriate sources. In this article, a survey of the research in the area of web mining and suggest web mining categories and techniques. Furthermore, a presentation of a web mining environment generator

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that allows naive users to generate a web mining environment specific to a given domain by providing a set of specifications.

Application of data mining techniques to the World Wide Web, referred to as Web mining, has been the focus of several recent research projects and papers. However, there is no established vocabulary, leading to confusion when comparing research efforts. The term Web mining has been used in two distinct ways. The first, called Web content mining in this paper, is the process of information discovery from sources across the World Wide Web.The second, called Web usage mining,is the process of mining for user browsing and access patterns. In this paper we define Web mining and present an overview of the various research is sues, techniques, and development efforts. We briefly describe WEBMINER, a system for Web usage mining, and conclude this paper by listing research issues.

Keywords: Data, Mining, Warehouse Web

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Authors:	K. M. Pandey, Upendra Kumar, Subho Deb Verma
Paper Title:	CFD Analysis of Flow Field inside the Expansion Chamber of Internal Combustion Engines

Abstract: Noise is a disturbance to the human environment that is escalating at such a high rate that it will become a major threat to the quality of human lives. There are numerous effects on the human environment due to the increase in noise pollution. In the present Paper, the causes and effects of noise pollution is presented. for 15m/s considering four different models of silencer through which exhaust gas passes at different velocities in atmosphere. The analysis carried with commercial package fluent software. The design of these models was carried out using Gambit. Flow is observed at different conditions. Different parameters like turbulent kinetic energy, turbulent viscosity, turbulent dissipation rate, velocity magnitude, static pressure and dynamic pressure were analyzed. . It is seen that near the source the noise is more, it decreases with increases the distance between source and observer So it is observed that muffler is also one of the major factors for noise reduction.

Keywords: Muffler, Silencer, Exhaust Pipes, Velocity, Noise pollution.

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Authors:	P Bose, K M Pandey
Paper Title:	Analysis of Thrust Coefficient in a Rocket Motor

Abstract: In motors of artillery rockets and anti tank missiles solid propellant is used to provide high thrusts for short period of time. On fixing of propellant composition and its grain geometry nozzle design becomes the controlling factors for optimum performance of rocket. Thrust coefficient is one of the most important parameters for its performance. It is the thrust per unit chamber pressure and throat area. It is a dimensionless multiplication factor and signifies the degree to which the thrust is amplified by the nozzle. It is a function of gas property i.e. specific heat ratio of the gas and other thermodynamic parameters. It is also a function of nozzle geometry i.e. expansion ratio and pressure ratio. It is highest when the nozzle expands the gases exactly down to ambient pressure at the exit plane. However, thrust coefficient is independent of chamber pressure. In this paper thrust coefficient is analysed as a function of expansion ratio at three different values of specific heat ratio. It is observed that flow separation typically occurs when the ratio of exit pressure to atmospheric pressure is less than 0.25 to 0.35 and thus kept less than 0.40. Thrust coefficient losses are due to divergence of the flow at the nozzle exit, skin friction losses, two-phase flow and also propellant performance. These are minimized by developing proper propellant and designing suitable nozzle.

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However, the losses cannot be brought down to zero. The paper analyses the various parameters that affect the thrust coefficient and brought out methods to improve the performance of solid rocket motor.

Keywords: Flow separation, Nozzle throat area, Propellant, Rocket motor, Thrust coefficient.

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Authors:	**Vinay Kumar Nassa, Sri Krishan Yadav**	
Paper Title:	**Project Management Efficiency –A Fuzzy Logic Approach**	

7.

Abstract: Fuzzy logic is a relatively new technique for solving engineering control problems. This technique can be easily used to implement systems ranging from simple, small or even embedded up to large. The objective of this paper is to present an approach that utilizes a fuzzy decision making system (FDMS) to quantify the Project Management Efficiency (PME). The algorithm developed in this paper is based upon fuzzy logic, giving it the ability to solve complex problems plagued with uncertainty and vagueness. A fuzzy decision making system is designed and implemented using the MATLAB Fuzzy Logic tool box for the evaluation of the PME. This algorithm once refined to each area under the industry of software development can be used for subsequent projects, saving large percentages of time, money, and effort, without sacrificing quality

Keywords: Project management efficiency; Fuzzy decision making system; Fuzzy sets; Project time delay; Project time delay gradient.

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Authors:	**Trinadh Balaga, B.Bhaskar Rao**	
Paper Title:	**1D Discrete Cosine Transform Using Distributed Algorithm**	

8.

Abstract: Discrete Cosine Transform（DCT）, which is an important component of image and video compression, is adopted in various standardized coding schemes, such as JPEG, As the ongoing demand increases, for better compression performance of the latest video coding standard, the H.264/AVC (Advanced Video Coding) is formulated .The H.264/AVC is also known as MPEG-4 .An advantage of the H.264/AVC is the simplicity of its transform. Distributed Arithmetic (DA) is an effective method for computing inner products when one of the input vectors is fixed. It uses pre computed look-up tables and accumulators instead of multipliers for calculating inner products and has been widely used in many DSP applications such as DFT, DCT, convolution, and digital filters. In particular, there has been great interest in implementing DCT with parallel distributed arithmetic and in reducing the ROM size required in the implementations since the DA-based DCT architectures are known to have very regular structures suitable for VLSI implementations. Low hardware circuit cost as well as low power consumption. Low hardware cost is achieved by exploiting redundant computational units and a technique to reduce error introduced by sign extension is also presented. The results indicate the considerable power as well as hardware savings in presented architecture.

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Keywords: Distributed Arithmetic (DA), JPEG, Discrete Cosine Transform (DCT), MPEG.

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Authors:	**Arvind Vishnubhatla**	
Paper Title:	**Hand Held Unit for Imaging**	

Abstract: We implement Terahertz imaging arrays to get synthetic aperture imaging data.As the data rates are extremely high we have designed a custom processor for an unmanned vehicle taking due care of weight and DC power restrictions.

Keywords: We implement Terahertz imaging arrays to get synthetic aperture imaging data.

