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Email: director@blueeyesintelligence.org, blueeyes@gmail.com
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Dr. Preeti Singh Bahadur
Associate Professor, Department of Applied Physics Amity University, Greater Noida (U.P.) India

Dr. Ramadan Elaiess
Associate Professor, Department of Information Studies, Faculty of Arts University of Benghazi, Libya

Dr. R . Emmaniel
Professor & Head, Department of Business Administration ST, ANN, College of Engineering & Technology Vetapaliem. Po, Chirala, Prakasam. DT, AP. India

Dr. C. Phani Ramesh
Director cum Associate Professor, Department of Computer Science Engineering, PRIST University, Manamai, Chennai Campus, India

Dr. Rachna Goswami
Associate Professor, Department of Faculty in Bio-Science, Rajiv Gandhi University of Knowledge Technologies (RGUKT) District-Krishna, Andhra Pradesh, India

Dr. Sudhakar Singh
Assoc. Prof. & Head, Department of Physics and Computer Science, Sardar Patel College of Technology, Balaghat (M.P.), India

Dr. Xiaolin Qin
Associate Professor & Assistant Director of Laboratory for Automated Reasoning and Programming, Chengdu Institute of Computer Applications, Chinese Academy of Sciences, China

Dr. Maddila Lakshmi Chaitanya
Assoc. Prof. Department of Mechanical, Pragati Engineering College 1-378, ADB Road, Surampalem, Near Peddapuram, East Godavari District, A.P., India

Dr. Jyoti Anand
Assistant Professor, Department of Mathematics, Dronacharya College of Engineering, Gurgaon, Haryana, India

Dr. Nasser Fegh-hi Farahmand
Assoc. Professor, Department of Industrial Management, College of Management, Economy and Accounting, Tabriz Branch, Islamic Azad University, Tabriz, Iran

Dr. Ravindra Jilte
Assist. Prof. & Head, Department of Mechanical Engineering, VCET Vasai, University of Mumbai , Thane, Maharshtra 401202, India

Dr. Sarita Gajbhiye Meshram
Research Scholar, Department of Water Resources Development & Management Indian Institute of Technology, Roorkee, India

Dr. G. Komarasamy
Associate Professor, Senior Grade, Department of Computer Science & Engineering, Bannari Amman Institute of Technology, Sathyamangalam,Tamil Nadu, India

Dr. P. Raman
Professor, Department of Management Studies, Panimalar Engineering College Chennai, India

Dr. M. Anto Bennet
Professor, Department of Electronics & Communication Engineering, Veltech Engineering College, Chennai, India

Dr. P. Keerthika
Associate Professor, Department of Computer Science & Engineering, Kongu Engineering College Perundurai, Tamilnadu, India

Dr. Santosh Kumar Behera
Associate Professor, Department of Education, Sidho-Kanho-Birsha University, Ranchi Road, P.O. Sainik School, Dist-Purulia, West Bengal, India

Dr. P. Suresh
Associate Professor, Department of Information Technology, Kongu Engineering College Perundurai, Tamilnadu, India

Dr. Santosh Shivajirao Lomte
Associate Professor, Department of Computer Science and Information Technology, Radhai Mahavidyalaya, N-2 J sector, opp. Aurangabad Gymkhana, Jalna Road Aurangabad, India

Dr. Altaf Ali Siyal
Professor, Department of Land and Water Management, Sindh Agriculture University Tandojam, Pakistan

Dr. Mohammad Valipour
Associate Professor, Sari Agricultural Sciences and Natural Resources University, Sari, Iran

Dr. Prakash H. Patil
Professor and Head, Department of Electronics and Tele Communication, Indira College of Engineering and Management Pune, India

Dr. Smolarek Małgorzata
Associate Professor, Department of Institute of Management and Economics, High School of Humanitas in Sosnowiec, Wyższa Szkoła Humanitas Instytut Zarządzania i Ekonomii ul. Kilińskiego Sosnowiec Poland, India

Dr. Umakant Vyankatesh Kongre
Associate Professor, Department of Mechanical Engineering, Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, Maharashtra, India

Dr. Niranjana S
Associate Professor, Department of Biomedical Engineering, Manipal Institute of Technology (MIT) Manipal University, Manipal, Karnataka, India

Dr. Naseema Khatoon
Associate Professor, Department of Chemistry, Integral University Lucknow (U.P), India

Dr. P. Samuel
Associate Professor, Department of English, KSR College of Engineering Tiruchengode – 637 215 Namakkal Dt. Tamilnadu, India

Dr. Mohammad Sajid
Associate Professor, Department of Mathematics, College of Engineering Qassim University Buraidah 51452, Al-Qassim Saudi Arabia

Dr. Sanjay Pachauri
Associate Professor, Department of Computer Science & Engineering, IMS Unison University Makkawala Greens Dehradun-248009 (UK)

Dr. S. Kishore Reddy
Professor, Department of School of Electrical & Computer Engineering, Adama Science & Technology University, Adama

Dr. Muthukumar Subramanyam
Professor, Department of Computer Science & Engineering, National Institute of Technology, Puducherry, India

Dr. Latika Kharb
Associate Professor, Faculty of Information Technology, Jagan Institute of Management Studies (JIMS), Rohini, Delhi, India

Dr. Kusum Yadav
Associate Professor, Department of Information Systems, College of Computer Engineering & Science Salman bin Abdulaziz University, Saudi Arabia

Dr. Preeti Gera
Assoc. Professor, Department of Computer Science & Engineering, Savera Group of Institutions, Farrukh Nagar, Gurgaon, India

Dr. Ajeet Kumar
Associate Professor, Department of Chemistry and Biomolecular Science, Clarkson University 8 Clarkson Avenue, New York

Dr. M. Jinnah S Mohamed
Associate Professor, Department of Mechanical Engineering, National College of Engineering, Maruthakulam.Tirunelveli, Tamil Nadu, India

Dr. Mostafa Eslami
Assistant Professor, Department of Mathematics, University of Mazandaran Babolsar, Iran

Dr. Akram Mohammad Hassan Elentably
Professor, Department of Economics of Maritime Transport, Faculty of Maritime Studies, Ports & Maritime Transport, King Abdul-Aziz University

Dr. Ebrahim Nohani
Associate Professor, Department of Hydraulic Structures, Dezful Branch, Islamic Azad University, Dezful, Iran

Dr. Aarti Tolia
Faculty, Prahaldbhai Dalmia Lions College of Commerce & Economics, Mumbai, India

Dr. Ramachandra C G
Professor & Head, Department of Marine Engineering, Srinivas Institute of Technology, Valachil, Mangalore-574143, India

Dr. G. Anandharaj
Associate Professor, Department of M.C.A, Ganadipathy Tulsi's Jain Engineering College, Chittoor- Cuddalore Road, Kaniyambadi, Vellore, Tamil Nadu, India

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1.

Authors: Sandhia Valsala, Anil R

Paper Title: Review and Analysis of Software Release Planning Models

Abstract: Software maintenance is generally recognized to consume majority of resources in many organizations. Regular replacement of legacy systems with new ones is not a feasible solution. Planning releases so as to maximize the functionality and quality of software is very much in need now. Release Planning plays a very important role in managing and maintaining releases and helps in the delivery of a high quality product to the end-users. Software Release planning involves proper grouping of activities in the release of one or more versions of software to one or more customers. This paper analyzes the various release planning models and the factors considered by these models for feature selection. 32 release planning models are considered and taxonomy of requirement selection factors is constructed. The main contribution of this paper is to assist software engineers in finding out the real factors that need to be considered in planning a release and to assess the effect of these identified factors on a release so as to plan releases efficiently and effectively.

Keywords: Release planning, Software maintenance, Legacy systems, Requirement selection.

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Authors: **Rinkal Patel, Rajanikanth Aluvalu**

Paper Title: **A Reduced Error Pruning Technique for Improving Accuracy of Decision Tree Learning**

Abstract: Decision tree inductions are well thought-out as it is one of the most accepted approaches for representing classifiers. Many researchers from varied disciplines like Statistics, Pattern Reorganization; Machine Learning measured the problem of growing a decision tree from available data. Databases are the rich sources of hidden information that can be used for intelligent decision making. Classification and Prediction techniques of data mining are two form of data analysis that can be used to discovering this type of hidden knowledge. Classification techniques deal with categorical attributes whereas prediction model is the continuous value function. Training data are analyzed by classification algorithm. In decision tree construction attribute selection measure are used to select attributes, that best partition tuples into different classes. The branches of decision tree may reflect noise or outliers in training data. So tree pruning techniques applies to identify and remove those branches which reflect noise with the aim of improving classification accuracy. But still scalability is the issue of decision tree from large database. This paper present implementation of decision tree induction algorithm in java with reduced error pruning(REP) technique for improving accuracy of classifier.

Keywords: Data Mining, Classification Decision Tree Induction, Information Gain, C4.5, Tree Pruning.

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3.

Authors: **Sameer Duggal, Gagan Deep Aul**

Paper Title: **Review on Effect of Electric Permittivity and Magnetic Permeability over Microwave Absorbing Materials at Low Frequencies**

Abstract: The dielectric properties of any material is the most important parameters to judge its microwave absorptive properties. This paper reviews the sufficient conditions for absorption of electromagnetic waves by a material by taking electric permittivity and magnetic permeability of materials into consideration. At the end of this

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paper the electric permittivity and magnetic permeability of different materials having single layer (composite structures) and multilayer structure is compared to see the effect of electric permittivity and magnetic permeability.

Keywords: Real permittivity, imaginary permittivity, real permeability, Imaginary permeability, dielectric losses, impedance matching.

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4.

Authors: **Vikas Mittal**

Paper Title: **Enhanced Two Dimensional Circular Encryption Algorithm**

Abstract: In recent years, many multimedia and image encryption techniques based on chaotic maps have been proposed. Recently, a new signal security system called TDCEA (two-dimensional circulation encryption algorithm) was proposed for real-time multimedia data transmission. There exist some essential security defects in TDCEA. This paper gives an analysis on the security of TDCEA and proposed enhanced encryption algorithm. Proposed encryption scheme is based on two digital chaotic maps, which in turn are used to generate two different chaotic sequences. Detail description of the security analysis of TDCEA, proposed encryption technique and performance analysis of enhanced encryption algorithm on various parameters of security is given in later sections of this paper.

Keywords: Multimedia, Encryption, Decryption, Two Dimensional Circular Encryption Algorithm (TDCEA), Piecewise Linear Chaotic Map (PWLCM), Enhanced Two Dimensional Circular Encryption Algorithm (Enhanced TDCEA).

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5.

