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Paper Title: Challenges Faced By Next-Generation-Networks

Abstract: This paper will address the challenges thatNext-Generation-Networks will face and how to tackle them. As we are pumping more and more data into the current networks, there exists an inescapable need for improvement in our current telecommunication networks. This has fuelled a lot of research and surveys on the development of Next-Generation-Networks. But developing these "better networks" is not a very easy task and the process will face a lot challenges such as, (1) maintaining optimum energy efficiency, (2) keeping an eco-friendly outlook while developing new technologies, (3) dealing with security issues such as jamming and spoofing, (4) dealing with software bugs that would arise with the use of SDN (Software Defined Networking) as well as many other SDN related problems. Addressing these challenges can eventually lead to lesser costs and more efficiency.

Keywords: Next-Generation-Networks, SDN, Cognitive Radio

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2.	**Authors:** Abubakr Mustafa Elkhaleefa	**6-8**

Paper Title: Waste Engine Oil Characterization and Atmospheric Distillation to Produce Gas Oil

Abstract: Two type of used engine oil (A and B)has been characterized along with a fresh sample of each type and hence the properties changes and degradation was observed. The samples (A and B) subjected to a batch atmospheric distillation process. The distillation product analyzed and the results show that the product specifications are similar to the gas oil.

Keywords: Used engine oil, characterization, atmospheric distillation, gas oil

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Authors:	**Ionuț Daniel Smărăndescu, Petre-Marian Nicolae**	
Paper Title:	**About Electric Scooter Mobility. Aspects Regarding the Designing of a Brushless DC Motor for an Electric Scooter**	

Abstract: The paper deals with the electric scooter mobility in Europe and with the designing of a brushless dc motor for an electric scooter. In the first part of the paper, the context and the motivation of the theme are presented. In the second part of the paper, the electric scooters market is described. Then, the main parts equipping an electric scooter are exposed. The final part of the paper deals with the designing of a permanent magnet brushless dc motor for electric scooter propulsion.

Keywords: designing, electric scooter, electric scooter mobility, permanent magnet brushless dc motor.

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Authors:	**Kavita Burse, Subrato Howlader, Prateek Wankhade**	
Paper Title:	**Breathing Sensor Operated Wheel Chair for Paralyzed Persons**	

Abstract: The proposed breathing sensor based wheel chair (BSWC) can be controlled using breathing commands. Therefore a 'disabled' person can control the BSCWC by himself. Computer input system with breathing commands does not work in real time bases. Moreover it is not robust against various background noises and vibrations. Through experiment it is found that the proposed BSWC is robust against the above mentioned influencing factors. Moreover it is confirmed that the proposed BSWC can be controlled by breathing accurately and safely. The proposed research is a computer controlled wheel chair where sensor and intelligent control algorithm have been used to minimize the level of human intervention.

Keywords: BSWC, breathing sensor, wheel chair, paralysis

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5.	**Authors:**	**Suhas S, Abhishek Joshi, Ravi Srinivas, Nagarjun C S**	**17-19**
	Paper Title:	**FPGA Implementation for Integrated Circuit Technology Tester**	
	Abstract: Integrated Circuits have dominated every walk of life in the present world. In this Integrated Circuit era, the need of testing of ICs has become the need of the hour. The implementation and fabrication of new ICs on a daily basis have brought testing to new heights. Albeit these requirements, not many efficient, cheap and readily available testing solutions have been realized. In the following paper, a simple yet highly effective solution to various testing concerns of digital circuits or ICs along with its implementation has been brought out. The real time results got are validated and are readily available for verification of the design under test. **Keywords:** Digital designs, Field Programmable Gate Array [FPGA], Testing **References:** 1. Md. Fokhrul Islam, M. A. Mohd. Ali, Burhanuddin Yeop Majlis, " FPGA Implementation Of An LFSR Based Pseudorandom Pattern Generator For MEMS Testing", International Journal of Computer Applications (0975 – 8887) Volume 75– No.11, August 2013 2. R. V. PrasadaRao, N. A. Varaprasad, G. S. Babu and C. M. Mohan, "Power Optimization of Linear Feedback Shift Register for Low Power BIST Implemented in HDL", International Journal of Modern Engineering Research (IJMER), Vol. 3, Issue. 3, pp. 1523-1528 (2013). 3. C. R. Reddy, S. Zilani and V. Sumalatha, "Low Power, Low-Transition Random Pattern Generator", International Journal of Engineering Research & Technology (IJERT), Vol. 1, Issue 5 (2012). 4. Jutman, A. Tsertov and R. Ubar, "A tool for Advanced Learning of LFSR-Based Testing Principles", Baltic Electronics Conference, 2006 International. 5. Nazeih.M.Botros "HDL Programming Using VHDL and VERILOG", John Weily India, 2008.	

6.	**Authors:**	**Priyanka Khare, Kavita Burse, Anjana Pandey**	**20-23**
	Paper Title:	**Comparing Various Classification Techniques Through Weka for Ovarian Cancer**	
	Abstract: In today's world, enormous amount of data is presented in various fields. This data can provide important and helpful information for making important decisions. Data mining is the method of finding valuable information. There are numerous data mining techniques used for extracting information classification is one of them. Classification is the process of classifying various data according to established criteria. In this paper, various classification algorithms are used for classifying the data set before these relevant features are selected by the process of feature selection. The performance of various classifiers is analyzed on the basis of accuracy and time taken to build the model. **Keywords:** feature selection, classification, weka, Interquartile range, navies bayes, instance based learning (IB1) ,k-nearest neighbour (IBK) , K-STAR, logical analysis of data(LAD) Tree **References:** 1. F. J. Ferri, V. Kadirkamanathan and J. Kittler, "Feature subset search using genetic algorithms", Proceedings of the IEEE Workshop on Natural Algorithms in Signal Processing, vol. 740, 1993. 2. J. Yang and V. Hanover, "Feature subset selection using genetic algorithm", Journal of IEEE Intelligent Systems, vol. 13, pp. 44-49, 1998. 3. K. Jain and B. Chandrasekaran, Dimensionality and Sample Size Considerations in Pattern Recognition Practice, Amsterdam: Handbook of Statistics, vol. 2, 1987. 4. Blum and P. Langley. Selection of relevant features and examples in machine learning. Artijicialintelligence, 97:245- 271" 1997. 5. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.11.454&rep=rep1&type=pdf 6. http://stattrek.com/statistics/dictionary.aspx?de finition=Interquartile%20range. 7. http://www.cs.ccsu.edu/~markov/weka-tutorial.pdf	

7.	**Authors:**	**Satyapriya Behera, Deepak Khare, Prabhash Kumar Mishra, Sangitarani Sahoo**	**24-30**
	Paper Title:	**Application of Statistical Downscaling Model for Prediction of Future Rainfall in Bhudhabalanga River Basin, Odisha (India)**	
	Abstract: The impact of climate change in the hydrology sector, often require fine scale spatial resolution climate information for studying present as well as future scenario. Global climate Models (GCMs) assess climate change scenarios on coarse partial resolution. There are different techniques to downscale to downscale coarser grid scale data to finer scale as coarse resolution of GCMs data cannot be used directly to asses climate impact for a particular area. Therefore downscaling of Global climate Models (GCMs) output is important to estimate regional climate change impacts. Precipitation is one of the important climate variables that is used as inputs in hydrologic models in many water resources studies. In this present study, Statistical Downscaling Model (SDSM) has been adopted to downscale daily precipitation to generate future climate outputs for Budhabalanga river basin in Odisha. Multiple linear regression (MLR) technique is used in SDSM. The daily precipitation data (1961-2001) representing Budhabalanga river catchment area has been used as input of the SDSM Model. The model has been calibrated and validated with large-scale National Central for Environmental Prediction (NCEP) reanalysis data for the period 1961-1990 and 1991-2001 respectively. The prediction of future daily precipitation for the period 2025s, 2050s and 2080s for the study area has been carried out corresponding to Hadley Centre Coupled Model version 3 (HadCM3 A2 and B2). The study results show that during the calibration and validation, confirm the SDSM model acceptability in regards to its downscaling performance for daily and annual rainfall. The results of the downscaled daily precipitation for future period indicates an increasing trend for the period 2025s and 2050s where as decrease in trend for the period 2080s for mean daily precipitation.	