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Authors:	**Anshul Singh, Devesh Narayan**	
Paper Title:	**A Survey on Hidden Markov Model for Credit Card Fraud Detection**	

Abstract: Credit card frauds are increasing day by day regardless of the various techniques developed for its detection. Fraudsters are so expert that they engender new ways for committing fraudulent transactions each day which demands constant innovation for its detection techniques as well. Many techniques based on Artificial Intelligence, Data mining, Fuzzy logic, Machine learning, Sequence Alignment, decision tree, neural network, logistic regression, naïve Bayesian, Bayesian network, metalearning, Genetic Programming etc., has evolved in detecting various credit card fraudulent transactions. A steady indulgent on all these approaches will positively lead to an efficient credit card fraud detection system. This paper presents a survey of various techniques used in credit card fraud detection mechanisms and Hidden Markov Model (HMM) in detail. HMM categorizes card holder's profile as low, medium and high spending based on their spending behavior in terms of amount. A set of probabilities for amount of transaction is being assigned to each cardholder. Amount of each incoming transaction is then matched with card owner's category, if it justifies a predefined threshold value then the transaction is decided to be legitimate else declared as fraudulent.

Keywords: Credit card, fraud detection, Hidden Markov Model, online shopping

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Authors:	**Rashmi Mishra, Baibaswata Mohapatra**	
Paper Title:	**Performance Evaluation of OFDM System**	

Abstract: Orthogonal frequency division multiplexing (OFDM) is a special segment of multi carrier transmission system, which has found its application in numerous wire-less and wired systems. In an OFDM scheme, a large number of orthogonal, overlapping, narrow band sub-channels or subcarriers, transmitted in parallel, divide the available transmission bandwidth. The separation of the subcarriers is theoretically minimal, so that there is a very compact spectral utilization. This paper presents the overview and then the performance evaluation results of an OFDM system, in terms of BER. The results presented in the paper are based on computer simulations performed using MATLAB; a highly efficient tool for different applications.

Keywords: OFDM, BER

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Authors:	**Sapna Sharma, Gajendra Singh Chandel**	
Paper Title:	**Implementation of P2P network for search algorithm**	

Abstract: A peer-to-peer, commonly abbreviated to P2P, is any distributed network architecture composed of participants that make a portion of their resources (such as processing power, disk storage or network bandwidth) directly available to other network participants, without the need for central coordination instances (such as servers or stable hosts). Peers are both suppliers and consumers of resources, in contrast to the traditional client-server model where only servers supply, and clients consume.
In a P2P network which employs the use of a purely decentralized design, and where everyone participates equally in the network as both a client and a server. Machines were assumed to be always switched on, always connected and assigned permanent IP.
In this paper, we propose the Modified Search algorithm to improve the search efficiency of unstructured P2P networks by giving higher querying priority to peers with high querying reply capabilities which is based on bandwidth, locality, reliability and quantity of available data. We categorized all peers based on their performance in the network. Our experiment shows that the Modified Search algorithm can improve the search efficiency without resorting to index operations. Our simulation shows that the Modified Search algorithm increases the efficiency of

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network from 20 to 89.28 percent.

Keywords: Unstructured P2P Network, Search Algorithm, Opnet Simulator

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Authors:	**R. M. Potdar, Anup Mishra, Vinni Sharma, Tripti Roy**
Paper Title:	**Performance Evaluation of Different Adaptive Filtering Algorithms for Reduction of Heart Sound from Lung Sound**

Abstract: Auscultation is the most important and effective clinical technique for evaluating a patient's respiratory function. Auscultation of the chest is a diagnostic method used by physicians, owing to its simplicity and noninvasiveness. Hence, there is interest in lung sound analysis using time and frequency domain techniques to increase its usefulness in diagnosis. This proposed work is focused on the application of adaptive filtering technique to separate heart sound signal from lung sound signal. Lung sound signal measurements are taken to aid in the diagnosis of various diseases. The aim of this proposed work is to filtering heart sounds from lung sounds. In medicine this separation is made by doctors individually. This may lead to some errors in listening the lung sounds. The method we will use during this separation process is adaptive filtering. We will use Matlab basically while doing mathematical calculations and filtering methods.

Keywords: Auscultation, lung sound, heart sound, adaptive filtering, different adaptive algorithms.

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Authors:	**Rubeena Mirza, Vinti Nanda**

Paper Title:	Paper Currency Verification System Based on Characteristic Extraction Using Image Processing

Abstract: Over the past few years, as a result of the great technological advances in color printing, duplicating and scanning, counterfeiting problems have become more and more serious. In the past, only the printing house has the ability to make counterfeit paper currency, but today it is possible for any person to print counterfeit bank notes simply by using a computer and a laser printer at house. Therefore the issue of efficiently distinguishing counterfeit banknotes from genuine ones via automatic machines has become more and more important. Counterfeit notes are a problem of almost every country but India has been hit really hard and has become a very acute problem. There is a need to design a system that is helpful in recognition of paper currency notes with fast speed and in less time. This proposed system describes an approach for verification of Indian currency banknotes. The currency will be verified by using image processing techniques. The approach consists of a number of components including image processing, edge detection, image segmentation, characteristic extraction, comparing images. The image processing approach is discussed with MATLAB to detect the features of paper currency. Image processing involves changing the nature of an image in order to improve its pictorial information for human interpretation. The image processing software is a collection of functions that extends the capability of the MATLAB numeric computing environment. The result will be whether currency is genuine or counterfeit.

Keywords: Characteristic Extraction, Counterfeit Detection, Image Processing, Paper Currency Verification.

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Authors:	**Komal Shah, Amit Thakkar, Amit Ganatra**
Paper Title:	**A Study on Association Rule Hiding Approaches**

15.

Abstract: In recent years, data mining is a popular analysis tool to extract knowledge from collection of large amount of data. One of the great challenges of data mining is finding hidden patterns without revealing sensitive information. Privacy preservation data mining (PPDM) is answer to such challenges. It is a major research area for protecting sensitive data or knowledge while data mining techniques can still be applied efficiently. Association rule hiding is one of the techniques of PPDM to protect the association rules generated by association rule mining. In this paper, we provide a survey of association rule hiding methods for privacy preservation. Various algorithms have been designed for it in recent years. In this paper, we summarize them and survey current existing techniques for association rule hiding.

Keywords: Association Rule Hiding, Data Mining, Privacy Preservation Data Mining.