Authors: **Arkan R. Ridha, Wasan Z. Majeed, Ali D. Salloum**

Paper Title: **Effects of Occupation Numbers on Charge Density Distributions, Elastic Form Factors, and Root-Mean Square Radii for Some Nuclei in 1s-1p Shell**

Abstract: The effects of occupation numbers on the ground state charge density distributions, elastic form factors and root mean square (RMS) radii are investigated for 4He, 12C, and 16O nuclei in 1s-1p shell using single-particle radial wave functions of harmonic-oscillators (HO) potential. For such potential, two HO size parameters are used one for neutron ( ) and the other for proton ( ). For the calculated charge density distributions, the results showed good agreement with experimental data except the fail to produce the hump in the central region for 12C and 16O nuclei. For elastic charge form factors the results in general, showed excellent agreement to predict the positions of diffraction minima. The match of calculated charge form factor for 12C with experimental data was excellent at all q range, but for 4He and 16O it was obtained an underestimation at high q values. Finally, the calculated RMS charge radii in general, showed an overestimation comparing with those of experimental data, while those of matter showed

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excellent agreement with experiment.

Keywords: Stable Nuclei, Shell Model, Charge Density Distribution, Elastic Charge Form Factor, RMS Charge, Neutron, And Matter Radii.

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Authors:	**Vaibhav Muddebihalkar, R.M.Goudar**
Paper Title:	**Remote Data Access for Control of TCP/IP Network using Android Mobile Device with Fast Transfer of Images**

Abstract: In today's world most of the mobile have the use more than its basic functionality. As mobile becomes more advance to be have same architecture same as desktop system. Hence this feature should be used as to create application that controls the desktop nodes in the network with help of client server architecture. This paper purpose x The application connects the system node by server and server connects to android mobile which will easy to control network from any mobile place. The application having functionality to capture a screenshot of client node to know the state of system which will have to capture picture and send over network which will required some time. By adding compression technique for image as screenshot which helps to send faster over the network. This all implemented using JAVA and servlets which also increase performance.

Keywords: Android, Remote control, JAVA- Servlets, image compression.

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4. VNC ARCHITECTURE BASED REMOTE DESKTOP ACCESS THROUGH ANDROID MOBILE PHONES Archana Jadhav , International Journal of Advanced Research in Computer and Communication Engineering Vol. 1, Issue 2, April 2012
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Authors:	**Ravindra S. Thube**
Paper Title:	**Effect of Tool Pin Profile and Welding Parameters on Friction Stir Processing Zone, Tensile Properties and Micro-hardness of AA5083 Joints Produced by Friction Stir Welding**

Abstract: AA5083 aluminium alloy has gathered wide acceptance in the fabrication of light weight structures requiring a high strength to weight ratio. Compared to the fusion welding processes that are routinely used for joining structural aluminium alloys, friction stir welding (FSW) process is an emerging solid state joining process in which the material that is being welded does not melt and recast. This process uses a non-consumable tool to generate frictional heat in the abutting surfaces. The welding parameters and tool pin profile play major roles in deciding the

weld quality. In this investigation, an attempt has been made to understand the effect of tool speed (rpm) and tool pin profile on Friction Stir Processing (FSP) zone formation in AA5083 aluminium alloy. Friction stir welding between 5083 aluminium alloy plates with a thickness of 2.5 mm was performed. Five different tool pin profiles (straight cylindrical, tapered cylindrical, triangular, square and cone) have been used to fabricate the joints at three different rotational speeds i.e. 900, 1400 and 1800 rpm under a constant traverse speed of 16 mm/min. The formation of FSP zone has been analysed macroscopically. Tensile properties of the joints have been evaluated and correlated with the FSP zone formation. From this investigation it has been found that the tool pin profiled designs had little effect on heat input and tensile properties, weld properties were dominated by thermal input rather than the mechanical deformation by the tool for the plate thickness of 2.5 mm. straight cylindrical pin profiled tool produces mechanically sound and metallurgically defect free welds compared to other tool pin profiles.

Keywords: AA5083 aluminium alloy, friction stir welding, macrostructure, micro-hardness, tensile properties, tool pin profile

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Authors: **Richa Sharma, Sachin Sharma, Nitin Pundir**

Paper Title: **Windowed Independent Update Algorithm for ODCT-I**

Abstract: Data Compression is the process to eliminate redundancy between the neighboring pixel. To do this DCT is much more efficient. In this paper, an algorithm has been developed for DCT-V or ODCT-I using rectangular window. These updated DCT coefficient are independent of the Odd DST coefficient.

Keywords: DCT,DST,EDCT,ODCT

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9.

Authors: **Chukwuma G.J. Nmegbu, Jossy Spiff**

Paper Title: **Chemical Flocculation of Microorganisms in the Reservoir During Meor**

Abstract: Clogging of the pores of a porous medium can be caused chemically by formation of a precipitate, physically by entrainment of suspended particles or biologically by the formation of biomass by microbes. All these mechanisms are potentially relevant to enhanced oil recovery. This paper investigates the level of flocculating activity in a Berea core sample dosed with Bacillus and Pseudomonas species, Nutrient agar and Salt diluent. Three of such samples were prepared and incubated for 12, 24 and 48hours. From scan pictures of the core, slimy substances were seen suggesting the production of biofilms, crystalline substances were observed inferring the production of biopolymers by the microorganisms and colloids observed, proving the production of biosurfactants. Heat was also generated during the process and the basic characteristics of the crude oil changed as seen in the flow of the crude oil. Thus, the chemical flocculation of these microorganisms in the reservoir aids in the recovery of substantial amounts of crude oil.

Keywords: Bioflocculants, Chemical flocculation, MEOR, Microbial Flocculation.

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Authors: **S. B. Kulkarni, Kirthishree C. Katti, Arun A. Kumbi, R. B. Kulkarni, Vinita K. Tapaskar**

Paper Title: **Analysis of Iris Image Segmentation in a Color Space Model**

Abstract: The paper presents the iris localization using circular Hough transform. Circular Hough transform localized the inner and outer boundaries of the iris.The software of the application is based on detecting the circles surrounding the exterior iris pattern from a set of images in different spaces. The iris segmentation system is based on the combination of the canny edge detection method, adaptive histogram Equalization method, circular Hough Transform and Euclidean Distance formula methods. The main part of Iris recognition is the segmentation of iris part of the eye. The performance of the segmentation is analyzed using UBIRIS, IITD, PALACKY, MMU database with adaptive parameters.

Keywords: Segmentation, Canny Edge Detection, Adaptive Histogram Equalization, Circular Hough Transform and Euclidean Distance Formula.

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11.

Authors:	**Piyush Pant, Navneet K Pandey, S. Rajesha, Gaurav Jain**
Paper Title:	**Experimental Study of Surface Roughness in Wedm Process and Ann Modelling**

Abstract: Surface roughness is an effective parameter in representing the quality of machined surface and is one of the most common performance measurements in machining process. This paper reports the effect and optimization of pulse-on time, gap voltage, wire feed rate on surface roughness in wire electrical discharge machining (WEDM) process for die steel D3 using L27 orthogonal array. Signal-to noise (S/N) ratio and ANOVA are used as statistical analyses to achieve optimum levels and to study the population distribution of the response characteristic respectively. It has been found that pulse on-time is the most significant factor affecting the surface roughness. The experimental data is later used to model the surface roughness using artificial neural network.

Keywords: Surface roughness, Taguchi, Wire cut electrical discharge machining, Die steel Artificial neural networks.

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12.

Authors: **Manoj Barnela, Suresh Kumar, Akhil Kaushik, Satvika**

Paper Title: **Implementation and Performance Estimation of FIR Digital Filters using MATLAB Simulink**

Abstract: In modern communication systems, filtering is the most widespread and extremely important signal processing technology. FIR filters form the basis of wireless systems in medical devices, industrial control, consumer electronics, and cellular infrastructure. A filter network selectively changes the wave-shape of a signal in a desired approach. The most common filtering purpose is to remove the noise from the signal. The FIR filters are of finite transient duration, more stable, efficiently realisable and providing exact linear phase as compared to IIR filters .FIR filter structure can be used to realize almost any sort of frequency response digitally. FIR filters are invariably used in the situation where linear phase characteristics within the passband of the filter is required. In this paper, implementation and simulation of 1-D and 2-D FIR filters is presented in the MATLAB and Simulink environment. The comparison of the output waveforms show that 2-D FIR filter posses higher speed than 1-D FIR filter.

Keywords: Digital filters, 1-D FIR filters, 2-D FIR filters, Simulink.

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Authors: **P. P. Badgujar, M. G. Rathi**

Paper Title: **Taguchi Method Implementation in Abrasive Waterjet Machining Process Optimization**

Abstract: Abrasive waterjet machining (AWJM) is a non-conventional metal removal process as well as one of the best manufacturing processes suitable for machining on very hard material. The objective of this paper is to optimize the input parameters of AWJM, such as pressure within pumping system, abrasive material grain size, stand-off distance, nozzle speed and abrasive mass flow rate for machining SS304. The Taguchi design of experiment, the signal-to-noise ratio, and analysis of variance are employed to analyze the effect of the input parameters by adopting L27 Taguchi orthogonal array (OA). In order to achieve the minimum surface roughness (SR), five controllable factors, i.e. the parameters of each at three levels are applied for determining the optimal combination of factors and levels. The results reveal that the SR is greatly influence by the abrasive material grain size. Experimental results affirm the effectiveness of the solving the stated problem within minimum number of experiments as compared to that of full factorial design.

Keywords: Surface roughness, Taguchi method

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14.

Authors: **Arshad I. Esmael, Minerva E. Matta, Hisham A. Halim, Farouk M. Abdel Azziz**

Paper Title: **Adsorption of Heavy Metals from Industrial Wastewater using Palm Date Pits as Low Cost Adsorbent**

Abstract: The removal of heavy metals from industrial wastewater is of great concern as heavy metals are non-biodegradable, toxic elements that cause serious health problems if disposed of in the surrounding environment. In this study, the removal of three heavy metals: copper, hexavalent chromium, and iron through adsorption using palm date pits was studied. Palm date pits are considered a low cost source of activated carbon. Heavy metals adsorption was studied for individual elements, and for industrial wastewater samples collected from a tannery and an electroplating factory. The kinetic studies showed that Cu, Cr+6, and Fe were adsorbed very rapidly within the first 30minutes, while equilibrium was attained within 90min, the optimum pH range for their adsorption was found to be (4.5-6.5), depth of adsorbent layer (70-90)cm, and particle size(0.5-0.75)mm. The adsorption capacity and removal efficiency for individual elements reached 89.17% for Cu, 71.30% for Cr+6, and 85.17% for Fe respectively. As for the removal of heavy metals from industrial wastewater collected from the tannery, removal efficiency reached 85.17% for Cu, 65.42% for Cr+6, and 87.03% for Fe and for the electroplating factory effluent: 82.857% for Cu, 61.65% for Cr+6, and 89% for Fe. The equilibrium sorption data for synthetic wastewater at temperature 27+ 2°C was described by both the Langmuir and Freundlich isotherm models. Experimental data were better fitted to the Freundlich equation rather than to the Langmuir equation.

Keywords: Adsorption; heavy metals; industrial wastewater; low cost adsorbents; palm date pits.

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15.