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Authors:	**Shankar Mane, S. G. Bhatawadekar, Pravin R. Kubade**	
Paper Title:	**Optimization of Processing Parameters in Electrochemical Machining of AISI 304 using Taguchi Design Technique**	

Abstract: Electro chemical polishing is a process by which metal is removed from a work piece by passage of electric current while the work is submerged in a specially-designed solution. This study investigate the effect of temperature, current, time and electrolyte composition on the surface characteristics and metal removal rate (M.R.R.) of austenitic stainless steel AISI 304 in phosphoric acid and sulphuric acid bath. In case of MRR, time was the most influential factor and then the relative influence decreases in the order current (I), temperature (T) and electrolyte composition (C). For Surface Roughness it was seen that temperature (T) being the most influential factor and current (I), electrolyte concentration(C) and time being less influential in the order they are mentioned.

Keywords: AISI 304, Electrochemical machining, Optimization

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Authors:	**Torres Ramirez Raisa Ivanova, Tambo Encalada Walter Simón, Valarezo Riofrio Jorge Michael, Gonzalez Sisalima, Fermín Alexander, Jose Leonardo Benavides Maldonado.**	
Paper Title:	**Generation of Geology, Geomorphology and Geological Threats for the Updating of the Development and Land Management Plan of Quilanga Canton of Loja Province, scale 1: 25 000.**	

9.

Abstract: This project refers to the generation of geology, geomorphology and geological hazards for the updating of the Development and Land Management Plan of Quilanga canton. For which 76 aerial photographs and Digital Terrain Model (DTM) at 1:25 000 scales of SIGTIERRAS of 2012 were used, in addition to the official geological maps of Gonzanamá and the plowed scale 1: 100 000 and topographic maps of Gonzanamá and the plowed at 1:50 000 scale The generated base cartography allowed obtaining the water supply, road network, and settlements through 3D vision allowed by the Arc Scene extension; The analysis of geology, geomorphology, and geological hazards was characterized based on the genesis, morphology, morphometry and identification of landslides; additionally, it should empathize that these digital tools allowed the obtaining the result. For each terrain feature, was obtained through the field validation photo interpreted data, which affect was georeferenced performed the respective corrections, there obtained to qualitative and quantitative end map for each one. Finally, with the assistance of information generated, the landslide susceptibility map was obtained through the State Matrix of Analytic Hierarchy, according to on the methodology that consists of an appraisal, normalization, and weighting of the factors.

Keywords: Geology, Geomorfholopy, Geological, Geographic Information Systems (GIS).

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Authors:	**Solomani Coulibaly, Sidiki Tibina Koné**	
Paper Title:	**Improving Process Quality by 5s Tool in a Handling Company: Case Study**	

10.

Abstract: To get advantage in an increasingly intense competition, companies have to satisfy their customers by offering them a service or product of quality. An unorganized work-station, uncomfortable working environment and the excessive wastes in the company are some reasons to lost competitiveness facing to concurrence. To face these challenges "Handling Co" was undertaking a project by introducing the 5S practice into their business. The present research case study reports the 5S practice experience from "Handling Co". The results show that, the 5S practice improves productivity, efficiency, customers' satisfaction of the company. Three month of 5S implementation show that productivity, efficiency and customer satisfaction have progressed from 51.5% to 75.0%. However, a greater involvement from top management and a rigorous following are absolutely necessary for the success of the 5S implementation.

Keywords: 5S, 5S Practice, 5S project, Process Quality

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Authors:	**Alex Raj S.M., Rita Maria Abraham, Supriya M.H.**	
Paper Title:	**Vision-Based Underwater Cable/Pipeline Tracking Algorithms in AUVs: A Comparative Study**	

11.

Abstract: The advancement in the field of communication has led to laying of cables in the seafloor. Pipelines that are used for transporting gas and oil are laid in a similar manner. Due to the dynamic nature of the seabed, these structures may get worn out easily and become useless. In such a situation, regular surveillance of seafloor is unavoidable. As the process is difficult for a human operator, vehicles are used for the same, and are called

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Autonomous Underwater Vehicles (AUV). AUVs carry out surveys for inspection. Embedding intelligence into AUVs increases the speed of computation and the accuracy is improved. Various sensors associated with AUVs contribute to algorithms for navigational purposes. Various techniques are in use for cable/ pipeline inspection, out of which vision based systems offer cheaper but efficient solutions. This paper provides a review on such vision oriented systems for underwater surveillance.

Keywords: Autonomous Underwater Vehicles (AUVs), navigation, Underwater image, vision-based

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Authors:	Jameel Ahamed, Hemendra Kumar Tiwari
Paper Title:	**Suppression of side lobe power for Cognitive Radios based on OFDM using Windowing Techniques**

12.

Abstract: With the introduction of new technology in wireless applications with high data rate and increase of existing wireless services, need for additional bandwidth is speedily enhancing. Existing spectrum allocation policies of the Federal Communications Commission (FCC) forbids unlicensed access to licensed spectrum, confining them to various heavily populated, interference-prone frequency bands, which causes shortage in spectrum. Orthogonal frequency division multiplexing (OFDM) is used for cognitive radio (CR) transmission because it supports high data rates that are vigorous to channel impairments. The immense problem for transmission of OFDM is high out-of-band (OOB) radiation, which is due to sinc-type function representing the symbols throughout one time constant. Thus, high sidelobe may happen that will intervene with neighboring transmissions. In this paper we used windowing techniques to decrease the effects of sidelobe transmission.

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Keywords: OFDM, CR, Windowing

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Authors:	**G. Prasanna Kumar, N. Seetharamaiah, B. Durga Prasad**
Paper Title:	**Finite Element Analysis of Magneto-Rheological Fluid (MRF) Boring Bar**

Abstract: Chatter is a concern in boring process, due to the low dynamic stiffness of long cantilever boring bars. Chatter suppression in machining permits higher productivity and better surface finishes. In order to improve the performance of boring operations, several researchers have investigated electro- and magneto-rheological fluids and piezoelectric and electromagnetic actuators as vibration absorbers. The MR fluid, which changes stiffness and undergoes a phase transformation when subjected to an external magnetic field, is applied to adjust the stiffness of the boring bar and suppress chatter. The stiffness and energy dissipation properties of the MR fluid boring bar can be adjusted by varying the strength of the applied magnetic field. In this study, a finite element model of a MR fluid boring bar is established to investigate the strength of magnetic field at various locations of the boring bar for different current inputs.

Keywords: Chatter, MR Fluid, Boring bar, Magnetic Flux Density, Finite Element Model.