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Authors:	Shraddha Modi, Amit Thakkar, Amit Ganatra
Paper Title:	A Survey on Approaches of Multirelational Classification Based On Relational Database

Abstract: Classification is an important task in data mining and machine learning, in which a model is generated based on training dataset and that model is used to predict class label of unknown dataset. Today most real-world data are stored in relational databases. So to classify objects in one relation, other relations provide crucial information. Relational databases are the popular format for structured data which consist of tables connected via relations (primary key/ foreign key). So relational databases are simply too complex to analyse with a propositional algorithm of data mining. To classify data from relational database need of multi relational classification arise which is used to analyze relational database and used to predict behaviour and unknown pattern automatically which include credit card fraud detection, disease diagnosis system, financial decision making system, information extraction and face recognition applications. This paper presents survey of different approaches to classify data from multiple relations, which includes Flattening based approach, Upgrading approach and Multiple view based approach.

Keywords: Inductive logic programming, Multi relational classification, Multiple view, Multi-view, Relational database, Selection graph, Tuple id propagation.

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16.

17.	**Authors:**	**B. Muthukumar, S. Ravi**	
	Paper Title:	**Face Recognition using Random Projection with Neural Network**	
	Abstract: In the domain of face recognition, many methods are used to reduce the dimensionality of the subspace in which faces are presented. Recently, Random Projection (RP) has emerged as a powerful method for dimensionality reduction. It represents a computationally simple and efficient method that preserves the structure of the data without introducing very significant distortion. Our focus in this paper is to investigate the dimensionality reduction offered by RP and perform an artificial intelligent system for face recognition using back propagation neural network. Experiments show that projecting the data onto a random lower-dimensional subspace yields results and give an acceptable face recognition rate. **Keywords:** Dimensionality reduction; Face Recognition; Sparse Random Projection; neural network. **References:** 1. D. Fradkin and D. Madigan, "Experiments with random projection for machine learning," in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, 2003. 2. Aditya Krishna Menon, "Random projections and applications to dimensionality reduction", Phd thesis, School of Information Technologies The University of Sydney Australia, 2007. 3. Dimitris Achlioptas, "Database-friendly random projections:Johnson- Lindenstrauss with binary coins", Journal of Computer and System Sciences, 2003. 4. Navin Goel, George Bebis, and Ara Nfian. "Face recognition experiments with random projection". In Proc. of SPIE, 2005. 5. Ella Bingham and Heikki Mannila. "Random projection in dimensionality reduction: Applications to image and text data". In Proc. of KDD, San Francisco, CA, 2001. 6. M. Kurimo, "Indexing audio documents by using latent semantic analysis and SOM", In E. Oja and S. Kaski, editors, Kohonen Maps, Elsevier, 1999. 7. I. Mario, M. Chacon, State of the Art in Face Recognition, In-Teh, 2009. 8. Fabrizia M. de S. Matos, Leonardo V. Batista, JanKees v. d. Poel, "Face recognition using DCT coefficients selection", Proceedings of the 2008 ACM symposium on Applied computing, 2008 9. M. Turk and A. Pentland, "Eigenfaces for recognition," Journal of Cognitive Neuroscience 3, 1991, pp. 71–86. 10. L. Chen, H. Liao, M. Ko, J. Lin and G. Yu, "A new LDA-based face recognition system which can solve the small sample size problem", Pattern Recognition, 2000, pp. 1713–1726. 11. S. Dasgupta and A. Gupta, "An elementary proof of the Johnson-Lindenstrauss lemma," in UTechnical Report TR-99-006, International Computer Science Institute, Berkeley, CA, 1999. 12. Rosa Arriaga and Santosh Vempala. "An algorithmic theory of learning: Robust concepts and random projection", In Proc. of FOCS, 1999.	**82-86**
18.	**Authors:**	**B. Muthukumar, S. Ravi**	
	Paper Title:	**Tracking the human motion in real time using Star Skeleton Model**	
	Abstract: Human motion analysis is receiving increasing attention from researchers. This interest is motivated by wide spectrum of applications. In this paper, a process is described for detecting moving targets and extracting boundaries. From these, "star" skeleton is produced. The star skeletonization is suitable for detecting and analyzing human motion in real time. Also the method does not require great deal of image-based information to work efficiently. Extremal points are extracted in star skeleton like head, hands and legs, their tracking described based on an n*n block of DCTs coefficient. Then we correct the false tracked extremal points such as occluded extremal points. **Keywords:** Human Detection, Image Processing, Occlusion Removal **References:** 1. Fujiyoshi, A. J.Lipton and T. Kanade "Real-time Human Motion Analysis by Image Skeletonization" IEICE TRANS, 2004. 2. N. Roudsarabi. and A. R. Behrad, "3D Human Motion Reconstruction Using DCT Matrix Descriptor", ICISP 2008, Vol. LNCS 5099, pp: 386- 395, 2008. 3. Wren, A. Azarbayejani, T. Darrell, and A. Paul Pentland "Pfinder: Real- Time Tracking of the Human Body" IEEE Transactions on Pattern Analysis and Machine Intelligence, 1997. 4. Nadiya Roudsarabi, Ali Reza Behrad, "Solving Occlusion Problem in 3D Human Motion Reconstruction" 2008 International Symposium on Telecommunication. 5. Weiming Hu, Tieniu Tan, "A Survey on Visual Surveillance of Object Motion and Behaviors" IEEE transactions on systems, man, and cybernetics—part c: applications and reviews, vol. 34, no. 3, august 2004 6. B. Jahne "Digital Image Processing, Concepts, Algorithms and Scientific Applications" 4th edition, 1997.	**87-91**
19.	**Authors:**	**Prerana Gupta, Amit Thakkar, Amit Ganatra**	
	Paper Title:	**Comprehensive study on techniques of Incremental learning with decision trees for streamed data**	
	Abstract: Incremental learning is an approach to deal with the classification task when datasets are too large or when new examples can arrive at any time. Data streams are inherently time-varying and exhibit various types of dynamics. There are some problems in data stream mining like class imbalance, concept drift, arrival of a novel class, etc. This paper focuses on the problem of concept drift. The presence of concept drift in the data significantly influences the accuracy of the learner, thus efficient handling of non-stationary environment is an important problem. Detecting changes of concept definitions in data streams and adapting classifiers to them is studied in this paper. The classifying technique studied is decision trees classification for streamed data, As decision trees are more efficient and easily interpretable. The comparative studies of some algorithms FIMT-DD, ORTO, FIOT, OVA-classifier, i+learning, UFFT, SCRIPT and HOT are shown in this paper **Keywords:** concept drift, Data stream mining, Incremental learning, Hoeffding trees **References:**	**92-97**