Authors: **Sourabh Bisht, Bhaskar Nautiyal, Upendra Mohan Bhatt, Pankaj Joshi**

Paper Title: **Plasma Applications for Environmental Protection**

Abstract: Plasmas (both thermal and non-thermal) are known to be utilized for various environmental applications. These applications mostly include fields of air pollutant treatment, wastewater and drinking water decontamination, and thermal disposal of solid waste. The non-thermal plasmas used for environmental applications are mainly high-pressure discharges, such as DBDs, pulsed corona discharges, microwave plasmas, electron beams and dielectric packed bed reactors. An increasing number of investigations are devoted to the decomposition of nitrogen and sulphur oxides in flue gases, and of volatile organic compounds (VOC) emitted from various industrial processes. Many hazardous organic compounds are readily attacked by excited species, free radicals, electrons, ions and/or UV photons generated in DBDs. Moreover, investigations are going on to use dielectric barrier discharges (DBDs) for the generation of H2 and elemental sulphur from H2S and for the conversion of the greenhouse gases CO2 and CH4 to liquid fuels. The thermal plasmas mostly used for this purpose include several kinds of arcs.

Keywords: Corona Discharge, Dielectric Barrier Discharge, Ozonation

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Authors: **P. Deepa, Upendra saharkar**

Paper Title: **To Study the Capability Model for Sustainable E –Business Environment in Construction Industries in Maharashtra Region**

Abstract: This paper focuses on studying a capability model for an individual firm in relation to e business in construction industries within Maharashtra region. The paper describes a framework for theorization of adoption of e- business overcoming different barriers faced by them. Capability model though it comes from the field of software development, it is also used as a general model to aid in business processes. The adoption of e- business is considerably less in small and medium enterprises due to barriers like lack of knowledge, lack of trust, lack of fund which requires attention. This research study confirms this lacking and focuses on providing solution through capability frame work.

Keywords: E-business, capability model, SMEs, framework, construction industries

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Authors: **M. Iqbal, I. Shahid, S. H. Farooq**

Paper Title: **Behavior of Polymer Strengthened Plain Concrete**

Abstract: In developing countries, structures damaged due to extreme loading such as earthquakes or deteriorated due to aging needs to be frequently repaired instead of replacement for economic reasons. In this research, effectiveness of polymer modified mortar on the mechanical properties of repaired Plain Cement Concrete (PCC) was studied through laboratory testing. 69 specimens (18 x Prisms, 30 x cubes and 21 x cylinders) were cut in different ways including horizontal, vertical, single, double and inclined cuts. The cut specimens were then repaired using mortars modified with three polymers namely Styrene Butadiene Rubber Latex, ZUBA (latex of various polymers) and Polyvinyl Acetate polymers and were tested under compressive and flexural load and the strength was compared with reference specimen. The restored compressive strength of the repaired specimens was in the range of 54 to 98 percent of the original strength of reference specimen. In case of cubes and prisms, the failure plane of repaired specimens was away from the cut plane showing the effectiveness of polymer modified mortar.

Keywords: Strengthening; Plain Concrete; Polymers

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Authors: **Saad F. Oboudi, Muna M. Abbas, Nadein Q. Raoof**

Paper Title: **Effect of Li Substitution on Bi (Pb)-2223 Superconductors**

Abstract: Samples of stoichiometric composition Bi2-xLixPb0.3Sr2Ca2 Cu3O10+δ with x = 0.0, 0.1, 0.2, 0.3, 0.4 and 0.5 were prepared by a solid state reaction method. The process consists of three steps. Firstly a Bi2-xLixPb0.3Sr2Ca2 Cu3O10+δ sample was sintered in the air at 850 °C for 50 hrs; subsequently the sintered sample was regrind and sintered again at 850 °C for another 50 hrs. While in the third step the sample resintered it at 830 °C for 40 hrs, and then slowly cooled in furnace with a rate of 2 ºC/min. The process enhances growing a superconducting phase unidirectional and suppresses the high phase intrusion which leading to the production of well textured samples. Li particles were introduced into Bi2Pb0.3Sr2Ca2u3O10+δ powder in various concentrations. Bulk samples were made from the Bi2223/Li powder and heat-treated at various processes. The phase formation and the microstructure were studied for different amounts of Li. It was found that sample with x = 0.3 Li showed the highest Tc-zero at 130 K. Increasing Li content to 0.5 decreases the critical temperature to 113 K. The samples were characterized by X-ray diffraction, and DC electrical resistivity. The X-ray diffraction studies were done at room temperature and the lattice constants of the material were determined by indexing all the peaks observed.

Keywords: Bi-based superconductors, Li substitution, Phase formation

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19.

Authors: **Chukwuma G. J. Nmegbu**

Paper Title: **Modeling the Diffusion Rate of Biogenic Gases Produced During Microbial Enhanced Oil Recovery**

Abstract: Different transport mechanisms occur within the subsurface region. To have a vast comprehension of these transport modes, researchers, scientists, scholars etc. are charged with the responsibility of providing concrete answers to lingering subsurface mass transfer questions. In this study, the prediction of diffusion rates of biogenic gases for a MEOR subjected core is investigated using a developed predictive model, which when compared to results from experiments conducted showed a great level of precision. The 50 -50 mixtures of both microbes for the MEOR investigation were also found to reduce the formation permeability and heavy crude viscosity, all of which constitute mobility improvement techniques.

Keywords: Biogenic gases, Diffusion, Microbes.

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20.	**Authors:**	**Ambati Raghu**
	Paper Title:	**Improving Performance with Security Mechanism for Wireless Multi-Hop Relay Network**

Abstract: Wireless relay network consist of distribution of network topology commonly used in wireless network. Where it sender and receiver are interconnected by mean some of mobile nodes. Relay technology are used enhance packet delivery and increase performance of wireless networks such as worldwide interoperability for microwave access and LTE-A. Later developed automatic repeat request (ARQ) [11]technique that to reduced packet lose and increase latency but we recognizes potential drawbacks of automatic repeat request techniques that's are ambiguous error report, packet overhead and number of acknowledgement in case of successful received data. Authentication schema is most important factor in relay network to secure, protect from attackers because of thousands of users are communicated each other's without any identification. Authentications in relay network have been proposed public-key cryptographic algorithm developed based on Diffie-Hellman key exchange algorithm. The process of Diffie-Hellman key exchange algorithm is two users to securely exchange a keys that keys ultimately using to encrypt the message. Our research is going on reduced workload in relay network and improve performance by consider some Components that mobility factor, battery power and workload. These components Consider to establishing reliable path to reduced delay and increase data transmission speed and finally data transmission is one of major problem in wireless network then we consider hop-by-hop scheme.

Keywords: Authentication, establish reliable path, hop-by-hop communication

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21.	**Authors:**	**Shaikh Tausif, L.G.Kalurkar**
	Paper Title:	**Review Integral Abutment Bridge Behavior in Different Condition**

Abstract: This paper presents findings of a literature review of behavior of Integral Abutment Bridge (IAB) , The purpose of the report is to identify problems and uncertainties, and to gain insight into the interactions between the foundation piles, the integral abutment, and the surrounding ground and Synthesize the information available on the general behavior of integral abutment bridges. Integral Abutment Bridge (IAB is joint less bridge in which the deck is continuous and monolithic with abutment walls. The outperform their non-integral counterparts in economy and safety. Their principal advantages are derived from the absence of expansion joints and sliding bearings in the deck, making them the most cost effective system in terms of construction, maintenance, and longevity. The main purpose of construction IAB is to prevent the corrosion of structure due to water seepage through joints. The simple and rapid construction provides smooth, uninterrupted deck that is aesthetically pleasing and safer for riding. The single structural unit increases the degree of redundancy enabling higher resistance to extreme events. To gain a better understanding of the mechanism of IAB, a comparative study is carried out on a typical IAB and a simply supported bridge. A literature review focusing on past numerical models of. A discussion on results of analysis of the IAB with different geometry and comparison with simply supported bridge and each experiencing same temperature change scenarios and same loading pattern is observed.

Keywords: Integral Abutment Bridge, Simply Supported Bridge, Soil Interaction, Comparison.

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22.

Authors: **Gursharan Saini, Harpreet Kaur**

Paper Title: **K-Mean Clustering and PSO: A Review**

Abstract: Clustering is a method which divides data objects into groups based on the information found in data that describes the objects and relationships among them. There are a variety of algorithms have been developed in recent years for solving problems of data clustering. Data clustering algorithms can be either hierarchical or partitioned. Most promising among them are K-means algorithm which is partitioned clustering algorithm .Moreover k-mean Algorithm is an efficient Clustering Algorithm but it can generate a local optimal solution. On the other hand, Particle Swarm Optimization is used for global optimization. Thus K-means algorithm shows improved results when used with the combination of PSO (Particle Swarm Optimization).

Keywords: Data clustering, Data Mining, K-Mean PSO

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23.

Authors: **Nmegbu Chukwuma Godwin Jacob, Pepple Daniel Dasigha**

Paper Title: **The Diffusion Model for the Longitudinal Mixing of Microbes in Reservoir Beds of Finite Length**

Abstract: Microbial injection in petroleum reservoirs for enhancing oil recovery has recently been an area of intensive study in the oil and gas industry. Before the application of this non-expensive, environmental friendly method of recovery is employed, the comprehension of its modus operandi is paramount, most essential being its movement and transport techniques through tortuous porous media in petroleum reservoirs. This study reveals the patented process of microbial transport through advection within a finite length reservoir by development and Simulation of a mathematical model which when validated with microbial and reservoir parameters, showed a great degree of similarity with an already established model. Simulation of these models presented a visual description of the longitudinal mixing process of dispersing microbes in the reservoir using the SIMULINK program.

Keywords: Diffusion, Dispersion, MEOR, Microbes.

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24.

Authors: **Shiny G, M.R.Baiju**

Paper Title: **Space Vector based Pulse Width Modulation Scheme for a Five - Level Inverter using Open - End Winding Induction Motor**

Abstract: A Space Vector based Pulse Width Modulation (SVPWM) scheme for a 5-level inverter is presented. Sector identification is carried out using an approach based on fractal concept. To represent the space vectors, 60° coordinate frame work is used. The use of 60° coordinate system eliminates fractal arithmetic compared to Cartesian coordinate system, and increases speed of computation. No look up tables are used to generate sectors and switching vectors. The scheme also works in over modulation region. Experimental results for a 5-level inverter using induction motor in open-end winding configuration are presented to validate the scheme.

Keywords: Space vector, fractal, inverter, open-end winding

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25.

Authors: **Abhimanyu Kanneganti, Manasa, Prathyusha Doddapaneni**

Paper Title: **A Sustainable Approach Towards Synthesis of Moo3 Nanoparticles using Citrus Limetta Pith Extract**

Abstract: Our research focused on a sustainable approach for synthesis of molybdenum trioxide nanoparticles, which can be utilized in oxidation catalyst and electrochemical devices research. This study reports the exploit of pith, generally considered as waste, to prepare an aqueous extract of citrus limetta as an eco-friendly agent for synthesis of MoO3 nanoparticles. The obtained product was subjected to X-ray diffraction analysis to confirm the formation of MoO3 nanoparticles by comparing the peak values with JCPDS software which matched with JCPDS card no.35-0609. The transmission electron microscope micrographs were analyzed to study the size and morphology of the nanoparticles. The absorbance spectrum of MoO3 nanoparticles was studied using the UV-spectroscopy and the absorbance peak was observed at 257nm. The functional groups present in the final product were studied using

Fourier transform infrared spectroscopy.