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13. — **57-61**

Authors:	**F. González, W. Tambo, M. Valarezo, l. González, J. Romero, J.Benavides**
Paper Title:	**Landslide Susceptibility in the Community Neighborhood Road, the National University of Loja to 0.9 Km Stretch, the city, Canton, and Province of Loja.**

Abstract: This article has as the main purpose to identify landslide prone areas in the Community Neighborhood Road, in the section between the Julio Ordoñez Urbanization and the National University of Loja in about 0.9 kilometers in Loja city-Ecuador. The implementation needed to develop in two phases of field and office: the first was to use specialized equipment to carry out the survey of the topography, geology, land use, geomorphology and geotechnical investigation directly scan standard penetration tests (SPT), and indirectly with vertical electrical sounding (SEV). This information after being analyzed entered into software (ArcGIS 10.1. Ilwis 3.06 and ArcView 3.2) and then perform modeling using susceptibility calculation methods to landslides. The methods utilized in this investigation for determining susceptibility are, deterministic based on the computation of safety factor (FS) and heuristic method with the combination of factors maps whose weights assigned according to the knowledge of the actual conditions of the sector which obtained from the SEV, SPT, and bibliographic sources. The heuristic method was systematized in ArcGIS 10.1 software by applying the model tool builder for combining raster maps using the tool weighted sum, through the assignment of values to each of the variables that are: Geology 0.4, slope 0.3, geomorphology 0.2 and vegetation cover 0.1. In contrast, to the deterministic method, a digital terrain model (DTM) in Ilwis software was developed, after calibrated and modeled in ArcGIS 10.1 software, being the most relevant parameters angle of internal friction and soil cohesion. Moreover, an inventory of landslides was performed, which were located within the area of high susceptibility to match the physical-mechanical characteristics of the soil resulting from SPT and SEV analysis.

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Keywords: Sensitivity, SPT standard penetration test, Vertical electrical sounding SEV, Deterministic, Heuristic, Model builder, Weighted sum, DTM.

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Authors:	**Hernán Fabricio Alvarado, Emperatriz Elizabeth Bailón Abad, José Leonardo Benavides Maldonado Francisco Aleaga Loaiza, Manuel Pesantez**
Paper Title:	**Analysis of Mechanical Strength Concrete with Addition of Fiber PAMBIL**

Abstract: In the second decade of the twentieth-century housing still plays a decisive role in the quality of life of the population of the countries in the developing world and it represents the primary investment and the most important assets of middle and low-income families. However, despite acknowledging recognizing its importance, the deficits recorded for the countries of Latin America are more than 25 million housing units (CEPAL, 1995) and to Ecuador, a requirement of 1 million, two hundred thousand solutions. The causes that prevent the provision of accommodation associated with the unequal distribution of wealth, the high costs of building materials, and the dependence on technology and the lack of local research and ingenuity. Currently, the predominant use of concrete has led to the discovery of composite materials, achieved through the addition of fiber to the real matrix, aiming to reduce costs. In this case, the design of concrete performed under the Maximum Density Method and utilized Iriartea deltoidea or Pambil as fiber reinforcement, which is readily available in the province of Zamora Chinchipe, located in the southeastern part of Ecuador. It used in varying percentages of 0.50, 1.50 and 2.5% and whose sizes retained in sieves 4 and 8, placed randomly in the concrete mix. The results obtained show that the addition of fiber elements tested under compression improves the characteristics of the composite. However, about flexion the concrete strength decreases, showing not so encouraging results for the manufacture of composite concrete and fiber pambil. This adverse outcome does not guarantee the success of the composite concrete, which under experimental conditions is technically recommendable, but still does not prove to be economically appropriate solutions.

Keywords: composite materials, organic fibers. Reinforced concrete.

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16.

Authors:	**Ahmed H. El-Masry, Mohamed A. Dabaon, Tarek F. El-Shafiey, Abd El-Hakim A. Khalil**
Paper Title:	**Numerical Modeling of Innovative Connection Between RC Beam and Steel Column**

Abstract: Transferring the load from beam to the column by a safe way is considered one of the critical issues which have been studied by many researchers in many fields. The failure of the connection between the column and the beam is one of the major reasons which causes structures failure and has a great effect on the acceleration of collapse. Experimental study has been provided to investigate the transfer part technique as a structural system which aims to keep the failure location at the beams side. This paper presents the finite element modeling to simulate that technique for expanding the research field. A discussion is provided for the effect of increasing the column stiffness through the experimental results. The study indicates that the use of finite element modeling by a specific materials and elements could be given an asymptotic behavior of the behavior of the experimental test.

Keywords: Finite element modeling, RC beam, Steel column, Transfer Part.

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Authors:	Mark Obegi Kenyatta
Paper Title:	Sources of Payment Problems in the Construction Industry of Kenya: a Perspective of the National Construction Authority

Abstract: The underlying sources of payment problems have not only troubled many countries but have also seen contractors and those below the supply chain blacklisted by the credit reference bureaus. Whilst those who contract in the construction industry expect prompt and regular payments for work done, in reality this happens not to be the case. This paper therefore investigates the sources of payment problems from the perspective of the National construction authority. Besides review of secondary literature, a focus group discussion was employed to collect qualitative data. By a way of themes synchronized with a "black letters" approach, data was analyzed and discussed. The study finds out that sources of payment problems are attributable to client related factors, contractor related, actions of the consultants and the procurement route chosen. It is generally hoped that the awareness created around this subject may trigger industry to commission further research and subsequent action by a way of new regulations.

Keywords: Construction industry, Contractor, Payments, construction contracts

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Authors: **Aashita Nyati, Emil Christian, Shairal Neema**

Paper Title: **Smart Street Light System: Innovation and Revolution**

Abstract: Presently, 18-38% of the total energy bill goes to the global street lighting and most urban cities still use Metal Halide bulbs, High Pressure Sodium Vapor Lamps and CFLs that neither provide efficient lighting nor energy savings. Therefore this is one domain that needs major attention in an objective of saving energy. So, the paper discusses about the use of LED arrays powered by solar panels in the existing street light system and automate the same using Light Dependent Resistor(LDR),Passive Infrared(PIR) sensors, presence detectors and brightness sensor .

Keywords: LDR, LED arrays, Zigbee, PIR, microcontroller.

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Authors: **P.R. Thorat, K.V. Patil**

Paper Title: **Identification of Diabetic Retinopathy from Segmented Retinal Fundus Images by using Support Vector Machine**

Abstract: Segmentation of images has become important and effective tool for many technological applications like vessel segmentation from fundus images, medical imaging and many other post-processing techniques. Diabetic Retinopathy is an eye disease which is caused by changes in blood vessels of retina of diabetes. It is the primary cause of blindness in the universe. To avoid blindness of diabetes detection of diabetic retinopathy as early as possible is the only option as number of persons are becoming blind because of this disease. Many studies have shown that early diagnosis is the most efficient way to cure this disease. This paper presents identification of diabetic retinopathy from segmented retinal images by using support vector machine. In pre-processing, first the input image is converted into green channel image and converted into binary image. After that we have segmented the vessels using thresholding. For tracing of vessels, graph tracer algorithm is used. Through the project we have developed an algorithm for identifying the diabetic retinopathy from fundus images. For identification we have used GLCM features and SVM classifier together. The results indicate a potential for developing an automatic algorithm to segment and trace vessels and diabetic retinopathy classification for planning of treating the disease. For this, we have collected the database of 24 retinal fundus images from Dongaonkar Eye hospital, Kranti chowk, Aurangabad. The proposed system is implemented in MATLAB software. .

Keywords: Vessel Segmentation, Graph tracer algorithm, Feature Extraction, GLCM (Gray Level Co-occurrence Matrix), SVM (Support Vector Machine).

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	Authors:	Sheetal Shinkhede

Paper Title: Emerging Trends to Relieve Power System Stress Condition

Abstract: To relieve congestion in the power swystem while increasing static security margin and voltage profile, demand response (DR) and demand side manage-ment (DSM) encourages the costumer in smart grid to use the electricity in response to varying electricity prices. In this paper the distributed algorithm and load management for price based demand response scheduling is studied. The future scope is suggested to relive the power system stress condition. Power system stress issues like issues like small signal analysis, transient conditions and voltage stabilities are studied.

Keywords: Energy management, demand side management (DSM), demenad response(DR), load modeling

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	Authors:	Swapnil S. Jogal, K. Jayarajan, Aqleem Siddiqui

Paper Title: Effect of Link Length Ratio on the Workspace of A Delta Robot

Abstract: Delta robot design has attracted a great interest in industry and in academia. The aim of this paper is to study the effect of link length ratio on the vertical reach of a delta robot. Link length ratio is defined as the ratio of the length of a link attached to the motor at the base plate to the total length of links between the base plate and the moving plate. Based on the study, the optimum link length ratio is obtained for maximum depth of workspace. The study makes use of inverse kinematic algorithm. Workspace is plotted using MATLAB.