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Authors:	H. B. Kekre , Kavita Sonawane
Paper Title:	Feature Extraction in the form of Statistical Moments Extracted to Bins formed using Partitioned Equalized Histogram for CBIR

Abstract: This Paper introduces a new method of feature extraction in terms of statistical moments Mean, Standard deviation, Skewness and Kurtosis into three different bin sizes 8, 27 and 64 based on partitioned equalized histogram of the R, G, and B planes for content based image retrieval. Various feature vector databases are prepared and tested in this work to test response of the system through all small possibilities used in the feature extraction process based on invariant features. The system is designed to work with 2000 BMP images which include 20 different classes where each class has 100 images. Comparison process is core part of all CBIR systems; this system makes use of two similarity measures named Euclidean and Absolute distance for this purpose. System performance is evaluated using PRCP in addition to that LIRS, LSRR along with the newly introduced parameter 'LONEGST String' in the response of the given query for all the algorithms. Further the results obtained are refined and combined using the three criteria 1, 2 and 3.

Keywords: Absolute distance, Equalized Histogram, Euclidean distance, LISR, LSRR, 'Longest String', PRCP.

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Authors:	**Purvi Prajapati, Amit Thakkar, Amit Ganatra**	
Paper Title:	**A Comprehensive and Comparative Study on Hierarchical Multi Label Classification**	

21.

Abstract: Multi label classification is variation of single label classification where each instance is associated with more than one class labels. Multi label classification is used in many applications like text classification, gene functionality, image processing etc. Hierarchical multi-label classification problems combine the characteristics of both hierarchical and multi-label classification problems. This paper introduced k binary classifier and one classifier approaches of hierarchical multi label classification. These approaches are explained with two algorithms to solve hierarchical multi label classification problems. One is the C4.5H algorithm (extension of multi label decision tree) and second is Predictive Clustering Tree (PCT) algorithm. From theoretical and experimental study on yeast data set shows that PCT algorithm is the best option for hierarchical multi label classification. PCT algorithm is implemented on Clus. This paper introduced three approaches of Clus: Single Classification (SC), Hierarchical Single Label Classification (HSC) and Hierarchical Multi label Classification (HMC). From theoretical and experimental study, HMC performs better compare to remaining two approaches.

Keywords: Classification, Decision Tree, Hierarchical Classification, Multi Label Classification, Predictive clustering tree.

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Authors:	**A. Anusha, Ch.Veera Babu**	
Paper Title:	**EFFICIENT BANDWIDTH IN MOBILE AD HOC NETWORKS USING GENETIC ALGORITHAM**	

22.

Abstract: Most of the existing routing protocols are designed primarily to carry best effort traffic and only concerned with shortest path routing. Little attention is paid to the issues related to the quality of services (QoS) requirement of a route. In this paper, we will consider the problem of searching for a route satisfying the bandwidth requirement in a mobile ad-hoc network.
Unlike in a wired network, where the available bandwidth of a route is simply the minimum bandwidth of the links along the route, the calculation of the available bandwidth of a route in a mobile ad-hoc network has been proved to be complete. The Genetic Algorithm (GA) has successfully been applied to many famous Application problems in communication networks, such as the multicast routing problem. Recently, many researchers have attempted to adopt

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genetic algorithms to solve various problems existing in mobile ad hoc networks. This Genetic Algorithm executed in a centralized manner for the bandwidth calculation problem in the TDMA channel model.
Extensive computer simulations are performed to compare the performance of our proposed GA method and that of other existing heuristic algorithms. Simulation results verify that our GA can produce larger bandwidth utilization than others.

Keywords: The Genetic Algorithm (GA) has successfully been applied to many famous

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Authors:	Tonye K. Jack
Paper Title:	A Method for the Stress and Fatigue Analysis of Bolted Joint Connections: together with Programmed Solution

Abstract: Often the weakest link in integral engineering equipment, bolted joint connections require proper attention and detailed analysis at the design stage for a fail safe operation in service. The analysis is often lengthy with several variables under consideration. A step-by-step guide, together with all required equations for evaluating a typical bolted joint connection is given. A computer programmed solution in Microsoft Excel TM for such analysis is shown through a worked example.

Keywords: Bolt and nut connection, bolted joint analysis, bolt fatigue, joint stresses, bolt preload

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Authors:	Ming Cai, Jing Cai, Shouning Qu
Paper Title:	The Design and Implementation of KDD System for Industrial Flow Object

Abstract: KDD is an important research and application area. This paper is aimed at the application of flow object's association rules extraction and object modeling in the cement industry. We adopt the improved Apriori algorithm and the flexible neural tree model of the structure optimization algorithm, designing and implementing the KDD system for industrial flow object by J2EE. The whole system is mainly divided into two functions: one function module is association rules extraction, the other one is object modeling, and the original data were collected from the decomposing furnace production link, which is one of the most important processes of the cement industry.

24.

Keywords: Association Rule, Flow Object, J2EE, KDD, Object Modeling

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25.	**Authors:**	**Dhaval N Tailor, Bhavesh Bhalja, Vijay Makawana**
	Paper Title:	**Roll of PSS and SVC for improving the Transient Stability of Power System**

Abstract: This paper focus on the significant of PSS and SVC(static var compensator) to improve the transient stability of power system in various abnormal condition. This paper shows the simulation result of model for different fault condition with PSS and without PSS and show how the SVC help to improve the stability when PSS is fail to maintain the stability.

Keywords: PSS, static var compensator, simulation model, their result with PSS and without PSS, model with SVC.

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26.	**Authors:**	**Purvi Rekh, Amit Thakkar, Amit Ganatra**
	Paper Title:	**A Survey and Comparative analysis of Expectation Maximization based Semi-Supervised Text Classification**

Abstract: Semi-supervised learning (SSL) based on Naïve Bayesian (NB) and Expectation Maximization (EM) combines small limited numbers of labeled data with a large amount of unlabeled data to help train classifier and increase classification accuracy. The iterative process in the standard EM-based semi-supervised learning includes two steps: firstly, use the classifier constructed in previous iteration to classify all unlabeled samples; then, train a new classifier based on the reconstructed training set, which is composed of labeled samples and all unlabeled samples. There are limitations of standard EM-based semi-supervised learning like, problem in the process of reconstructing the training set - some unlabeled samples are misclassified by the current classifier, problem of over-training, problem of as the number of documents increases, the running time increases significantly. With the aim of improving the efficiency problem of the standard EM algorithm, many authors have proposed approaches. These approaches are described in this paper, also comparison of these approaches is done and limitations of these methods are described. Also some research challenges are given in this area.