Keywords: sustainable approach, molybdenum trioxide nanoparticles, green synthesis, citrus limetta.

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26.

Authors:	**Jnana Ranjan Tripathy, Hrudaya Kumar Tripathy, S.S.Nayak**
Paper Title:	**Artificial Neural Network Implementation in Microchip PIC 18F45J10 8-Bit Microcontroller**

Abstract: Implementing neural networks on an 8-bit microcontroller with limited computing power presents several programming challenges. In order for the network to perform as quickly as possible, creating the software at the assembly level was chosen. Writing the software in assembly allows a level of customization that cannot be achieved with C. However, the need for hardware portability was also a motivating factor and a more generic C implementation was also created. It was also very important to manually manage the very limited amount of data memory. Several assembly routines were created with this purpose in mind. A pseudo floating point arithmetic protocol was created exclusively for neural network calculations along with a multiplication routine for multiplying large numbers. A tanh compatible activation function was also needed. The final procedure is capable of implementing any neural network architecture on a single operating platform.

Keywords: Neural Architecture (NA), Microcontroller, Embedded C, Pseudo Floating Point, Activation Function

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27.

Authors:	**Srikantarao S, Radhika K R**
Paper Title:	**Overview of Sap Hana: In-Memory Computing Technology and ITS Applications**

Abstract: Traditional database management systems are designed for optimizing performance on hardware with constrained main memory. Disk I/O was the main bottleneck. The focus was on optimizing disk access, where by minimizing the number of disk pages to be read into main memory during processing. The SAP HANA database is designed from the ground up around the idea that memory is available in abundance. Instead of optimizing I/O hard disk access, SAP HANA optimizes memory access between the CPU cache and main memory. SAP HANA is a massively parallel (distributed) data management system that runs fully in main memory, allowing for row- and column based storage options, and supporting built-in multitenancy.

Keywords: High-Performance Analytic Appliance (HANA), Structured query language (SQL), multidimensional expression (MDX), Online transaction processing (OTLP), Online analytical processing (OLAP).

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28.

Authors: **D.G.Wadnere, G.A.Wadnere**

Paper Title: **PC based Digital Sound Level Analyzer**

Abstract: Sound energy meters measures sound pressure level & are used in noise pollution studies.Most of the sound level meters are hand held,battery powered devices & are often limited in functionality beacause of poor processing power limited storage & poor display. A Pc based sound level meter will not only overcome these limitation but more advanced functionalities can be implemented in it. Ac signal from microphone is converted into DC.It will make use of MAX187,Max 232 & LM 358 ICs as main component for converting sound into digital signal.The working of this meter will confirm the noise levels as per environments. It is easy to use & has small package size. This circuit is ideal for the circuits where power consumption & space are crucial.This project also is able to detect ,analyze & matches the frequency of a particular human being as per our requirements. This project is basically design for classroom application

Keywords: LM 358, MAX 187,MAX 232,Sound energy meter.

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29.

Authors: **Monowar Hussain, Arnab Paul**

Paper Title: **A Survey on Graph based Web Service Discovery and Composition Techniques**

Abstract: Web Service composition technique provides the features to users that an individual web service cannot perform. There are several web services available over the web for performing different tasks. When there is no unique service capable of performing user request, there must be some way to sufficiently compose basic services to satisfy the user's request. Now it becomes very important to determine which service composition system is the most efficient one. This paper presents the requirement for service composition, the required technologies to perform service composition. It also provides several different graph based web service composition techniques. At service composition time, the composition of these services depends on the requester's inputs, outputs parameters and other non-functional parameters. Web service composition is a difficult task due to the asymmetric nature of results of the various services. In order to evaluate the best approach, various composition approaches were justified. We consider number of comparative parameters for evaluating the best composition plan.

Keywords: Web Services, Semantic Web Services, Web Service Discovery, Graph Based Web Service Composition.

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30.

Authors: **Geeta, Puja Kumari Singh**

Paper Title: **Electromagnetic Radiation Influencing Stomatal Patterning in Oxalis Corniculata L**

Abstract: This paper attempts for assessing the effect of Electromagnetic field and low intensity radiations from haphazardly erected network of cell towers on some plants which are being exposed continuously in their natural habitat. Although the electrosmog being unsmelt and unfelt, its potential harm over long periods of exposure could be realized on plants in the manifestation of morphological and biochemical disorders. Such kind of manifestations when aimed at Oxalis corniculata at various distances from cell tower positively indicated in its stomatal patterning. Increased stomatal density and stomatal index at certain distances followed by a sharp fall in values compels to think that this invisible threat has become a new environmental challenge.

Keywords: EMF, Exposure, Radiation,Stomatal patterning

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31.

Authors: **Avinash Kadam, Pravin Hujare**

Paper Title: **Optimization of Segmented Constrained Layer Damping Literature Review**

Abstract: constrained layer damping has extensively used since many years to damp flexural vibrations by producing shear forces in between constraining and constrained layer. This creates shear deformation is responsible for dissipation of vibration energy. CLD is a sandwiched structure of viscoelastic material between upper constraining layer and base layer. Enhancing the results of damping efficiency of CLD can be achieved by cutting constraining and constraining layer, this is called as segmentation. The main objective of this paper is to provide guidelines for optimization of segmentation of viscoelastic material in between composite structure.

Keywords: Constrained Layer Damping, Damping, Optimization, Vibration Control.

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32.

Authors: **Pramod Patil, Ashish Patel, Parag Kulkarni**

Paper Title: **Density-Based Clustering Based on Probability Distribution for Uncertain Data**

Abstract: Today we have seen so much digital uncertain data produced. Handling of this uncertain data is very difficult. Commonly, the distance between these uncertain object descriptions are expressed by one numerical distance value. Clustering on uncertain data is one of the essential and challenging tasks in mining uncertain data. The previous methods extend partitioning clustering methods like k-means and density-based clustering methods like DBSCAN on uncertain data based on geometric distances between objects. Such method facing the problems with the data that they cannot handle uncertain objects that are geometrically indistinguishable (such as weather data across the world at same time). In this paper, we model uncertain objects in both continuous and discrete domains with the help of probability distribution. We use Kullback-Leibler divergence to measure similarity between uncertain objects in both the continuous and discrete Values, and integrate that into partitioning and density-based clustering methods to cluster uncertain objects. We first find out uncertain objects and then we cluster uncertain data according to partitioning based clustering. Then remaining data we clustered by using any traditional method of clustering.

Keywords: Clustering, Uncertain Data, Probabilistic Mass Function, Probabilistic Density Estimation, Fast Gaussian Transform.

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33.

Authors: **Neha Bansal, Ashish Chaudhari, Manish Mishra, Jenish K Jadav**

Paper Title: **Fabrication of a Cost effective Automatic Dual/Single Axis Active Solar Tracker with Built in Inverter Designed for Grid Connectivity and Standalone Systems**

Abstract: In our Dual axis automatic solar tracker project, AT89S52 micro-controller has been used. Four photo-sensors (LDR VAC54) are used for sensing the sunlight to know sun's movement. Two gear motors (12V, 300 rpm) are there to rotate the solar panel (E-W and N-S) as the sun changes its direction. ADC chip 0808 is used to decode analog voltage to digital voltage. PROTEUS software coding has been used for designing and simulating the tracker. Photo sensors, battery charging level and solar panel voltage will be monitored by the micro-controller through ADC chip. Attempts have been made to make this pilot project cost-effective with successful completion for standalone systems and can be expanded further for grid connectivity.

Keywords: Dual/Single axis solar tracker, ADC, Crystal Oscillator, multi-vibrator, micro-controller, PCB, Gear motors, Inverter, Proteus software simulation.

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34.

Authors: **Umesh Kumar, Praveen Kumar, Sapna Gambhir**

Paper Title: **Analysis and Literature Review of IEEE 802.1x (Authentication) Protocols**

Abstract: This paper gives us detailed study of some of the commonly used EAP authentication protocol. But before understanding these authentication methods we have to understand what EAP is and how EAP work because it's all start with EAP. So our aim in this paper is to provide detailed study of EAP and its architecture. This paper also covers literature review of authentication protocols. EAP is a frame work and it consists of different types of protocols nearly forty but we will study only those protocols which are very common in use and also their advantages

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and disadvantages.

Keywords: EAP, MD5, LEAP, TLS, TTLS, PEAP.

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35.

Authors: **Abhishek Vyas, S.S. Dhakad**

Paper Title: **Microstrip Patch Antenna Loaded with Shapes of Triangle and Circle using Metamaterial Structure**

Abstract: In this paper, proposed Rectangular microstrip patch antenna loaded with metamaterial structure is used for bandwidth improvement at dual band operation. The proposed antenna is designed at a height 3.2 from the ground plane by using CST MICROWAVE STUDIO. The bandwidth of Microstrip patch antenna is 12 MHz and return loss is -10.36 dB at dual band.The bandwidth of desired antenna is increased up 22.8MHz at 1.824 GHz. and up 56.2 MHz at 2.85 GHz. The return loss of proposed antenna is reduced up to -36.922 dB at 1.824 GHz and up to -29dB at 2.85 GHz. This proposed design has small size, easy to fabricate and better directivity.

Keywords: Recangular microstrip patch antenna(RMPA), Impedance Bandwidth , Metematerials

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36.

Authors: **Samir S. Khalse, Dhondiram M. Kakre**

Paper Title: **Computer Oriented Load Flow Study of Five Bus System using Matlab**

Abstract: Power flow analysis is the backbone of power system analysis and design. They are necessary for planning, operation, economic scheduling and exchange of power between utilities. The principal information of power flow analysis is to find the magnitude and phase angle of voltage at each bus and the real and reactive power flowing in each transmission lines. Power flow analysis is an importance tool involving numerical analysis applied to a power system. In this analysis, iterative techniques are used due to there no known analytical method to solve the problem. To finish this analysis there are methods of Mathematical calculations which consist plenty of step depend on the size of system. This process is difficult and takes a lot of times to perform by hand. The objective of this project is to develop a toolbox for power flow analysis that will help the analysis become easier. Power flow analysis software package Develops MATLAB programming and MATLAB GUI. I have used NEWTON-RAPHSON method to find the unknown parameters of 5 BUS systems. The power flow computation consists of imposing specified power and voltage input conditions to a power network and producing the complete voltage information at all the system buses. The calculation is required for both the steady state analysis and the dynamic performance evaluation of power systems.3The paper also describes the undergoing integration and initialization of the well-known system software MATLAB with the load flow program.