Keywords: Delta Robot, Inverse kinematics, Link length ratio, Workspace.

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<tr><td rowspan="3">22.</td><td colspan="2">Authors: Megha I Mathapati, Shrikant Salotagi</td></tr>
</table>

Authors: **Megha I Mathapati, Shrikant Salotagi**

Paper Title: **Handling Dead-Ends, Load Balancing and Providing Security in Wireless Sensor Networks**

Abstract: This paper represents load balancing around the dead ends using adaptive load balancing algorithm and rainbow protocol providing security using RSA algorithm. This is brief introduction to various algorithms to handle the load balancing. This represents the converge-casting protocol in wireless sensor networks. The protocol is localized and distributed, and adapts efficiently to vary traffic. Graphs are analyzed using NS-2 simulator. This is done for 41 nodes in NS-2 simulation.

Keywords: LBA, Rainbow mechanism, RSA algorithm

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Authors: **Najmus Sehar, Santosh Kushwaha, Yogesh Rai**

Paper Title: **Face Recognition Method using Mean-Shift by Means of Region Merging**

Abstract: We projected a original method for face matching from face image database. In this technique we have used set of face images because recognition conclusion is based on comparisons of face image database. In this paper we have presented an approach to region based face matching. Here the mean shift low level image segmentation method is used to segment the image into many small regions. As a well-liked segmentation scheme for color image, watershed has over segmentation as compared to mean-shift and also mean-shift conserves edge information of the object very well. The proposed technique mechanically merges the regions that are initially segmented by mean shift segmentation, effectively takes out the object contour and then, matches the obtained mask with test database image sets on the basis of color and texture. Extensive research are performed and the outcome shows that the projected method can reliably figure out the mask from the face image and efficiently matches the mask with face image sets.

Keywords: Face Matching, Image segmentation, Region merging, Watershed, Mean shift

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Authors:	M. Mansour
Paper Title:	Heat Transport Limitations and Overall Heat Transfer Coefficient for a Heat Pipe

Abstract: The objective of the present work is to investigate the heat transport limitations and overall heat transfer coefficient for a Copper - Acetone heat at different vapor temperatures. A dimensional analysis has been made to the overall heat transfer coefficient in the heat pipe, A new correlation for the overall heat transfer coefficient has been obtained . It has been found that latent heat vaporization , the pipe diameter and Reynolds number are the parameter affects the overall heat transfer coefficient. A computer program was used to calculate heat pipe limits theoretical and correlated overall heat transfer coefficients using the data of (6). The sonic, capillary, and entrainment limits are increased with increasing the vapor temperature but the boiling limit is decreased with the increasing of vapor temperature. The correlated function that relates overall heat transfer coefficient and vapor temperature is very close to the theoretical overall heat transfer coefficient

Keywords: objective, present, transport limitations, overall, correlation, coefficient, temperature, transfer

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Authors:	Aswathy G P, Niyas K Haneefa
Paper Title:	A Survey on Methods of Parallel Concatenation of LDPC Codes

Abstract: From the time of discovery of Turbo codes, parallel concatenation of codes has become one of the fieriest topics in code theory. In the recent years, there has been a remarkable advancement in LDPC codes and has seen them outshine turbo codes in terms of performance especially in the error floor and higher code rate. On the other hand, fully parallel LDPC decoder for longer block length suffers from prohibitive implementation complexity, due to the pervasive connectivity in the bipartite graph. Subsequently, in order to achieve better performance for longer codes with reduced decoding complexity, different methods for parallel concatenation of LDPC codes were introduced. Parallel concatenation of LDPC codes provides the advantage of breaking an equivalently long and highly complex LDPC code into multiple small and less complex LDPC codes to distribute the encoding and decoding load. This could offer scalability and scope for improving the performance of LDPC codes in practical delay-sensitive and energy-aware applications. This paper gives an overview of different methods of parallel concatenation of LDPC codes.

Keywords: LDPC, Parallel concatenation, PCGC, Turbo codes.

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Authors:	**Uthra Devi. S, Sahana. K, T.V. Narmadha**	
Paper Title:	**Stability Analysis of Multiple Input Multiple Output System Using Sliding Mode Controller**	

26.

Abstract: This paper depicts the design and implementation of nonlinear control approach called sliding mode control for Multiple Input Multiple Output (MIMO) system. In order to provide a good regulation of output in this system it is mandatory to make them operate in the closed loop mode using conventional controllers such as P, PI and PID controller. But the use of conventional controllers have failed to provide the desired regulation of output voltage under large variation of system parameters. Due to these disadvantages of conventional controllers a nonlinear controller called sliding mode controller (SMC) is proposed here. Sliding mode controller is used to regulate the system against disturbances. Sliding mode controllers is designed for Induction motor having Multiple Input Multiple Output (MIMO) system. The design of the controller is done with an aim to regulate the output against disturbances. The main advantage of SMC over the non conventional control is its stability and good response variations with respect to the input.

Keywords: Induction motor, DC motor, Sliding mode control, output regulation

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Authors:	**Vaishali Chaudhari**	
Paper Title:	**Smart Clearance System**	

27.

Abstract: The manual clearance system is one of the tedious process because this takes lot of time.one reason of this happen is because this task involves the manual work and there is no special technology involved in automating the job. Involvement of manual work calls lots of irregularities. In this we propose the concept of replacing manual job or work in manual process by smart clearance system at workspace. This smart clearance system replaces the conventional process by smart card. In addition password authentication is placed in the machine in order to check correct user access. If the user is correct user, the next process takes place. A soon as the input is given, the dues for the particular person are detected and deducted from the account setting up at the time of admission of that person in the particular institution or college. The embedded controller is preprogrammed in a such a way to perform the similar operations. In this smart clearance system, GSM module is used which further sends the details about the transactions on the registered mobile number linked with the system in the form of text message. Hence it is easy as well as the reliable system. In this system the document verification also takes place which frees student to carry the files regarding the documents. .

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Keywords: Academic Requirement, Administrator module, Clearance

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Authors:	**Georgewill M. Onengiye, Ezeofor J. Chukwunazo**	
Paper Title:	**Design and Implementation of RF based Wireless Remote Control Generator SystemDesign and Implementation of RF based Wireless Remote Control Generator System**	

28.

Abstract: this paper presents the design and implementation of RF based wireless remote control generator system that can be interfaced with automatic changeover. We noticed that generator system is designed to be powered ON by pressing a button or turning a key or drawing the rope tiled on its body. The generators are kept on the back corridor or outside of the house due to the noise they generate. The owners usually walk a distance where they are kept to switch ON or switch OFF the generator system. This has been a stressful process to the generator owners whenever the service of the generator is needed. This work is designed to bridge the gap (or distance) between the generator and the owner. The owner can remotely switch ON or switch OFF the generator kept at hundred (100) meter distance around his or her building which operates with a radio frequency of 435MHz.The remote controlled generator involves a transmitter unit which sends a wireless signal through an antenna and this signal is received by the reception unit. This signal is further processed by the controller unit and the processed signal is sent to relay which acts as a switch to trigger the generator ON or OFF. This work is tested with accuracy and finally interfaced with the automatic changeover.

Keywords: wireless remote, Arduino Uno, Generator system, radio frequency

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Authors:	**Rushinesh Bagal, Kaushik Deshpande, Digvijay Yadav**	
Paper Title:	**Hydrogen Fuel Cell in Automobile**	

29.