Keywords: Expectation Maximization, Naïve Bayesian, Semi-supervised learning, Text Classification.

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	Authors:	Asha Gowda Karegowda , M.A. Jayaram, A.S. Manjunath
	Paper Title:	Cascading K-means Clustering and K-Nearest Neighbor Classifier for Categorization of Diabetic Patients

Abstract: Medical Data mining is the process of extracting hidden patterns from medical data. This paper presents the development of a hybrid model for classifying Pima Indian diabetic database (PIDD). The model consists of three stages. In the first stage, K-means clustering is used to identify and eliminate incorrectly classified instances. In the second stage Genetic algorithm (GA) and Correlation based feature selection (CFS) is used in a cascaded fashion for relevant feature extraction, where GA rendered global search of attributes with fitness evaluation effected by CFS. Finally in the third stage a fine tuned classification is done using K-nearest neighbor (KNN) by taking the correctly clustered instance of first stage and with feature subset identified in the second stage as inputs for the KNN. Experimental results signify the cascaded K-means clustering and KNN along with feature subset identified GA_CFS has enhanced classification accuracy of KNN. The proposed model obtained the classification accuracy of 96.68% for diabetic dataset.

Keywords: Genetic algorithm, Correlation based feature selection ,K-nearest neighbor, K-means clustering , Pima Indian Diabetics.

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	Authors:	Ritu Pareek, P.K. Ghosh
	Paper Title:	Discrete Cosine Transformation based Image Watermarking for Authentication and Copyright Protection

Abstract: In this paper, a digital image watermarking algorithm based on DCT transformation is proposed. The imperceptibility and robustness is provided against different attacks. A binary image is embedded in the host image by two different techniques based on DCT. One is middle band coefficient exchange technique, it utilizes comparison of two middle-band DCT coefficients to encode a single bit into a DCT block. Coefficient locations are selected based on the recommended JPEG quantization table. Second is based on PN sequence, PN sequences of the watermark bits are embedded in the coefficients of the corresponding DCT middle frequencies. In extraction stages, the watermarked image, which may be attacked, is processed the same way as the embedding process. Finally, correlation and PSNR values are calculated to determine the level of accuracy and imperceptibility. Experimental results show that the proposed method improved the performance of watermarking algorithm.

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Keywords: Discrete Cosine Transform, Digital watermarking, PN Sequence, Middle band frequency, Copyright protection, CDMA.

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Authors:	**Swati Anand Dwivedi**	
Paper Title:	**Low Power CMOS Design of an SRAM Cell with Sense Amplifier**	

29.

Abstract: Power dissipation and switching delay are the focusing point in any circuit used in memory. It is required to design a circuit having low power dissipation and high switching speed in order to meet the current requirements. Reduction in power can be done by several methods. Here low power current sensing scheme for CMOS SRAM is presented in this paper. Large bit-line capacitance is one of the main bottlenecks to the performance of on-chip caches. New sense amplifier techniques need to explicitly address this challenge. The current sense amplifier senses the cell current directly and shows a speed improvement of 17-20% for 128 memory cells as compared to the conventional voltage mode sense amplifier

Keywords: CMOS, SRAM, Sense Amplifier, Swithching delay, VLSI

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Authors:	**Anil Kumar Vajja, B.Bhaskar Rao**	
Paper Title:	**Design and analysis of 32-bit CPU based on MIPS**	

30.

Abstract: In this paper, we have studied Microcomputer with out interlocked pipeline stages instruction format instruction data path decoder module function and design theory basend on RISC CPUT instruction set. We have also designed instruction fetch(IF) module of 32-bit CPU based on RISC CPU instruction set. Function of IF module mainly includes fetch instruction and latch module address arithmetic module check validity of instruction module synchronous control module. Function of IF modules are implemented by pipeline and simulated successfully on Xilinx Spartan 3E fpga device..

Keywords: MIPS, Data Flow, Data Path, Pipeline

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Authors:	**Reena Dadhich, GeetikaNarang, D.M.Yadav**	
Paper Title:	**Analysis and Literature Review of IEEE 802.16e (Mobile WiMAX) Security**	

31.

Abstract: IEEE802.16e or Mobile WiMAX, where WiMAX stands on Worldwide Interoperability for Microwave Access, is one of the latest technologies in the Wire-Less World. The main goal of WiMAX is to deliver wireless communications with quality of service in a secured environment. IEEE 802.16e provides the ability for users to use the Broadband Wireless Communication even when the user is moving. Its Mobility feature makes it differ from the previous protocol IEEE 802.16d which was based on Static WiMAX and providedthe Wireless communication at fixed locations.This paper is related to the security issues for IEEE802.16e. Various Threats which occurs at Physical and MAC(Medium Access Control) layer in Mobile WiMAX,what solutions have been proposed in literature related to these threat and what are the shortcomings of these proposed solution. And also at last in proposed work we have proposed solution for one of the main threat called as DoS(Denial of Service)

Keywords: MIMO,Threats,Protocol Architecture, Security Frame Work.

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Authors:	L.Savadamuthu, S.Muthu, S.Gunasekharan
Paper Title:	Study on Equipment Failure and Loss Estimation through Taguchi Method with Risk Management

Abstract: In the highly competitive business environment, manufacturing organizations are seeking new strategies to improve the quality of product reduce product cost, eliminate loss producing events and reduce wastage arising out of manufacturing system, and the cited subjects are aggressively discussed in the present days. Processing equipments are playing important role in achieving the high quality product and productivity in manufacturing organizations. The equipment failures may occur on various accounts during the manufacturing process. The cost of special and sophisticated manufacturing equipment are high and their idle time or down time becomes more expensive. Hence the effective maintenance system is most important for better utilization of resources. A case study has been taken up from preventive maintenance department at M/s Premier Instruments and Control Limited (PRICOL) to develop effective maintenance system. One of the risk management techniques has been used to predict the probability of occurrence and severity of failure events for prioritizing the risk. In identifying the root causes of the failure, the common tools like fault tree analysis is made use of. The losses due to risks are computed using Tauguchi method. Further evaluated and risk control measures like reduction, risk avoidance, risk transfer and risk retention are effected on critical failure events.