Keywords: Power flow, Bus Classification, Five Bus System, Newton Raphson method, Voltage profile. Real and Reactive Power.

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37.

Authors: **Kunj Karia, Neha Chanchlani, Karan Kashyap, Mona Deshmukh**

Paper Title: **Krishi Sahyog: Image based Cognitive E-Learning**

Abstract: Krishi Sahyog is a web-based solution developed to provide basic education about farming techniques and usage of tools. The uniqueness of this project lies in the fact that it takes into account the present day farming scenario. Krishi Sahyog will help the farmers to understand various farming techniques and will acquaint them with the latest tools and technologies by means of video tutorials in regional languages. This Human Computer Interaction project, an e-learning website, is to help them get a hang of the latest technologies and the latest tools albeit not having any basic technical education, which will also make them aware of the market rate, owing to which they will be aware of the current rate of their product as compared to current market scenario. Also, the weather forecast feature will help them plan their crop accordingly.

Keywords: Human Computer Interaction, image based e-learning, video tutorials, optimization, regional languages.

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38.

Authors: Rahul Krishnaji Bawane, S.V. Channapattana, Nilima Baliram Gadge, Sandip M. Ingole

Paper Title: Experimental Investigation of Performance Characteristics of Calophyllum Inophyllum Biodiesel in CI Engine by Varying Compression Ratio

Abstract: In a modern day world alternative source of energy are given importance due to gradual depletion of fossil fuels reserves vegetable oils can be used as an alternative to diesel in CI engines. The use of vegetable oils in CI engine results in low CO and HC emissions compared to conventional diesel fuel. The present study covers the various aspects of biodiesels fuel derived from calophyllum inophyllum oil, which is converted to calophyllum inophyllum methyl esters (CIME) by transesterification process. An experiment is conducted to obtain the operating characteristics of the variable compression ratio (VCR) engine run on biodiesl made from calophyllum inophyllum oil, at various compression ratio, and the results are compared with diesel. From the comparison of results, it is inferred that the engine performance is improved with significant reduction in emissions for the chosen biodiesel without any engine modification. The effective compression ratio can be fixed based on the experimental results obtained in the engine since the findings of the present research work infer that the biodiesel obtained from Calophyllum Inophyllum oil is a promising alternative fuel for direct-injection four-stroke VCR engine.

Keywords: Biodiesel, Calophyllum Inophyllum oil, Transesterification, Various Compression Ratio, Performance and Emission Characteristics

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39.

Authors: Anju Bansal

Paper Title: Assessing the Relation Between Quantity of Test Cases and Amount of Code Coverage

Abstract: The software testing process can be unpredictable due to deficiencies in the measurement process, resulting in poor quality of software releases. Code coverage analysis is a vital activity in any software testing process. It provides developers with a measure of how well their source code is being exercised by the test runs. Several types of code coverage include the statement, branch and symbol coverage. The focus of this paper is to find out the relationship, if any, between the quantity of test cases and amount of code coverage. Code coverage process is automated through software known as code coverage tool. In this research, NCover code coverage tool is used to measure the above mentioned relationship. NCover is the .Net code coverage tool which shows the untested part of code. For analyzing the relationship, we have used a project "Secure Mailing System" which a web based application that sends and receives messages in a secure manner by encrypting them. Results showed that there is no relationship between number of test cases and amount of code coverage. Code coverage depends on the quality of test cases rather than the quantity. The association found in this research is an important software quality indicator capable for use in describing the software test effectiveness. The results of this research are valuable data for guidance to future research in code coverage analysis.

Keywords: Code Coverage, Coverage Metrics, NCover, Software Testing

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Authors: **J.B.Shaikh, J.S.Sidhu**

Paper Title: **Experimental Investigation and Optimization of Process Parameters in Turning of AISI D2 Steel using Different Lubricant**

Abstract: Vegetable oils have traditionally been applied in food uses but recent trend suggests that it has economic usefulness as an industrial fluids. Increasing crude oil prices and emphasis on the development of renewable, environment friendly fluids have brought vegetable oils to a place of prominence. As environment pollution and health problem are becoming more and more concerned, the use of environment friendly lubricants is strongly supported by manufacturers'. The objective of this work is to determine the influence of lubricant on surface roughness and material removal rate (MRR) by using CNC LATHE Machine with AISI D2 steel. Taguchi Method is used for determining and optimising operating parameters. The experimentation is proposed to identify the influence of cotton seed oil on AISI D2 steel. Further the usability of cotton seed oil will be checked in turning operation at low and high speeds. The performance of cotton seed oil is compared with servo cut oil and soybean oil. The above experimentation results may help practitioners to compare and increase MRR, Surface finish using more environment friendly oil as lubricant.

Keywords: Cotton seed oil, Servo cut and soya bean oil, AISI D2 steel, CNMG carbide insert and Taguchi method.

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Authors: **Tripti Yadav, Aditi Gupta**

Paper Title: **Application of Ayurveda for Treatment of Non Communicable Disease - Human Blood Cancer**

Abstract: Acute myeloid leukemia is a cancer of the blood and bone marrow. This type of cancer usually gets worse quickly if it is not treated. It is the most common type of acute leukemia in adults. Benefits of ayurveda utilized in cancer treatment are Increase haemoglobin & platelates, Maintain W.B.C. count, Increase immunity, Increases Appetite, increase Sufficient blood supply to every part of body, Reduce weakness& laziness, Reduces side effects of allopathy, Feel fresh & energetic all the time, Heal wounds, Reduce depression, Useful as a Tonic for all age groups to maintain good health and most effective on all types of blood related disorders. Thus ayurveda can be helpful in the management of cancer in many ways such as—prophylactic, palliative, curative and supportive.

Keywords: ayurveda, haemoglobin, platelates, allopathy.

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Authors: **P.Rathina Kumar, M.G.Thiruselvan, J M Babu, M.Rajagopal**

Paper Title: **Weight Optimization of Buck Stays using Castellated Beams**

Abstract: The present water-tube boiler construction is based on membrane walls (tube wall panels) to form furnace envelope. Buckstay is a supporting element external to the boiler envelope stiffening the furnace against pressure differentials between gases inside the furnace and outside atmosphere. The membrane walls forming the furnace envelope alone could not withstand those pressure differentials. Hence membrane walls have been stiffened with the buckstay system placed to prevent large deformations. Buckstays are designed in accordance with any structural codes (IS 800, BS 5950 etc.) against shear, bending and axial stresses. Typical rolled & fabricated 'I' sections may be used as buckstay beam. This technical paper provides applicable loadings on buckstay, design considerations design procedure and to reduce the weight of buckstays using castellated beams.

Keywords: Water tube boiler, boiler construction, supporting structure, mechanical properties.

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Authors: **S. M. Lim, D. C. Wijeyesekera, A. J. M. S. Lim, I. B. H. Bakar**

Paper Title: **Critical Review of Innovative Soil Road Stabilization Techniques**

Abstract: New roads are vital socio-economic pathways to a better quality of life for the thirty-five per cent of the Malaysian living in rural areas. However, building of roads in rural areas is always hindered by geographic limitation and often can be costly and energy inefficient. Hence it causes more adverse impact on the environment. Roadways designed for low-volume traffic are constructed of local soils containing high percentages of fines and high indices of plasticity. These soils may not have characteristics appropriate for use in soil road construction, but can often be upgraded with soil stabilization technology to successfully recondition and strengthen existing road base and sub-base materials for extended life and heavier traffic duty. In this paper, an attempt is made to bring in together soil road stabilization technologies for the extremes of dry and wet condition and discuss their positive impacts so as to convince the field engineers to adopt such technologies effectively.

Keywords: California bearing ratio; enzyme; soil roads; soil stabilization.

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Authors: **Nitha V Panicker, Sukesh Kumar A**

Paper Title: **BER Performance Evaluation of Different Digital Modulation Schemes for Biomedical Signal Transceivers under AWGN and Fading Channel Conditions**

Abstract: The RF transceivers play an important role in the wireless medical monitoring system.

Compared to the conventional RF transceiver, the transceiver in medical sensor nodes has more stringent constraints in terms of power consumption, size limitation and the quality of transmission. Digital modulation schemes used in the wireless transceivers plays an important role in the performance of the transceiver. In this paper the Bit error rate (BER) of different digital modulation schemes are compared under AWGN, Rayleigh and Rician fading channels to identify a suitable digital modulation scheme for biomedical application.

Keywords: probability of error, BER, transceiver, AWGN, Rayleigh, Rician

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Authors: **R. K. Raghuwanshi, V. K. Verma**

Paper Title: **Mechanical and Thermal Characterization of Aero Grade Polymethyl Metha Acrylate Polymer used in Aircraft Canopy**

Abstract: Aircraft canopies are designed for high visibility and resistance to damage from foreign objects. The trend in aircraft canopy design is towards stronger, tougher, and thicker canopies. The drive towards lighter aircraft is leading towards the trend to reduce weight associated with the systems. The system must be reliable, safe, lighter in weight, and cost effective. Acrylics are thermoplastics which are widely used in diverse industries such as building, automotives, lighting appliances and aircrafts. The term acrylics not only covers the polymers and resins made from acrylics esters, but also polymerisable derivatives of both acrylics and methacrylic acids as well as the acid chlorides nitrides and amides. Natural gas, compressed gas and acetone are the basic raw materials from which monomers for acrylics resins are produced. By combining the carbon, hydrogen, oxygen and nitrogen from the natural gas and air, methanol and ammonia are obtained. These raw materials and intermediates are then converted in several steps to PMMA and other members of broad family of acrylics monomers Polymerization is accompanied by adding organic catalyst and heat to the reactive mixture through either bulk, suspension or emulsion polymerization. Moreover, stress whitening quantification methods in the literature are simply used to compare different testing conditions or material compositions. A new approach for stress whitening quantification is essential for establishment of quality control over thermoformed products and development of possible relations between stress whitening level and the state of thermoformed product. It is also desirable to replicate actual thermoforming procedure on small scale samples rather than large size panels in order to reduce the cost and the labor in such experimental studies. PMMA are virtually unaffected by alkalis, hydrocarbons acids, saltwater, photographic or battery solution. PMMA resins are available in a complete range of transparent, translucent, opaque and custom colors in varying grades of melt flow and heat resistance. Other properties include a high Young's modulus and greater hardness. PMMA is one of the hardest and highly scratch resistant thermoplastic. Parts made of PMMA have high mechanical strength and good dimensional stability.

Keywords: Poly methyl methaacrylate, Aircraft canopy, Environmental degradation, Mathematical modeling

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46.

Authors: **Avinash Taskar, Bhushan Sinkar**

Paper Title: **Privacy-Preserving Location Query Service using Privacy Preserving Distance Computation**

Abstract: Today's world is none of other than Smart Phones, Tablets, and High Speed Media, and its context-rich functionalities attract considerable users. Many LBS providers use users' location information to offer them convenience and useful functions. However, the LBS could greatly breach personal privacy because location itself contains much information. Hence, preserving location privacy while achieving utility from it is still an challenging question now. This paper tackles this non-trivial challenge by designing a suite of novel fine-grained Privacy-preserving Location Query Protocol (PLQP). Our protocol allows different levels of location query on encrypted location information for different users, and it is efficient enough to be applied in mo bile platforms.