Abstract: one of the most dynamic fields which have been developing rapidly with time is automobile. It has been observed that even today after so much of advancement automobile makers are striving hard to make it a perfect machine in every aspect, enabling it to face any problems that would come up in future, and one such biggest problem is the depletion of fossil fuels which forces us to look for alternate and equally efficient fuels. This paper is based on a study done in this direction. Hydrogen is not an energy source, it is an energy carrier. It can store and deliver energy but still, must be produced from compounds that contain it. Hydrogen can be produced using diverse, domestic resources including fossil fuels, such as coal (with carbon sequestration) and natural gas; nuclear; and biomass("Hydrogen Production.") Hydrogen fuel cells convert the energy in hydrogen to electricity. They are much more efficient at converting the energy source than other methods. Hydrogen fuel cell vehicles use electric motors and are much more energy efficient. They use 40-60 percent of the fuel's energy. This would correspond to more than a 50% reduction in fuel consumption when compared to a conventional vehicle with an internal combustion engine. Fuel cells are also much quieter, have fewer moving parts, and are well suited to a variety of applications. This paper is based on "HYDROGEN FUEL CELL".A Fuel Cell is an electrochemical device that combines hydrogen and oxygen to produce electricity, with heat as its by-product. Firstly we understand the main concept of fuel cell. Then working, the need for having an alternate fuel. Next we see how the fuel technology can be used. Then we see the advantages of the fuel cells by understanding their detailed composition and functioning. Then the efficiency of fuel cell. And then challenges to fuel cell..

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Keywords: Energy, Fuel cell, Hyrogen application, Environmental benefits, Environment, Sustainable development

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Authors:	**Anurekha Mukherjee, Sohini Mondal**
Paper Title:	**Analysis and Study of V-I Characteristics by Replacing Low-K Dielectric (HfO2) with High-K Dielectric (La2O3) in MOSFET**

30.

Abstract: This project journal paper presents the analysis and study of Lanthanum oxide La2O3, one of the promising high-k dielectric films used in the MOSFET over hafnium dioxide, HfO2. Capacitance-Voltage measurements were carried out to investigate properties such as oxide charges and interface trap charges that exist in the dielectric La2O3 , an inorganic compound containing the rare earth element lanthanum and oxygen . The investigation has been carried out by experiment and modeling. With the advent of semiconductor technology in VLSI era, the channel length of a metal oxide semiconductor has drastically gone down. DIBL (Drain Induced Barrier Lowering) is one of the short channel effects which degrade the performance of a MOSFET with its down scaling. To understand this effect the study of the nature of surface potential and energy is very important. In this project an analytical model for threshold voltage of short channel MOSFETs is presented. For such devices, the depletion regions due to source/ drain junctions occupy a large portion of the channel, and hence are very important for accurate modeling. The proposed threshold voltage model is based on a realistic physically – based model for the depletion layer depth along the channel that takes into account its variation due to the source and drain junctions .With this, the unrealistic assumption of a constant depletion layer depth has been removed , resulting in an accurate prediction of the threshold voltage. The graphs between different parameters of HfO2 and La2O3 are verified against the simulator MATLAB and the comparative analysis of the features of the graph of both the oxides has been done

Keywords: Channel Length, DIBL, Pocket doping, Threshold Voltage

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Authors:	**Gaurav Kumar, E. Yazhini, Pankaj Agarwal**
Paper Title:	**Voice Customizable Text-To-Speech Conversion System for Dumb**

31.

Abstract: The text-to-speech conversion system is a useful interface for the speechless who wants to communicate effectively in public places and official areas. This system uses the MATLAB software, wherein the text entered is converted into its corresponding speech signal using a graphical user interface development environment. A text database is created and a set of corresponding signals are recorded, both of which are interfaced to the MATLAB code. The speech signal undergoes framing and de-framing in order to convert a non-stationary signal into a stationary one. This is necessary because any signal processing tool takes into assumption that the signal it receives would be stationary in nature. The MATLAB platform has been used to reduce the cost of this system.

Keywords: text-to-speech, MATLAB code, corresponding signals, recorded, signal processing.

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	3.	Helenca Duxans I Barrobes, Dr. Antonio Bonafonte Cavez, Universitat Politechnica, Voice Conversion applied to text-to-speech systems.
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	Authors:	**Mina Safwat Garas, Hassan El-Kamchouchi, Tawfik Namour**	
	Paper Title:	**Analysis and Design of Micro-Electromechanical Sensors**	
32.	**Abstract:** In developing Micro Electro Mechanical Systems (MEMS), using the MATLAB software , many modeling tasks in MEMS can be implemented easily. Additionally, their performance can also be determined so that it satisfies the needs of various fields. With this kind of approach, the performance of the devices can be easily expanded, as well as reducing the time and cost of MEMS production. This paper focuses on the modeling of silicon MEMS accelerometer in an attempt to design a surface micro-machined accelerometer that satisfies certain pre-determined specifications. **Keywords:** component; Acceleration, Accelerometer, Design, Displacement, MEMS, Modeling, Velocity **References:** 1. B. S. Sreeja and S. Radha, "Design and implementation of MEMS based differential voltage controlled oscillator", In Proceedings of EIT'2009, Windsor, Canada, 2009, pp.202-206. 2. N. Yazdi, F. Ayazi, and K. Najafi, "Micromachined inertial sensors", in IEEE Proceedings, vol 86, no 8, 1998, pp. 1640 1659. 3. Electronics Engineer's Reference Book edited by F. F. Mazda. 4. K. H. Denishev, and M. R. Petrova, "Accelerometer design", In Proceedings of ELECTRONICS'2007, 2007, pp. 159-164. 5. " Using Accelerometer in a data Acquisition System "by Bob Judd united electronic industries www.endevco.com, www.pcb.com and www.sensormag.com . 6. The Measurement, Instrumentation, and Sensors: Handbook By John G. Webster. 7. Wiley Survey of Instrumentation and Measurement By Stephen A. Dyer.	**161-165**

	Authors:	**Shifali M Patil**	
	Paper Title:	**Image Fusion using Wavelet Transform**	
33.	**Abstract:** Image fusion is the process of extracting meaningful visual information from two or more images and combining them to form one fused image. Image fusion is important within many different image processing fields from remote sensing to medical applications. Previously, real valued wavelet transforms have been used for image fusion. Although this technique has provided improvements over more naive methods, this transform suffers from the shift variance and lack of directionality associated with its wavelet bases. These problems have been overcome by the use of a reversible and discrete complex wavelet transform (the Dual Tree Complex Wavelet Transform DT-CWT). However, the existing structure of this complex wavelet decomposition enforces a very strict choice of filters in order to achieve a necessary quarter shift in coefficient output. The proposed work introduces an alternative structure to the DTCWT that is more flexible in its potential choice of filters and can be implemented by the combination of four normally structured wavelet transforms. The use of these more common wavelet transforms enables this method to make use of existing optimized wavelet decomposition and recomposition methods, code and filter choice. **Keywords:** Image fusion, wavelet transform, fused mages, wavelet based fusion, multi-resolution. **References:** 1. H. Li, B.S. Manjunath, S.K. Mitra, Multisensor image fusion using the wavelet transform, GMIP: Graphical Models Image Process. 57 (3) (1995) 235-245. 2. P.J. Burt and R.J. Kolczynski, Enhanced image capture through fusion, Proceedings of the 4th International Conference on Computer Vision, pages 173–182, 1993. 3. Zhu Shu-long, Image Fusion Using Wavelet Transform, Symposium on Geospatial Theory, Process and Applications, Ottawa 2002. 4. Paul Hill, Nishan Canagarajah and Dave Bull, Image Fusion using Complex Wavelets, BVMC 2002. 5. L.G. Brown, A survey of image registration, ACM 6. Computer Survey 24 (1992) 325-376. 7. S. Banerjee, D.P. Mukherjee, D. Dutta Majumdar, Point landmarks for the registration of CT and MR images, Pattern Recognition Lett. 16 (1995) 1033-1042. 8. Colligon, D. Vandermeulen, P. Seutens, G. Marchal, Registration of 3D multimodality medical imaging using surfaces and point landmarks, Pattern Recognition Lett. 15 (1994) 461-467 9. D.M. Mount, N.S. Netanyahu, J.L. Moigne, Efficient algorithms for robust feature matching, Pattern Recognition 32 (1999) 17-38. 10. A.A. Goshtasby, J.L. Moigne, Image registration Guest Editor's introduction, Pattern Recognition 32 (1999) 1-2. 11. Stephane G. Mallat, A Theory for Multi-resolution Signal Decomposition: The Wavelet Representation, IEEE Transaction on Pattern Analysis andd Machine Intelligence. Vol. II No. 7, July 1989,pages 671-693 12. R C Gonzalez, Richard E Woods, Digital Image Processing, Second Edition, Prentice Hall Publication, 2002. 13. V.P.S. Naidu and J.R. Raol, "Pixel-level Image Fusion using Wavelets and Principal Component Analysis", Defence Science Journal, Vol. 58, No. 3, May 2008, pp. 338-352. 14. Sruthy, S.; Parameswaran, L.; Sasi, A.P., "Image fusion technique using DT-CWT", Automation, Computing, Communication, Control and Compressed Sensing, 2013 International Multi-Conference on , vol., no., pp.160,164, 22-23 March 2013. 15. "Dipalee gupta" "Siddharth Choubey" " Descret wavelet transform for image processing" ISSN-2250-2459, vol.4, march 2015 . 16. Jiang Tao, Ji Dabin, Han Jinfang "Comparison Study of Different Fusion Methods Based on Remote Sensing Image", 3rd International Congress on Image and Signal Processing, ©2010 IEEE. 17. "Shaik Mahammed waseem" " Analysis of multi focus gray scale image fusion using wavelets" IJRT,ISSN-2319-1163, pISSN-2321-7308.	**166-169**