Keywords: Failures, FTA, Risk Management,Taguchi Loss Function

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33.	**Authors:** **Ram Kishan Dewangan, Tripti Sharma**	
	Paper Title: **Various Image Segmentation Techniques through clustering and Markovian Model: A Survey**	
	Abstract: Image segmentation is the identification and separation of homogeneous regions in the image, has been the subject of considerable research activity. Many algorithms have been elaborated for gray scale images. This paper is a survey on different clustering techniques to achieve image segmentation. Clustering can be termed here as a grouping of similar images in the database. Clustering is done based on different attributes of an image such as size, color, texture etc. The purpose of clustering is to get meaningful result, effective storage and fast retrieval in various areas. **Keywords:** Clustering, image segmentation, markovian model, relevance feedback **References:** 1. Kearney,Colm and Patton, J. Andrew, "Survey on the image segmentation", Financial Review, 41: 29-48 (2000). 2. H. D. Cheng, X. H. Jiang, Y. Sun, and J. Wang, "Color image segmentation: advances and prospects," Pattern Recognition, 34: 2259–2281, (2001). 3. W. K. Pratt, "Chapter 17: Image Segmentation," in Digital Image Processing, 3rd Edition New York: John Wiley and Sons, 2001, pp. 551-588. 4. R. M. Haralick and L. G. Shapiro, "Image segmentation techniques," Computer. Vision Graphics, Image Processing, vol. 29, pp. 100-132, 1985. 5. R. C. Gonzales and R. E. Woods, "Chapter 10: Image Segmentation," in Digital Image Processing, 2nd ed Upper Saddle River, N.J.: Prentice Hall, 2002, pp. 567-642. 6. K. S. Fu and J. K. Mui, "A survey of image segmentation," Pattern Recognition, vol. 13, pp. 3-16, 1981. 7. N. R. Pal and S. K. Pal, "A review on image segmentation techniques," Pattern Recognition, vol. 26, pp. 1277-1294, 1993. 8. Zhou XS, Huang TS. Relevance feedback in image retrieval: A comprehensive review. Multimedia Syst;8:536-544, 2003. 9. Shirakawa, S., and Nagao, T., "Evolutionary Image Segmentation Based on Multiobjective Clustering".Congress on Evolutionary Computation (CEC '09),Trondheim,Norway,2466-2473,2009. 10. S. Bhattacharya, "A Brief Survey of Color Image Preprocessing and Segmentation Techniques" Journal of Pattern Recognition Research 1 (2011) 120-129. 11. Thrasyvoulos N. Pappas, An Adaptive Clustering Algorithm for Image Segmentation, IEEE Transactions on Signal Processing Vol 40 no 4 April 1992. 12. Hoel Le Capitaine, Carl Fr'elicot, "On selecting an optimal number of clusters for color image segmentation", International Conference on Pattern Recognition,2010. 13. Irani, A.A.Z. Belaton, "A K-means Based Generic Segmentation System" B.Dept. of Comput. Sci., Univ. Sains Malaysia, Nibong Tebal, Malaysia Print ISBN: 978-0-7695-3789-4 On page(s): 300 – 307, 2009. 14. Li Wenchao Zhou Yong Xia Shixiong China Univ. of Min. & Technol., Xuzhou, "A Novel Clustering Algorithm Based on Hierarchical and K-means Clustering" Print ISBN: 978-7-81124-055-9, On page(s): 605, 2009. 15. Huiyu Zhou, Abdul H. Sadka, Mohammad R. Swash, Jawid Azizi and Abubakar S. Umar., "Content Based Image Retrieval and Clustering: A Brief Survey" school of Engineering and Design, Brunel University, Uxbridge, UB8 3PH, UK 16. Huang Min,Sun bo,Xi Jianqing "An Optimized image retrieval method based on Hierarchical clustering and genetic algorithm" forum on Information technology and applications, 978-0-7695-3600-2/09-IEEE,2009. 17. Zhuowen Tu, Song-Chun Zhu, "Image Segmentation by Data Driven Markov Chain Monte Carlo", IEEE Transaction on Pattern Analysis and Machine Intelligence, Vol. 24, No. 5, May 2002, pp 657-673. 18. H. Choi, R.G. Baraniuk, "Multiscale Image Segmentation Using Wavelet-Domain Hidden Markov Models" IEEE Transactions on Image Processing, Vol. 10, No. 9, Sept 2001, pp 1309-1321.	**183-185**

34.	**Authors:** **K. Kalyan raj, E. Swati, Ch. Ravindra**	
	Paper Title: **Voltage Stability of Isolated Self Excited Induction Generator (SEIG) for Variable Speed Applications using Matlab/Simulink**	
	Abstract: Three phase induction generators (SEIG) play a major role in renewable energy like wind energy and hydraulic energy generating systems. In this paper an attempt has been made to give the detailed approach about the analysis and control of SEIG for variable wind speed applications. The main disadvantage of SEIG is poor voltage regulation, here different strategies adopted for voltage regulation are discussed and its scope of research is evolved. **Keywords:** Wind, SEIG, Excitation, Capacitor bank, VSI, Universal bridge **References:** 1. R. C. Bansal, "Three-Phase Self-Excited Induction Generator: An Overview," IEEE Transactions on Energy Conversion, vol. 20, no. 2, pp. 292-299, June 2005. 2. O. Ojo, "Minimum Airgap Flux Linkage Requirement for Self-Excitation in Stand-alone Induction Generators," IEEE Transactions on Energy Conversion, vol. 10, no. 3, pp. 484-492, September 1995. 3. C. Grantham, D. Sutanto, and B. Bismail, "Steady-state and Analysis of Self-Excited Induction Generators," IEE Proceedings on Electric Power Applications, vol. 136, no. 2, pp. 61-68, March 1989. 4. D. Seyoum, C. Grantham, and M. F. Rahman, "The Dynamic Characteristics of an Isolated Self-Excited Induction Generator Driven by a Wind Turbine," IEEE Transactions on Industry Applications, vol. 39, no. 4, pp. 936-944, July/August 2003. 5. G. V. Jayaramaiah and B. G. Fernandes, "Novel Voltage Controller for Stand-alone Induction Generator using PWM-VSI," IEEE Conference on Industry Applications, vol. 1, pp. 204-208, October 2006. 6. T. Ahmed, O. Noro, E. Hiraki, and M. Nakaoka, "Terminal Voltage Regulation Characteristics by Static Var Compensator for a Three-Phase Self-Excited Induction Generator," IEEE Transactions on Industry Applications, vol. 40, no. 4, pp. 978-988, July/August 2005. 7. R. Bonetrt and S. Rajakaruna, "Self-excited induction generator with excellent voltage and frequency control," in Proc. Inst. Electr. Eng. Trans. Distrib., Jan. 1998, vol. 145, no. 1, pp. 33–39. 8. J. K. Chatterjee, P. K. S. Khan, A. Anand, and A. Jindal, "Performance evaluation of an electronic lead-lag VAR compensator and its application in brushless generation," in Proc. IEEE Power Electron. Drive Syst. Conf., May 1997, vol. 1, pp. 59–64. 9. T. Ahmed, E. Hiraki, M. Nakaoka, and O. Noro, "Three-phase self-excited induction generator driven by variable-speed primemover for clean renewable energy utilizations and its terminal voltage regulation characteristics by static VAR compensator," in Proc. IEEE Ind. Appl. Conf., Oct. 2003, vol. 2, pp. 693–700.	**186-190**