Keywords: LBS, protocol, PLQP.

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47.

Authors: **Neelam Thakur, Ajay Kumar Yadav**

Paper Title: **Design of Novel UWB Coupled Line Band Pass Filter with Improved Stop Band Performance**

Abstract: As we know that the conventional filter synthesis procedure is adequate only for the relatively narrow band filters and is not suitable for the Wideband and Ultra wideband filters .Therefore we are intend to design a Ultra Wideband filter. In this study a compact Ultra Wide Band pass filter consisting of quarter wave resonant conductor like micro strip lines is proposed to design. We have to increase the Bandwidth by using suitable techniques also have to improve the stop band performance. A microwave filter is frequency selective two-port network used to control the frequency response at a certain point in a microwave system by providing transmission at frequencies within the pass band of the filter and attenuation in stop band of the filter. Microwave filters specifically band pass filters have found large number of application in varying fields such as satellite communication, GSM networks, Bluetooth, remote sensing, navigation etc.

Keywords: GSM, Bluetooth, Remote Sensing, Navigation, Ultra Wideband Filter

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48.

Authors: **Swapnali Zagade, Smita Bhosale**

Paper Title: **Secret Data Hiding in Images by using DWT Technique's**

Abstract: Steganography method used in this paper is based on biometrics. And the biometric feature used to implement steganography is skin tone region of images [1]. Communication of data by maintaining confidentiality is a major issue everywhere, so to increase the security a non – conventional approach called steganography is proposed. "Steganography" is an art of "hiding data within data" [1, 2]. In general, Stego means "covering" and graphic means "writing". Combining these two terms gives the meaning of steganography, i.e. "covered writing" [2]. Here secret data is embedded within skin region of image that will provide an excellent secure location for data hiding. For this skin tone detection is performed using HSV (Hue, Saturation and Value) color space. Additionally secret data embedding is performed using frequency domain approach - DWT (Discrete Wavelet Transform). In DWT Different techniques are used. Secret data is hidden in one of the high frequency sub-band of DWT by tracing skin pixels in that sub-band. Different steps of data hiding are applied by cropping an image interactively. Cropping results into an enhanced security than hiding data without cropping i.e. in whole image, so cropped region works as a key at decoding side. This study shows that by adopting an object oriented steganography mechanism, in the sense that, we track skin tone objects in image, we get a higher security. And also satisfactory PSNR (Peak- Signal-to-Noise Ratio) is obtained and MSE.

Keywords: Skin tone detection, B-Panel, Cropping, DWT Security, PSNR, MSE.

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Authors: **Sushant Wagh, Dhananjay Panchagade**

Paper Title: **Analyzing Effect of Impeller Width on Mass Flow Rate of Centrifugal Blower using CFD**

Abstract: to predict the mass flow rate from the centrifugal blower, Computational Fluid Dynamics (CFD) analysis is one of the advanced tools used in industry. A detailed CFD analysis was done to predict the mass flow rate at outlet of blower for different widths of impeller. The CFD analysis was done using Fluent software. The CAD models of the blower were modeled using CAD modeling software ProE WF2. Three different CAD models were made with impeller width of 17, 20 and 21.5 mm at the tip. The CFD results were validated experimentally for 17 mm width impeller by measuring the outlet velocity with the help of an anemometer and then calculating mass flow rate. It was observed that CFD results were having very good correlation with measured values.

Keywords: CFD, Blower, Mass flow Rate, Impeller Width

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50. **Authors:** **Rukhsana Khan, Prashant Sonare, Yogesh Sharma**

	Paper Title:	**Comparison of Dual Band UWB Microstrip Antennas**	
	Abstract: The basic objective of the paper is to design a microstrip patch antenna for UWB wireless communication. The paper presents different types of microstrip antennas and compares their performance based on various characteristics so as to find the best antenna that can be used We have compared them on the basis of gain, return loss, VSWR, radiation efficiency, bandwidth, single and dual frequency operation. The developed prototype may find its application in mobile networks, base antennas, IEEE 802.11 a and j standards. Conclusion has been drawn from the two designs and the antenna providing optimal performance is selected for further implementation **Keywords:** Gain, MoM, modified E-shape. return loss VSWR **References:** 1. Ramesh Garg, Prakesh Bhartia ,Inder Bhal, Apisak Ittipiboon ,Micro strip Antenna design handbook, Boston, Artech House. 2. J.R.James and P.S. Hall, Handbook of Micro strip Antenna London, Peter Perigrinus, 1989. 3. Roger F. Harrington, Field computation by moment methods 4. C.A. Balanis, Antenna Theory analysis and design, 2nd Edition 5. K.L. Wong, "Compact and Broadband Micro strip Antenna", John Wiley & Sons, New York, USA, 2002 6. G. Kumar and K.P. Ray, "Broadband Micro strip Antennas", First Edition, USA, Artech House, 2003 7. Amit A. Deshmukh and K. P. Ray, "Compact Broadband Slotted Rectangular Micro strip Antenna", IEEE VOL antennas and wireless propagation letters, 8, 2009 8. Zulkifli, F.Y. ; Halim, H. ; Rahardjo, E.T. "a compact multiband micro strip antenna using u slot ant s slot "Antennas and Propagation Society International Symposium, 2008. AP-S 2008. IEEE 9. E. Lee, P. S. Hall, and P. Gardner, "Dual Band Folder Monopole/Loop Antenna for Terrestrial Communication System", Electron. Lett, vol-36, pp. 1990-1991, Nov 2000 10. Alok Singh,"Dual band E-shaped patch antenna (ESPA) for ultra wide band application,"978-1-4244-2802-1/09/2009 IEEE	**239-243**
51.	**Authors:**	**Manjula Das Ghatak, P. Mahanta**	
	Paper Title:	**Kinetic Assessment of Biogas Production from Lignocellulosic Biomasses**	
	Abstract: In this paper the kinetics of biogas production was studied by performing a series of laboratory experiments using different lignocellulosic biomass mixed with fresh cattle dung at three different temperatures. Laboratory digesters each of 1000 ml capacity were used for the laboratory experiments in batch mode. Five different types of lignocellulosic biomasses such as bamboo dust, saw dust, sugarcane bagasse, rice straw and rice husk were considered for biogas production, each mixed with fresh cattle dung, in the ratio of 1:3. Water was mixed with the prepared feed material in 1:3 ratio for digestion in the aforementioned digesters. The experiments were carried out in the temperature range 45°C-55°C in a step of 5°C. The purpose of this research was to study the biogas production kinetic from lignocellulosic biomass in batch mode anaerobic digestion. Modified Gompertz equation was used to compare the data obtained from the experiments. It was found that the kinetic parameters such as biogas production rate (U ml/gm/day) and maximum biogas production potential (A ml/gm) improved with increase in temperature for all the biomasses, whereas the lag phase period (λ days) reduces with increase in temperature. **Keywords:** anaerobic digestion, kinetics, biogas production, lignocellulosic biomasses, batch mode. **References:** 1. Raven, P.H., Evert, R.F.: Biology of plants (6th edition). W.H. Freeman and com-pany/Worth Publishers, (1992). 2. Sims, Kristen M.: Strategies to enhance conversion of lignocellulosic biomass to fermentable sugars and to enhance anaerobic digestion of algal biomass for biomass production, All Graduate Plan B and other Reports. Paper 256. (2013). http://digitalcommons.usu.edu/gradreports/256 3. Fan, L.T., Gharpuray, M.M., Lee, Y.H.: Evaluation of pretreatment for enzymatic conversion of agricultural residues. Biotechnol. Bioeng. Symp., 11, 29-45 (1988). 4. Palmowski, L., Müller, J.: Influence of the size reduction of organic waste on their anaerobic digestion. Proc. 2nd International Symposium on Anaerobic Digestion of Solid Waste, IWA Publishing, London, 137–144 (1999). 5. Lehtomaki, A., Huttunen, S., Rintala, J.A.: Laboratory Investigations on co-digestion of Energy Crops and Crop Residues with Cow manure for Methane Production: Effect of Crop to Manure Ratio. Resources, Conservation and Recycling. 51, 591-609 (2006). 6. Das Ghatak, M., Mahanta, P.: Biogas production from lignocellulosic biomasses. Proceedings of the 22nd National and 11th International ISHMT-ASME Heat and Mass Transfer Conference, organized by IIT Kharagpur, India, 28th to 31st Dec'2013. 7. Hills, D.J., Roberts, D.W.: Anaerobic digestion of dairy manure and field crop residues. Agricultural Wastes, 3, 179-189 (1981). 8. Usman, M.A., Olanipekun, O.O., Ogunbanwo, O.A.: Effect of temperature on Biogas production from lignocellulosic substrate. International Journal of Research in Chemistry and Environment, 2, 68-71 (2012). 9. Mahanta, P., Saha, U.K., Kalita, P.: The influence of temperature and total solid concentration on the gas production rate of a biogas digester. Journal of Energy in Southern Africa. 15, 112-117 (2004). 10. Carlos, V., John, B.: Anaerobic Digestion of Laminaria digitata: The effect of temperature on biogas production and composition. Waste Biomass Valor, 4, 509-515 (2013). 11. Das Ghatak, M., Mahanta, P.: Effect of Temperature on Biogas Production from Lignocellulosic Biomasses, 1st International Conference on Non Conventional Energy (ICONCE 2014), published in IEEE xplore digital library, pp.117-121. (2014), DOI:10.1109/ICONCE.2014.6808702 12. Garba, B: Effect of temperature and retention period on biogas production from lignocellulosic material. Elsevier science Ltd. 938 (1996). 13. Van Lier, J B.: Thermophilic anaerobic wastewater treatment: temperature aspects and process stability. Ph.D thesis, wageningen Agricultural University, Wageningen, The Netherlands (1995). 14. Feilden N.E.H.: A note on the temperature for maximum net gas production in an anaerobic digester system. Agricultural Wastes, 3, 75-79 (1981). 15. Henze M. and Harremoes P.: Anaerobic treatment of wastewater in fixed film reactors – a literature review. Wat Sci Techn, 15, 1-101, (1983). 16. Rintala J.A. and Lettinga G.: Effects of temperature elevation from 37 to 55 °C on anaerobic treatment of sulphate rich acidified wastewaters. Environ Technol Lett, 13, 801-812 (1992). 17. Speece R.E. and Kem J.A.: The effect of short-term temperature variations on methane production. J Wat Poll Contr Fed, 42, 1990-1997, (1970). 18. Van Lier J.B., Rintala J., Sanz Martin J.L. and Lettinga G.: Effects of short-term temperature increase on the performance of a mesophilic UASB reactor. Water Sci Technol, 22, 183-190 (1990).	**244-249**

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52.