	Authors:	**Suhas S, Gayatri Malhotra, Rajini V.H**	
34.	**Paper Title:**	**Comparison of Hsclone and Roulette Genetic Algorithms on the Application of Combinational Circuits**	
	Abstract: Future planetary and deep space exploration require robust methods of operation to operate spacecraft		**170-175**

in the outer atmosphere without any variations or faults. The best fault tolerant method which can be used for operations of this kind is the class of Genetic Algorithms (GA) which are a sort of evolutionary algorithm. In this domain of operation, a combinational circuit is designed by the method of Cartesian Genetic Programming (CGP). The Circuit after the design is fed to the two GAs, namely, HsClone and Roulette. The main advantage in this use of GA is the likely determination of the best possible circuit within the space of a thousand circuits. The combinational circuit design is applied to both the algorithms and tested for fitness. After the required fitness is obtained, both the algorithms are compared with respect to their cumulative generational fitness and other allied aspects. The better algorithm will hence be determined to integrate it into the future design of spacecraft hardware. This is expected to help the spacecraft recover from Single Event Upsets (SEU) which usually occur due to hostile temperature conditions and outer atmospheric radiation.

Keywords: Cartesian Genetic Programming (CGP), GeneticAlgorithm (GA), Evolvable Hardware (EHW), Reconfigurable FPGA, Evolutionary Algorithm (EA)

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Authors:	**M A Khamis, K Ennser**	
Paper Title:	**Model for a Thulium-Doped Silica Fiber Amplifier Pumped at 1558 nm and 793 nm**	

Abstract: This paper investigates the static behavior of Thulium-doped fiber amplifier (TDFA) operating around 2 μm at two different pump wavelengths. The developed model provides the influences of the amplified spontaneous emission (ASE) noise, the wavelength and the power of the seed, the thulium-doped fiber length and the pumping power into the TDFA. Simulation results show that the amplifier with pump at 1558 nm is more efficient than one with pump at 793 nm with core pumped low concentration thulium-doped silica fiber. Our findings reveal that a larger amplified signal can be achieved by increasing the pump power and the thulium-doped fiber length. In case of in-band pumping, the maximum gain reaches up to 34.4 dB with a 2 W pump power when a -10 dBm seed wavelength at 1900 nm is used. In contrast to indirect pumping, only 30 dB maximum gain is achieved under the same conditions. Also, it is important to take into account the selection of the seed wavelength in the TDFA design because high amplification can be produced when the selection seed wavelength is near the center of the emission cross-section curve

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Keywords: Amplified spontaneous emission, cross-relaxation process, silica glass material, Thulium-doped fiber amplifier.

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Authors:	**Arya S P, Aparna P R**	
Paper Title:	**Markerpixel using Watershed Transformation**	

Abstract: We describe a new method for the generation of superpixels which can be implemented using watershed transformation. Our method aims at the extraction process of local and global impression of a given image. We propose a gradient-based low level segmentation process inorder to fulfill the adherence property of the segmented image. We also show this as an efficient method to achieve the regularity and adherence property of the segmented image. Since we are dealing with marker controlled Watershed transformation technique, the problem of oversegmentation can be avoided to a great extreme. Here, we try to showcase 'markerpixels' as an efficient tool for the creation of superpixels using Watershed transformation.

Keywords: markerpixels, segmentation, watershed, clusters

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Authors:	**Arun K, Preeja V**	
Paper Title:	**Android Malware Detection Techniques- A Survey**	

Abstract: Smart phone users are increasing day to day. Most of the smart phone users connect to internet for various purposes and still they remain unprotected from malware attacks. One of the most commonly used operating system in smart phones is Android. A lot of applications available in play store makes android popular. The available applications can be easily installed from play store. Still it is very difficult to distinguish between clean and malicious application. This paper reviews four different methods for detecting android malwares.

Keywords: Android, Malware, Mobile Malware, Malware Detection, Permission Pattern