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Authors:	Kranti Kumar Jain, Tripti Sharma
Paper Title:	A Comparative Study of Image Scaling Algorithms

Abstract: In this paper, we propose comparative study of image scale retrieval scheme. To the best of our knowledge, there is less comprehensive study on large-scale evaluation. Our empirical results show that our proposed solution is able to scale for hundreds of thousands of images, which is promising for building scale systems. A comparison of various techniques for Image scaling one digital image in to another is made. We will compare various image scaling techniques such as Gaussian scale mixtures in the wavelet domain, Local Wiener estimate, Multi-scale image scaling, Bayes least squares estimator, Thin Plate Spline based image scaling based on different attributes such as Computational Time, Visual Quality of image scaling obtained and Complexity involved in selection of features.

Keywords: Bayes least squares (BLS), Gaussian scale mixture (GSM), Local Wiener estimate, Multi-scale image scaling, Thin Plate Spline,.

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Authors:	Samir Shihada, Mohammed Arafa
Paper Title:	Mechanical Properties of RC Beams with Polypropylene Fibers under High Temperature

Abstract: The objective of this study is to examine the impact of polypropylene fibers on fire resistance of steel reinforced concrete beams. In order to achieve this, concrete mixtures are prepared by using different contents of polypropylene; 0, 0.45 and 0.67 kg/m3. Simply supported beams are heated in an electric furnace to a temperature of 400° for exposure up to 4.5 hours and tested under a static point load on a universal loading frame. Based on the results of this study, it is concluded that the ultimate residual strengths of RC beams containing polypropylene fibers are higher than those without polypropylene fibers. Furthermore, the researchers find out that RC beams which are prepared using 0.67 kg/m3 of polypropylene fibers can significantly promote the residual ultimate strengths during heating.

Keywords: Reinforced Concrete, Polypropylene Fibers, Beams, Fire resistance, Flexural strength.

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Authors:	**H.S. Behera, Brajendra Kumar Swain, Anmol Kumar Parida, Gangadhar Sahu**	
Paper Title:	**A New Proposed Round Robin with Highest Response Ratio Next (RRHRRN) Scheduling Algorithm for Soft Real Time Systems**	

37.

Abstract: The efficiency and performance of multitasking operating systems mainly depend upon the use of CPU scheduling algorithms. Round Robin (RR) performs optimally in timeshared system but it is not suitable for real time system because it gives more number of context switches, larger waiting and turnaround time. In this paper, we have proposed a new Round Robin with Highest Response Ratio Next (RRHRRN) scheduling algorithm, which uses Highest Response Ratio (HRR) criteria for selecting processes from Ready Queue. Our experimental result shows that our proposed algorithm performs better than algorithm in DQRRR [1] in terms of reducing the number of context switches, average waiting time and average turnaround time.

Keywords: Context Switch, Highest Response Ratio Next Algorithm, Real Time Operating System, Response Ratio, Round Robin Algorithm, Scheduling, Turnaround Time, Waiting Time.

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Authors:	**Sweta Ghosh, Priyanka Pingle, Shweta Mendhe, Priyanka Ganvir, Amita Meshram**	
Paper Title:	**Quick Bid Online Server**	

38.

Abstract: This project is basically intended at developing software providing features of auctioning of products and players of various fields."Online Auctioning Server" is a server which is an online auction web site aimed at taking the auction to the finger tips of aspiring bidders there by opening up the doors of the "OPEN Auction House' to a wider cross section of Art Lovers and Antique Collectors. This site also acts as an open forum where buyers and sellers can come together and exchange their products. The site makes sure that the sellers get a genuine price and bidders get a genuine product.

Keywords: virtual auctioning, auction systems, bid security, quality of service (QoS), query certificate management (QCM)