Authors: **Jitendra Kumar Gothwal, Ram Singh**

Paper Title: **Study of Fragile Watermarking to Protect the Fingerprint Database Template**

Abstract: Biometric based authentication, described as the science of recognizing an individual based on physical or behavioral characteristics for identity verification is becoming a security mainstay in much areas. Biometric systems have now been deployed in various commercial, civilian, and forensic applications as a means of establishing identity. Protection of biometric data & templates is gaining interest and crucial issue for the security of biometric systems. Digital watermarking techniques are used to protect the biometric data from either accidental or intentional attacks. These attacks are intended to either circumvent the security afforded by the system or to deter the normal functioning of the system. Thus a protective scheme is needed which will preserve fidelity and prevent alterations. One possible solution to gratify this problem is by using fragile image watermarking techniques which is one of the sub disciplines of watermarking techniques in information hiding domain. This paper proposed one of the information hiding techniques which is called fragile watermarking techniques that will embed a secondary data into the fingerprint images to cater the vulnerability of the images. In this way, the authenticity of the fingerprint images can be established.

Keywords: Biometrics, Fingerprint, Information hiding, Fragile watermarking, Authenticity.

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53.	**Authors:**	**Abhijit D. Rane, Venkat N. Ghodke**
	Paper Title:	**Reliability of Thin (Metal) Film Resistors Impact of Pulse Screening**

Abstract: Field defects are the most delicate and severe failures passive components can have. The cost of the individual failed component is quite low, however, the consequential losses and liability-related costs could be extremely high. The impact of defects could go as far as "No-Go" for vehicles in automotive or aerospace applications or, even worse, in safety-relevant equipment. Specified failure levels of 0,05 ppm (parts per million) for thin-film resistors are quite common in quality assurance contracts between component supplier and customer today. That sounds quite low. But in practice that still means accepting a thousand more or less severe field defects amongst approx. 20 billion produced, sold, and used metal-film resistors world-wide per year. In a long-term study (more than 8 years) the root causes of field defects on thin-film resistors have been studied. Two major groups were isolated and Investigated intensively: Defects cause by (specified) pulse loads, and Defects caused by corrosion of resistive films. Several improvements by reengineering on product and manufacturing process were developed by project teams. The effects will be discussed in detail. As a result of this basic long-term process the failure rate of thin film resistor has been dramatically reduced by three orders of magnitude, down towards sub-ppb-level (parts per billion).Furthermore through this study new knowledge has been gained on control loops of process changes affecting field defect minimization. Paper will show the length of time after which the effectiveness of a Corrective action will become obvious in field data, and the length of time from introduction of an optimized process before significant effects on failure rates in field become measurable.

Keywords: Field defects, Pulse load application, Electrochemical corrosion, Failure rate, Defect level.

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54.	**Authors:**	**Rashmi Kashyap, Jaspal Bagga**
	Paper Title:	**Equalization Techniques for MIMO Systems in Wireless Communication: A Review**

Abstract: The main objective of this paper is to provide a review of equalization techniques in multiple input, multiple output (MIMO) communication system. In wireless communication inter symbol interference is major obstacle which greatly affect the data quality. The chief goal of equalization techniques is to rebuild the actual signal with the help of filter or any other methods and remove the effect of ISI so that the reliability of data transmission is maintained. Different kind of equalization techniques proposed earlier has been reviewed here.

Keywords: MIMO, interference, MMSE, Adaptive, filter, ISI

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Authors: **Vedkiran Saini, Parvinder Bangar**

Paper Title: **Design and Implementation of Advanced Encryption Standard Algorithm-128 using Verilog**

Abstract: Security has become an increasingly important feature with the growth of electronic communication. The Symmetric in which the same key value is used in both the encryption and decryption calculations are becoming more popular. AES is a symmetric encryption algorithm processing data in block of 128 bits. Under the influence of a key, a 128-bit block is encrypted by transforming it in a unique way into a new block of the same size. In this paper our main concerns is study AES algorithm and implement all modules of AES algorithm on FPGA. This methodology uses verilog HDL implementation of all the modules of AES algorithm Substitution Bytes Transformation, Shift Rows, Transformation, Mix Columns Transformation, Add Round Key Transformation and present power two different frequency 25 MHz. and 50 Mhz. frequency. The codes have been synthesized using Xilinx ISE 9.1i software for a Virtex 5 FPGA device.

Keywords: Advanced Encryption Standard (AES), Rinjdael, Cryptography.

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Authors: **Bhalchandra D. Dhokale, Ramesh Y. Mali**

Paper Title: **A Robust Image Watermarking Scheme Invariant to Rotation, Scaling and Translation Attack using DFT**

Abstract: Rapid development of digital technology has improved the ease of access to digital information copied, processed, stored and distributed among unauthorized users using freely available software. It also leads to the consequence of making the illegal production and redistribution of digital media easy and undetectable. Hence, the risk of copyright violation of multimedia data has increased due to the enormous growth of computer networks So, digital watermarking technique provides solution to the problem. Watermarking is the process in which an informal data is incorporated in original data to protect the owner's copyright over that content... Traditional watermarking schemes are sensitive to geometric distortions, in which synchronisation for recovering embedded information is a challenging task because of the disorder caused by rotation, scaling or translation (RST). The existing RST resistant watermarking methods still have limitations with respect to robustness, capacity and fidelity. Several types of watermarking algorithms have been developed so far each of which has its own advantage and limitations. Among these discrete Fourier transform (DFT) based watermarking algorithms have attracted researchers due to its simplicity and some attractive mathematical properties of DFT. Experimental results have been compared with existing algorithm which seems to be promising.

Keywords: Rotation, RST, DFT, scale, translation, watermarking.

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Authors: **A. Chandra Suresh, K.V.N.M. Prasad, R. Upender Rao**

Paper Title: **Development and Implementation of PRTOS on Robotic Navigation System**

Abstract: A real-time operating system (RTOS) is a software which ensures that time critical events are processed as efficiently as possible. In this paper, an attempt has been taken to implement a real time operating system, named Preemptive Real Time Operating System (PRTOS), in which all of the important tasks regarding to a real time application have been considered. In this PRTOS, strictly preemptive scheduling algorithm has been used. This Scheduling policy makes sure that important tasks are handled first and the less important later. In this paper we are using free RTOS. Free RTOS" is a small but powerful real-time kernel and it is used in many commercial applications. In this paper our intention is to design and construct a self navigating robot which works on Preemptive priority algorithm. This Free RTOS supports Tasking, Semaphores, Timer Management, Message Queues, Single Step Debugging support, and with Task synchronization. In this paper Robot is operated with Global Positioning system which allows the robot to aware of its position on the earth. Here PRTOS concept is implemented to control the different operational tasks .Hence This robots found some Real time applications like war fields ,mines and complex locations where the humans unable to reach.

Keywords: Pre-emitive prioroity algorithm,Task synchronisation,Real Time operating system,Scheduling policy,Self navigation,Global position System

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Authors: **Panduranga Talavaru, Nagaraj Naik R, V. Kishore Kumar Reddy V**

Paper Title: **Microcontroller Based Closed Loop Speed and Position Control of DC Motor**

Abstract: Direct current (DC) motor has become an important drive configuration for many applications across a wide range of powers and speeds, due to its easy control and excellent performance. This project is mainly concerned on design and implementation of bidirectional dc motor speed and position control system by using microcontroller ATMEGA32 and Lab VIEW software. It is a closed-loop real time control system, where optical encoder is coupled to the motor shaft to provide the feedback speed signal and angular position of shaft to the microcontroller. Pulse Width Modulation (PWM) technique is used which is generated using microcontroller Atmega32 the PWM signal generated will drive the motor driver circuit. By varying the duty cycle the voltage across the motor is varied. Lab VIEW software is used to provide a graphic user interface (GUI) for the user to enter desired speed or desired angle. From the hardware results it is observed that the speed of dc motor remains constant irrespective of the load across it. The angular position control was on par with the desired values.

Keywords: Mmicrocontroller ATMEGA32, Graphical User Interface, Pulse width modulation

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Authors: **Priyanka Nanaware, Rahul Ambekar**

Paper Title: **Enhancing Scalable Database-Driven Reverse Dictionary**

Abstract: Contrasting a traditional Forward Dictionary which convert word to their meaning ,we express design and implementation of reverse dictionary, a reverse dictionary return a set of candidate words that assure the input phrase, that input phrase concerning the desired idea. in current paper , we here a set of algorithms and the results of a set of experiment showing the retrieval accurateness of our methods and the runtime response time performance of our completion. This effort has Major useful for general public those who work closely with word also in general field of conceptual search. Our conduct experiment judge against the quality of the result to currently available implementations of reverse dictionary also to provide major improvements in performance level.

Keywords: Dictionaries, Search process, Web-based services, Reverse mapping

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Authors: **Vijay Singh Solanki, Siddhartha Rokade, Anuj Jaiswal**

Paper Title: **Leakage of Transit Ridership in BCLL Bus Service over Private Bus Service Provider in Bhopal**

Abstract: Leakage in the primary public transport system comparing other secondary private transport is major problem in Bhopal as other Indian cities. There are numbers of corridors on which both BCLL buses (government undertaking) and private buses are running, but major problem is leakage in transit ridership mean in these corridor the ridership in private buses are more compared to the BCLL buses although the better facilities are provided in BCLL buses. This becomes the major cause that affects the revenue of BCLL buses which are government undertaking. For increasing the revenue of BCLL buses, there is a need to shift the bus users from private bus service to BCLL bus services. For this study, we select the corridor from HEG Mandideep to Bharat Takies known as Trunk Route no.2 (TR-2) for identifying the reasons for leakage in transit ridership. In this study we have selected three parameters of travel behavior as they directly affected the demand generation in our context. The selected parameters are travel cost, travel time and service qualities as mentioned in the study. Six major bus stops in the corridor are selected and conduct the opinion survey along these stops mainly to understand the reasons for not using BCLL for that trip and the priority under which a commuter can have the mode choice.

Keywords: Leakage in Transit Ridership, BCLL, Public Transport System.

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Authors: **Lasker, Md. Minhaz Zaman, Majumdar, Md. Shahadat Hossain, Chowdhury, H.M. Ashiqur Rahman Ferdous, Jannatul, Chisty, Nafiz Ahmed**

Paper Title: **Design of a Device for Power Harvesting From Radio Frequency Signal**

Abstract: This paper discusses a prototype that will harvest available RF waves in urban areas especially from 700 MHz to 6 GHz. The harvested energy, which of very low magnitude, is later amplified to a suitable value for the use in consumer appliances, especially for mobile devices. It will increase the mobility of the device and allow to use the unused electromagnetic wave for daily purposes, thus reducing the pressure on national power grid in a broad sense. In addition describes efficient methods for extracting DC power from electromagnetic radiation.

Keywords: Yagi-Uda antenna, CST software, RF signal, Energy harvesting device

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62.