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	Authors:	Mrudang Patel, Nirav Oza	
	Paper Title:	Design and Analysis of High Efficiency Cross-Flow Turbine for Hydro-Power Plant	
38.	**Abstract:** flow turbine has gained much attention as it is low head turbine and can be used at remote places where a small waterfall of 10-15 meters is located. The objective of this study is to design a cross-flow turbine with maximum efficiency and doing static and model analysis of it. Complete design calculations of turbine have been performed along with static and model analysis of the turbine. The design parameters include runner diameter, runner speed, runner length, turbine power, number of blades blade spacing, radius of blade curvature, attack angle and the blade and exit angles. **Keywords:** Cross-flow turbine, design parameters, maximum efficiency, analysis. **References:** 1. http://www.ossberger.de/cms/en/hydro/the-ossberger-turbine-for-asynchronous-and-synchronous-water-plants/ 2. Mockmore, C. A. and Merryfield, F.: "The Banki water turbine", Engineering Experiment Station Bulletin Series, No. 25, February, 1949. 3. Bilal Abdullah Nasir:" Design of High Efficiency Cross-Flow Turbine for Hydro-Power Plant", International Journal of Engineering and Advanced Technology (IJEAT), Volume-2, Issue-3, February 2013. 4. CelsoPenche: "layman's Guide book on how to develop a small hydro site", Published by ESHA, Second Edition, Belgium, June, 1998. 5. Durgin, W. W. and Fay, W. K.: "Some fluid flow characteristic of cross-flow type turbine", The Winter Annual Meeting of ASME, New Orleans, pp. 77-83, Dec., 1984. 6. Nadim, M. A. and Desia, V. R.: "An experiment study of the effect of some design parameters in cross-flow turbine efficiency", Engineering report, Department of Civil Engineering, Clemson University, 1991. 7. Wakati, R.: "Development of cross-flow turbine for local manufacturing", M. Sc. Thesis, University of Dar Es Salaam, 2010. 8. Fiuzat, A.A. and B.P. Akerkar, 1989. The use of interior guide tube in cross flow turbines. Proceeding of the International Conference on Hydropower (WATERPPOWER, 89). London, UK 9. Sammartano, V., C. Aricò, A. Carravetta, O. Fecarotta and T. Tucciarelli, 2013. Banki-michell optimal design by computational fluid dynamics testing and hydrodynamic analysis. Energies, 6: 2362-2385.	**187-193**
	Authors:	Renitha T V, Raghunandan Kumar	
	Paper Title:	Optimised Cost Design of Reinforced Concrete Frame	
39.	**Abstract:** Cost optimization of Reinforced Concrete (RC) frames carried out in the present study. A three bay, three storey RC frame is optimised for minimum cost using global optimization toolbox in MATLAB software. The design variables taken for this study are effective depth and area of reinforcement of beams and columns. The design constraints included are geometric, strength and reinforcement areas confirming to IS 456:2000 code. The concept of grouping is incorporated for the simplicity of the design. The material properties are considered as constants. A MATLAB program is developed which expects to input constant parameters like grade of concrete and steel, cost of materials, live load etc. The program output is design variables and the cost of frame for optimized design. Reliable results have been obtained and are validated with manual design by Limit State Method. Comparison of optimised result with ETABS design result is made. **Keywords:** ETABS, Genetic Algorithm, MATLAB, Optimization, RC Frame **References:** 1. Aga A, Adam F M, Design Optimization of ReinforcedConcrete Frames, Open Journal of Civil Engineering,5, 74-83 ,2015 2. Ketkuka T S, Abubakar I, S P Ejeh, Optimum DesignSensitivity Of Reinforced Concrete Frames, InternationalJournal of Advanced Engineering Research andTechnology (IJAERT) Volume 2 Issue 5, August 2014,ISSN No.: 2348 8190,2014 3. Yousif S T and Najem M Rabi, Optimum Cost Designof Reinforced Concrete Columns Using Genetic Algorithms,Al-Rafidain Engineering Vol.22, No. 1,2014 4. Gholizadeh S. and Aligholizadeh V., Optimum designof reinforced concrete frames using bat meta-heuristicalgorithm, Int. J. Optim. Civil Eng., 2013; 3(3):483-497 ,2013 5. Gharehbaghia S. and Fadaee M.J., Design Optimizationof RC Frames under Earthquake Loads. InternationalJournal of Optimization in Civil Engineering, 2,459-477.,2012 6. Mahmoud Maher Jahjouh, Design Optimization ofRC Frames using Artificial Bee Colony Algorithm,Msc(Civil Eng.) Thesis,The Islamic University ofGaza,2012 7. Kaveh A and Sabzi O., Optimal design of reinforcedconcrete frames Using big bang-big crunch algorithm,International Journal of Civil Engineering, Vol. 10,No. 3,2012 8. Yousif S.T., ALsaffar. I.S. and Ahmed, S.M. , OptimumDesign of Singly and Doubly Reinforced ConcreteRectangular Beam Sections: Artificial NeuralNetworks Application, Iraqi Journal of Civil EngineeringVol. 6,1-19,2012 9. Camp. C.V., Pezeshk, S. and Hansson, H., FlexuralDesign of Reinforced Concrete Frames Using a GeneticAlgorithm, Journal of Structural Engineering(ASCE), 129, 105-115,2003 10. Moharrami H. and Grierson, D.E , Computer AutomatedDesign of Reinforced Concrete Frameworks.Journal of Structural Engineering (ASCE), 119, 2036-2058,1993	**194-199**

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Authors:	**Ramakrishna Gandi, Prathimarani Palla, Madhuri Thimmapuram, Daniel Prasanth T**
Paper Title:	**A Novel Approach for Faculty Appraisal in Educational Data Mining using CLEMENTINE TOOL**

Abstract: Data mining, the concept of unseen predictive information from big databases is a powerful novel technology with great potential used in various commercial uses including banking, retail industry, e-commerce, telecommunication industry, DNA analysis remote sensing, bioinformatics etc. Education is a required element for the progress of nation. Mining in educational environment is called Educational Data Mining. Educational data mining is concerned with developing new methods to discover knowledge from educational database. In order to analyze opinion of students about their teachers in Professor Appraisal System, this paper surveys an application of data mining in Professor Appraisal System & also present result analysis using CLEMENTINE 12.0 tool. There are varieties of popular data mining task within the educational data mining e.g. classification, clustering, outlier detection, association rule, prediction etc. How each of data mining tasks can be applied to education system is explained. In this paper we analyze the performance of final Faculty Appraisal of a semester of a computer engineering department, Vignan Institute of Information Technology College of engineering & is presented the result which it is achieved using CLEMENTINE 12.0 tool. We have verified hidden patterns of Faculty Appraisal by students and is predicted that which Faculty will be invited to faculty classes and which Faculty will be refusing and department heads due to Appraisal reasons will ask explanations with them.

Keywords: Classification, Clustering, Association rule, Data mining, Appraisal, CLEMENTINE 12.0.

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Authors:	**V Soundharya, Anil B A, Venu Gopal S, Gowreesh S S**
Paper Title:	**Aerodynamic Analysis of Dimple effect on Airfoil**

Abstract: The main objective of aircraft aerodynamics is to enhance the aerodynamic characteristics and maneuverability of the aircraft. This enhancement includes the reduction in drag. At present different kinds of surface modifications like Vortex Generators commonly known as Dimples are being studied to improve the maneuverability of the aircraft. Present paper attempts to evaluate the effects of such artificial modifications on the surface of a NACA 4412 Airfoil and analyze the impact on its aerodynamic performance. An external flow study was performed using commercially available software. Simulations for external flow configuration with and without dimples were carried out and analyzed in detail. The resulting pressure drop and drag were observed. The objective is to clarify whether or not dimples cause reduction of the skin friction drag and if it would provide better lift.

Keywords: Airfoil, Lift, Drag, Dimple, Pressure Drop.

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2. Dr. C. Ramprasadh and V. Devanandh Senior Assistant Professor, School of Mechanical Engineering SASTRA University, Former B.Tech Student, School of Mechanical Engineering, SASTRA University – Currently Deputy Manager, Engine R&D, Ashok Leyland Ltd, "A CFD Study on Leading Edge Wing Surface Modification of a Low Aspect Ratio Flying wing to Improve Lift Performance", International Journal of Micro Air Vehicles, Volume 7, Number 3, 2015.
3. Bhadri Rajasai, Ravi Tej, Sindhu Srinath, "Aerodynamic effects of Dimple on Aircraft Wings", Proc. of The Fourth Intl. Conf. On Advances in Mechanical, Aeronautical and Production Techniques - MAPT 2015 Copyright © Institute of Research Engineers and Doctors, USA. All rights reserved. ISBN: 978-1-63248-072-9 doi: 10.15224/ 978-1-63248-072-9-55

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Authors:	**Mathew Skaria, K. K. Abdul Rasheed, K.A.Shafi, S. Kasthurirengan, Upendra Behera**	
Paper Title:	**Influence of Working Fluid and Operating Parameters on the Performance of Traveling Wave Thermo Acoustic Prime Mover**	

Abstract: The paper present the performance studies on a traveling wave thermoacoustic system developed in our laboratory. Experiments were carried out for different working fluids such as Helium, Argon and Nitrogen and at different operating pressures. The results indicate that the working fluids with different charge pressures are critical to the performance of the system. The above experimental results are compared with simulation (CFD and Delta EC) results wherever possible and they are in good agreement.

Keywords: Traveling wave, prime mover, working fluid, CFD, Delta EC.

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Authors:	**Parminder Kaur, Monika Sachdeva, Gagandeep**	
Paper Title:	**Impact of Black hole Attack on Performance of AODV Routing Protocol**	

Abstract: MANET includes number of wireless nodes. The network topology varies frequently. During the communication nodes act as sender, receiver and router. There is various attacks in MANET routing protocols. In this paper, we discuss about the black hole attack under AODV. Black hole attack accesses the packets and then drops packets. In this paper, we evaluate and stimulate the effect of black hole in AODV. We evaluate the performance of AODV under black hole attack using different performance metrics i.e. Energy consumption, Average Jitter, End-to end Delay and throughput. Simulation is carried out using widely used simulator Qualnet..