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	Authors: Jitender kumar, Manoj Arora, R. S. Chauhan	
	Paper Title: Performance Analysis of Wdm Pon At 10 GB/S	
39.	**Abstract:** In this paper we have studied the Wave length division multiplexing in Passive Optical network using software OPTSIM. We transmit the signal at 10gb/s in MAN Optical network With long Distance(50 km) also minimize the bit error rate. The main aim of the proposed design is to build a MAN optical network using ten-gigabit Ethernet technique, and what are the necessary requirements to build these networks. As a case study, all states center are connected as Star – Bus topology using layer2 and layer3 optical switches. In addition, in this paper one-gigabit optical transmitter and receiver are designed to work as a node in the network topology. Furthermore, the benefits of using L- Band wavelength for transmission take in consider the linear and non-linear effects on fiber optic is presented. **Keywords:** Wave length division multiplexing, Passive Optical network, OPTSIM **References:** 1. R. Ramaswami et al. "optical Networks, a practical perspective", second edition, Elsevier Science and Technology books, November 2001. 2. G.P. Agrawal et al.,"Fibre-optic communication systems," third edition, John Wiley and Sons, May 2002. 3. Diptish Dey et al.,"Theory towards an all optical WDM slotted ring MAN with support for optical multicasting", Ph.D. Thesis, University of Twenty, June 2003. 4. Chanclou et al., E. 2006"Overview of the optical broad band access evolution: a joint paper of operators of the IST network of excellence" e-Photon/One. IEEE Communications Magazine. Vol. 44, issue 8, pp. 29-35. 5. FTTH Council Europe. 2009. "Fibre to the home continues its global march". Press release. [Online]. 12 February. documents/press release/GlobalRankingPressRelease-FINAL-12.02.09.pdf. [Accessed 2 November2009]. 6. FTTH Council Europe. 2009. Ranking of European FTTH penetration shows Scandinavia and smaller economies still ahead. Press release. [Online]. 8 September. [Accessed 2 November 2009]. 7. Chanclou, et al., , "A hybrid optical network architecture consisting of optical cross connects and Optical burst switches", Faculty Of Informatics, University Of Wollongong, October 2003 [8] Scalable Advanced Ring-based passive Dense Access Network Architecture ,11 November 2009. 8. Slavisa Aleksic et al., "Design Considerations for a High-Speed Metro Network Using All-Optical Packet Processing", Tu A3.3, pp. 82-86, ICTON 2006 9. G. Barish et al., "World Wide Web caching: Trends and techniques". IEEE Communications Magazine, Vol. 1, pp. 178–185, May 2000.	**213-216**
	Authors: Ashish Kumar Dewangan, Majid Ahmed Siddhiqui	
	Paper Title: Iris Recognition - An Efficient Biometric for Human Identification and Verification	
40.	**Abstract:** A biometric system provides automatic identification of an individual based on a unique feature or characteristic possessed by the individual. Iris recognition is regarded as the most reliable and accurate biometric identification system available. Most commercial iris recognition systems use patented algorithms developed by Daugman, and these algorithms are able to produce perfect recognition rates. However, published results have usually been produced under favorable conditions, and there have been no independent trials of the technology. The work presented in this paper involved developing an 'open-source' iris recognition system in order to verify both the uniqueness of the human iris and also its performance as a biometric. For determining the recognition performance of the system one databases of digitized grayscale eye images were used. The iris recognition system consists of an automatic segmentation system that is based on the Hough transform, and is able to localize the circular iris and pupil region, occluding eyelids and eyelashes, and reflections. The extracted iris region was then normalized into a rectangular block with constant dimensions to account for imaging inconsistencies. Finally, the phase data from 1D Log-Gabor filters was extracted and quantized to four levels to encode the unique pattern of the iris into a bit-wise biometric template. The Hamming distance was employed for classification of iris templates, and two templates were found to match if a test of statistical independence was failed. The system performed with perfect recognition on a set of 756 eye images; however, tests on another set of 624 images resulted in false accept and false reject rates of 0.005% and 0.238% respectively. Therefore, iris recognition is shown to be a reliable and accurate biometric technology. **Keywords:** Automatic segmentation, Biometric identification, Iris recognition, Pattern recognition, etc. **References:** 1. S. Sanderson, J. Erbetta. Authentication for secure environments based on iris scanning technology. IEEE Colloquium on Visual Biometrics, 2000. 2. J. Daugman. How iris recognition works. Proceedings of 2002 International Conference on Image Processing, Vol. 1, 2002. 3. R. Wildes, J. Asmuth, G. Green, S. Hsu, R. Kolczynski, J. Matey, S. McBride. A system for automated iris recognition. Proceedings IEEE Workshop on Applications of Computer Vision, Sarasota, FL, pp. 121-128, 1994. 4. W. Boles, B. Boashash. A human identification technique using images of the iris and wavelet transform. IEEE Transactions on Signal Processing, Vol. 46, No. 4, 1998. 5. C. Tisse, L. Martin, L. Torres, M. Robert. Person identification technique using human iris recognition. International Conference on Vision Interface, Canada, 2002. 6. Chinese Academy of Sciences – Institute of Automation. Database of 756 Greyscale Eye Images. http://www.sinobiometrics.com Version 1.0, 2003. 7. W. Kong, D. Zhang. Accurate iris segmentation based on novel reflection and eyelash detection model. Proceedings of 2001 International Symposium on Intelligent Multimedia, Video and Speech Processing, Hong Kong, 2001. 8. L. Ma, Y. Wang, T. Tan. Iris recognition using circular symmetric filters. National Laboratory of Pattern Recognition, Institute of	**217-221**

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Authors:	**Vineet Shekher, Pankaj Rai, Om Prakash**	
Paper Title:	**Comparison between classic PID, Integer Order PID and Fuzzy Logic Controller for Ceramic Infrared Heater: Analysis using MATLAB/Simulink**	

Abstract: This paper discusses the design, simulation and performance of ceramic infrared heater controller. This heater is energy saving potential, efficient heat transfer, uniform heating, efficient and instant heat. Many industries are increasibily making use of infrared technology as a means of improving their process. This type of heating often requires a large area of floor space. This study successfully developed a controller to achieve an effective and robust control of the infrared heating process. This paper consists three main tuning methods for IR heating system controller. Firstly, it presents design of PID controller using Zeigler Nichols (ZN) technique for first order plus time delay system using open loop step response method. Secondly, it presents the design of PID controller based on gain margin and phase margin (IOPID) for the same system. Thirdly, a fuzzy logic controller used for the same system for good stability and robust performance. Performance analysis shows the effectiveness of the ZN-PID, IOPID and fuzzy logic controller.

Keywords: Zeigler Nichols, PID, IOPID, Gain margin, Phase margin, Fuzzy Logic

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Paper Title:	**A Survey On Medical Image Compression Techniques**	

Abstract: Lossy compression schemes are not used in medical image compression due to possible loss of useful clinical information and as operations like enhancement may lead to further degradations in the lossy compression. Medical imaging poses the great challenge of having compression algorithms that reduce the loss of fidelity as much as possible so as not to contribute to diagnostic errors and yet have high compression rates for reduced storage and transmission time. This paper outlines the comparison of compression methods such as Shape-Adaptive Wavelet Transform and Scaling Based ROI, JPEG2000 Max-Shift ROI Coding, JPEG2000 Scaling-Based ROI Coding, Discrete Wavelet Transform and Subband Block Hierarchical Partitioning on the basis of compression ratio and compression quality.

Keywords: Lossy Compression Ratio, Shape - Adaptive Wavelet Transform, Scaling based ROI, JPEG2000 Max – Shift ROI Coding, JPEG2000, DCT

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