Authors: **Pramod Kumar Sahu, Dinesh Kumar Whavnani**

Paper Title: **Thyroid Segmenetation and Area Measurement using Active Contour**

Abstract: In this paper, we are presenting a simple guide to determine the thyroid Segmentation and Area lobes in the thyroid ultrasound image using a MATLAB. The thyroid measurement, recognition and segmentation system is very useful in the medical field because it measurement is important for the doctor diagnostic and medical analysis. Ultrasound image using undergoes the contrast enhancement and enhancement image .The enhancement image is used segmentation the thyroid region by local region active contour. The thyroid region is segmented into the 2 parts that is right and left with the active contour method separately. the thyroid have two lobes; right lobe and left lobe. We take five samples, different people have different size and area of thyroid, especially for measurement of the width, depth and area Therefore, measurements only involve the width, depth and area of the thyroid of particular region. The result of thyroid measurement is successfully calculated in pixel unit that can be converted in centimetre (cm) unit. The proposed method is benefited to enhance the image and segmentation the thyroid lobe.

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Keywords: Thyroid medical imaging, ultrasound image, Contrast Enhancement, local area Active Contours

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Authors:	**Y. M. Gaikwad, K. N. Pawar**
Paper Title:	**Artificial Neural Network Based Visual Recognition System using Dwt for Hearically Impaired Person**

Abstract: Generally image processing is done to process an image for different application. There is variety of transform base feature extraction method. Visual recognition system or lip reading method is important generally in noisy condition. The new modality in image processing area is gives you dictation of voice. The discrete cosine transforms (DCT) and discrete wavelet transform (DWT) are techniques for converting a signal into elementary frequency components. These are widely used in image compression. Here we develop some functions to compute the DWT and to compress images. These functions illustrate the power of Mathematic in the prototyping of image processing algorithms. The rapid growth of digital imaging applications, including desktop publishing, multimedia, teleconferencing, and high-definition television (HDTV) has increased the need for effective and standardized image compression techniques.

Keywords: ANN, DCT, DWT, HMM.

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64.	**Authors:**	**Alireza Memarian, Navid Niazkar**	
	Paper Title:	**The Lost Space of Architecture in the Context of Urban Lost Space**	
	Abstract: Among various functional concepts in architecture what takes our attention mostly, is the word "SPACE". The concept which might have been unseen in many cases of today world's architecture, but this carelessness has been developed until we can see its impact on conversion of the word "UNSEEN" to the word "LOST". Space…? Lost…? First it is better to perceive the meaning of space and after that it is more interesting to know what the "Lost Space" means. One and maybe the most essential duty of any architect is the creation of space. But, what is the definition of "SPACE"? Assuming architecture presents the issue of space, having in mind the present time's notions as well as being responsible for the projects prospective and demands, taking into account what the space accepts and how it happens, will bring us to more qualitative aspects of space. The essential elements of architectural design consist of two factors "Mass and Space". The essence of design is the interaction between these two factors. The awareness of space is much more than a mental activity. This awareness occupies all domains of our senses and feelings, which needs a vast presence of essence to find a perfect response. In fact, any surrounded space, or better said, a building as a small member of the city, has to be in total harmony and solidarity with the whole city and the adjacent areas. Lack of attention to these criterions, qualitative policies and aesthetic parameters had led to our characterless current urban images. The space which is the basics for nowadays cities and urban architecture had lost its inner spirit; chiefly, it is a blind and decayed space without any organic communication with important capabilities of human being. Lack of various qualitative surfaces and volumes in space is simply the reduction of space to the quantitative aspect of humans. This happened while the current human being had broken down the priority of tradition due to its limitations and managed to get into the pathway of the modern world with a joyous approach. Another important issue in creating space is memory which is used as an essential factor in space formation and is dependent on the political, social and economic fluctuations further than functional operations. With growth of urbanism and the massive movement of the city toward modernism, an avoidable discussion, is the creation of space as well as its influence on the creation of place. In other words, what we understand from our environment and our recognition and perception of that space, is quite a different category of the massive shape through the surrounding walls. The important issue that emerges is the spatial experience and the massive function of space which makes its identity. In this research by utilizing both field research and library researches, the above discussion is complied and studied. We try to work with creating dynamics and shaping spaces with modern architecture through identifying the relation between architecture and urbanism in the middle of our cities. Also, this is actually an effort through identifying dynamic spaces in the middle of unidentified ones, and at the end donates them once again to the cities. On the procedure of this study, classified lost spaces are obtained and finally tried to design a space with the capability of responding to the primary demands of the contemporary society and also the future demands which are hardly to foresee;, a space for an interactive sensibility and responsibility not dictating an idea or aManuscript Received on June 2014. Alireza Memarian, Asst. Prof., Department of Architecture, (Ghaem Shahr Branch), Islamic Azad University, Ghaem Shahr, Iran. Navid Niazkar, AA (Architectural Association School of Architecture) Membership & Visiting Member, London, England. BA of Architectural Engineering, UCL (University College of Rouzbahan), Sari, Iran definite rule.	**311-321**

Keywords: odern architecture.

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65.	**Authors:**	**Monika Tiwari, Kanwar Preet Kaur**	
	Paper Title:	**Analysis on Lowering the Effect of Timing Jitter in OFDM System using Oversampling**	
	Abstract: The limitation of the high speed analog to digital converters and synchronization systems causes the		**322-324**

miss-timed sampling of the signals, which results the timing jitter. The seriousness of this effect greatly increases for the multicarrier systems like OFDM, because of their structure where all sub-carriers may get affected by single sample. The removal (or suppression) of the timing jitter is hence one of the challenging task for the system designers. This paper presents an analysis of one of the jitter suppressing technique named "Over-Sampling", for its effectiveness the paper presents a detailed analysis on the basis of most practical OFDM mathematical modeling and simulation. The presented model facilities to analyze different size, type of modulation symbol, effect of jitter probability, amplitude independently, and to select different OFDM modulation techniques. Finally the simulation result shows that the BER can be reduced by half for any value of jitter at fixed AWGN when the oversampling rate is doubled.

Keywords: Timing jitter, OFDM, oversampling.

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Authors:	**Kale Sanket B, Satyajit A. Pangaonkar**
Paper Title:	**Design and Development of Low Cost Automotive Vehicular Communication System Based on ARM**

Abstract: Several European research projects in the vehicular area address the enhancement of vehicular safety. In the frame of the Caring Cars project, an on-board car-gateway embedded architecture for safety and wellness applications has been designed. This paper puts forward the essentials of this modular, dynamic and robust architecture and defines in detail the advanced navigation, Data acquisition and Safety features built in a single board computer. By mean of this device, the emergency services will always be able to track the affected vehicle and monitor the state of the vehicle. Thus the system can help the vehicle occupants and inform the status to the emergency services to save the occupants in critical situations also it gives real time traffic information Security and accident prevention on single To improve the level of supervision and management for cargo transport vehicles, especially trucks carrying coal it is important to develop transport vehicles remote monitoring module.

Keywords: Embedded Linux ,C++, Qtopia ,Qt Creator ,Linux Drivers for USB CAM ,ADC Device Drivers, UART Protocol for Data transmission & Receive for GPS and GSM Module, ARM Mini2440 Board, S3c2440 ARM 9 Processor, GPS , GSM , Temperature sensor ,USB Camera, DC Motor.

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Authors:	**Nirmala M, Hamsaveni N**
Paper Title:	**Robust Human Body Tracking using PCA and SVM Classifier**

Abstract: This paper deals with an intelligent image processing method for the video surveillance systems. We propose a technology detecting and tracking moving Human Body, which can be applied to consumer electronics

such as home and business surveillance systems consisting of an internet protocol (IP) camera and a network video recorder (NVR). A real-time surveillance system needs to detect moving objects robustly against noises and environment. In the proposed system SVM classifies the data in a wide variety range of applications. SVM is powerful to approximate any training data and generalizes better on given datasets. Extended Kalman filter which makes the system more robust by tracking and reduce the noise introduced by inaccurate detections. Extended Kalman filter outperforms other state-of –the –art algorithms in terms of efficiency, robustness and accuracy.

Keywords: Multiple moving object tracking, (IP) camera and a network video recorder (NVR)

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Authors: **Shujaat Hussain Buch, Muhammad Dilawar Bhat**

Paper Title: **Retrofitting of a Damaged School Building: A Case Study**

Abstract: A three story damaged school building which has developed multiple cracks in floor slabs is investigated and analyzed. The building vertical load paths are determined and failure patterns studied. The retrofitting (strengthening) measures are worked out. The building is provided with suitable strengthening features to limit the damage and prevent future damages.

Keywords: Cracks, retrofit, strengthening, yield-line.

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Authors: **S. B. Kulkarni, U. P. Kulkarni, Siddu Tushara M. S.**

Paper Title: **Iris Recognition using Color Models with Artificial Neural Network**

Abstract: Biometrics plays a vital role for an extensive array of highly secure identification and personal verification systems. Iris Recognition is the recognition of an individual based on iris features. It is regarded as the most promising biometric identification system available. In this paper, the iris recognition is applied on UBIRIS database. Image is segmented using circular Hough transform, then converted into a fixed sized rectangular block using Daugman's Rubber sheet model. Iris features are extracted using CMYK color model and a feature vector is created using 2D Walsh Hadamard transform, finally these are classified based on Artificial Neural Network(ANN) using MLP. Based on the database size ROC(Receiver Operating Characteristic) curve is plotted using true positive rate and false positive rate in order to analyze for what size efficiency may be good.

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Keywords: Artificial neural network, Biometrics, Receiver operating characteristic curve.

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Authors: **Rehan Masood, Babar Mujtaba, Muhammad Ali Khan, Tariq Ali**

Paper Title: **Adoption of Integrated Management System (IMS) by Construction Firms in Pakistan**

Abstract: Construction firms faced multi-faceted challenges to adopt standards due to unique operations in comparison with manufacturing firms having repetitive processes. Management systems (quality, environment and safety & health) in firms helps in development of standardized procedures and operations which are beneficial to get high performance on construction sites. Integrated Management system (IMS) is based on management system related to quality, environment and safety, which enhance the performance of firms and projects as well. This study aims to investigate the adoption and implementation of IMS in construction firms of Pakistan. Firms' websites visited for evidence of ISO certifications and then online questionnaire survey was conducted for availability and status of ISO standards; level of implementation, alignment and integration; internal and external barriers in adoption of IMS. Results showed that adoption of IMS is very low among construction firms but firms having all certifications have effective IMS; level of implementation gradually decrease from top to low category of firms; for implementation internal barriers were found as lack of skill and training, lack of awareness and requirement of high effort; external barriers were inexperience consultants; insufficient driver and benefits and high cost of certification; external barriers are more significant than internal barriers. International standards certifications should be considered by engineering councils for registrations and should be legitimate by government through national and international bodies. These standards should also be considered during contractor procurement. Contracting firms should embed international standards in to organization management system to get maximum benefits and training of these systems should be essential part of employee growth.

Keywords: Integrated management system (IMS), International standards, Construction firms, Pakistan.

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