Keywords: MANET, AODV, Black hole, Performance metrics.

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Authors:	Nizar Hussain M, Suresh Subramoniam
Paper Title:	Reengineering Healthcare using Information and Communication Technology: Structural Equation Model for Healthcare Information Systems

Abstract: It is claimed that reengineering healthcare using Information and Communication Technology (ICT) can bring many benefits to the healthcare organisation. Many ICT applications remain underused by healthcare professionals and healthcare organisations. Human and organisational factors have frequently been identified as the main causes of ICT implementation underuse. Therefore, it is very important to identify the Critical Success Factors (CSF) necessary for the implementation of Healthcare Information Systems (HIS). Existing models of CSF on information systems related to healthcare sector are practically less, globally, and almost nil with respect to India. Hence, the purpose of this research is to develop a conceptual model of CSF especially for HIS adoption, use and redesign in India. Such identified factors for redesign will also have international bearing as redesign possibilities discussed are mainly based on emerging technologies. The rationale of the purpose is justified by the fact that India is a leader in developing information systems, especially medical applications. Further, India is emerging as an international destination for healthcare due to the advancement in medical technology and is offering high quality health services at reduced cost.

Keywords: Information and Communications Technology, Critical Success Factors, Healthcare Information Systems, Structural Equation Model.

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Authors:	**Dheeraj S. Patil, M. V. Patil**	
Paper Title:	**A Fast FPGA based Architecture Implementation for Reversible Image Watermarking**	

Abstract: Now a day's different techniques are available for digital image watermarking including software and hardware implementation. Reversible contrast mapping (RCM) is one of the technique is used for embed secret information into the digital form. RCM algorithm is simple integer transform of the pixel pair and there LSB bits are used for data embedding. RCM offers high embedding rate, low mathematical calculation and good robustness. This paper focuses on implementation of Field Programmable Gate Array (FPGA) based fast image watermarking using RCM algorithm. The given architecture requires 52 slices, 52 number of flip-flop, 85 number of 4-input LUTs and transceiver data rate is up to 3.2Gbps with an operating crystal frequency is 100MHz. Given architecture is implemented with Xilinx 14.7 on Spartan-6 FPGA family. The given architecture is acceptable for various application areas such as digital cameras, medical and military applications, etc.

Keywords: Image Processing, RCM, FPGA

45.

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Authors:	**Dhanyashree T S, Sangeetha B G, Gayatri Malhotra**	
Paper Title:	**Design and Hardware Implementation of Sun Sensor based Sun Re-Acquisition on Safe Mode Detection in Satellites**	

46.

Abstract: Satellite/spacecraft enter into Safe Mode in case of contingency when the solar panel is not rotated towards Sun in order to provide full solar array power. The transition from safe mode to sun pointing mode, carried out automatically by Sun acquisition logic. In sun acquisition logic selected yaw and roll errors are used as inputs to controller whose outputs are routed to thruster selection logic. On Safe Mode enable condition, based on the safe mode pulse from on board computer (OBC) thruster block reconfiguration is done. This initiates thruster selection logic (TSL), whose outputs are routed to thruster drivers to fire the thrusters in satellites/spacecraft to change the spacecraft orientation. The eclipse condition is also detected from 4PI pitch output on safe mode.

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Keywords: Pitch, yaw, roll, safe mode detection, loop-on pulse generation, long pulse detection, thruster selection, sun pointing mode.

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Paper Title: **Performance Evaluation of Various Active Queue Management for Bufferbloat**

Abstract: Due to unprotected large buffers in network devices, the Internet is suffering from high latency and jitter which leads to decreased throughput. The perseveringly full buffer problem, recently exposed as "bufferbloat" [1] [2] has been observed for decades, but is still with us. As a solution to this problem, several new AQM algorithms CoDel, sfqCoDel and CoDel-DT have been proposed. This paper aims to evaluate these AQM algorithms by carrying out simulations in ns-2 and compares their performance with that of DropTail. sfqCoDel outperforms various peer solutions in variety of scenarios in terms of bottleneck link utilization, packet drop rate and mean queue length..

Keywords: AQM, RED, CoDel, Droptail, Bufferbloat .

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Authors: **Rajesh Kumar, Pinky Ramchandra Shinde**

Paper Title: **Computer Network - IP Address & Subnetting**

Abstract: The next-generation Internet Protocol, initially known as IP Next Generation (Ipng), and then later as IPv6, has been developed by the Internet Engineering Task Force (IETF) to replace the current Internet Protocol (also known as IPv4). which offers 2128 possible addresses To enable the integration of IPv6 into current networks, several transition mechanisms have been proposed by the IETF IPng Transition Working Group. This work examines and empirically evaluates two transition mechanisms, namely IPv6 to IPv4 tunneling and dual-stack mechanism, as they relate to the performance of IPv6. The primary focus of this paper is to compare and analyze IPv4 and IPv6 networks, study their characteristics and header formats. The paper also attempts to outline the key deployment issues and security-related challenges which are being faced and dealt with during the migration process.

Keywords: IP address, Subnet, IPV4, IPV6, Multicast Address, Unicast Address, 6-over-4, encapsulation, tunneling,

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49.	**Authors:** **Anwaar Ahmad Wani, Gowher Mushtaq**	
	Paper Title: **A Survey on NFC (Near Field Communication) and FFC (Far Field Communication) With Respect To RFID (Radio Frequency Identification) for Next Generation Network Infrastructure**	
	Abstract: This paper gives us the comprehensive analysis of security with respect to RFID (radio frequency identification) considering the Next Generation smartphone attributes i.e. NFC and FFC. The electromagnetic field that outlines the RFID antenna can be divided into two parts NFC & FFC; both are based on existing standards of the radio frequency identification network framework. NFC (near field communication) is a set of principles for Smartphone and alike devices to establish Radio Communication with each other. In this study we will try to survey the critical issues of NFC and FFC to find out the updated implementation issues for the Next Generation network infrastructures. **Keywords:** RFID (radio frequency identification), NFC, FFC, Smartphone, Electromagnetic field, Next Generation. **References:** 1. Nandita Srivastava, "RFID Introduction, Present and Future applications and Security Implications" MSEE Student George Mason University. 2. Charles Mutigwe and Farhad Aghdasi, "Research Trends in RFID Technology" School of Electrical and Computer Systems Engineering Central University of Technology, Free State, South Africa. 3. HUSSEIN AHMAD AL-OFEISHAT, MOHAMMAD A.A.AL RABABAH, "Near Field Communication (NFC)" IJCSNS International Journal of Computer Science and Network Security, VOL.12 No.2, February 2012 4. K.Preethi, Anjali Sinha, Nandini "Contactless Communication through Near Field Communication", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 2, Issue 4, April 2012. 5. Gowher Mushtaq, Shashank Singh, Neeraj Kumar Tiwari, Seemab Rasheed, Yogesh pal, " Radio Frequency Identification Upon Near Field Communication and Far Field Communication For Next Generation Wireless Network Infrastructures ". Trasactions on Networks and Communications Society for Science and Education United Kingdom Volume 3, Issue 3, 9 May 2015. 6. Wan Khairuzzaman, Wan Ismail , Paul Chan Hong Kit , Nora Buhari, Azlina Muzaini. "Acceptance of Smartphone in Enhancing Patient-Caregivers Relationship" J. Technol. Manag. Innov. Volume 7, Issue 3, 2012. 7. Weifeng ,Sun Guoqiang, Zhang Jingjing Zhou," Next-Generation Internet and Communication", Jun 3. Doi: 10.1155/2014/342471 PMCID: PMC4065677, Published online 2014.	**247-255**