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S. No	<b>Volume-5 Issue-3, February 2016, ISSN: 2249-8958 (Online)</b> <b>Published By: Blue Eyes Intelligence Engineering &amp; Sciences Publication Pvt. Ltd.</b>		Page No.
	<b>Authors:</b>	<b>Baha Ali Nasir</b>	
	<b>Paper Title:</b>	<b>Performance Comparison between SCFDMA and OFDMA in 4G-LTE under Two Subcarrier Mapping within Variable Channel Cases</b>	
1.	<p><b>Abstract:</b> The mobile communication is occupied by extra and extra facilities with information speed from little Kilobits per second reach to numerous Megabits per second. A main choice in the communication system is the select of the multiple access structures. A selection may be the “Orthogonal Frequency Division Multiple Access” (OFDMA). Even with more profits in great flow in information facilities, SCFDMA has brought excessive care as a smart substitution to OFDMA and now recommended in portable uplink communications in fourth generation (4G) “Long Term Evolution” (LTE). In this paper the comparison between these two techniques is done in order to prove the powerful points of using the SCFDMA in LTE under two subcarrier mapping that are localized and interleaved style in dual channel kinds that are ITU and LTE channels. The results demonstrate that the SCFDMA provides the lesser “bit error rate” as compared to OFDMA in all cases of channels. Also the interleaved mode gives lower BER than localized mode.</p> <p><b>Keywords:</b> OFDMA, SCFDMA, 4G, LTE, BER, ITU.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>D. Kumar, S. arulmozhi and r. Muthaiah (2011), “FPGA implementation of scalable bandwidth Single carrier frequency domain multiple Access transceiver for the fourth generation Wireless communication”, Journal of Theoretical and Applied Information Technology JATIT, Vol. 28 No.2, 30th June 2011, ISSN: 1992-8645, E-ISSN: 1817-3195, Page(s): 88-95</li> <li>Christian Rom (2008), “Physical Layer Parameter and Algorithm Study in a Downlink OFDM-LTE Context”, Ph.D. thesis, Department of Electronic Systems, Faculty of Engineering, Science and Medicine, Aalborg University, Denmark</li> <li>Dan J. 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	<b>Paper Title:</b>	<b>Video, Image and Data Compression by using Discrete Anamorphic Stretch Transform</b>	
2.	<p><b>Abstract:</b> we have a compression technology which is used to represent the more information efficiently. This kind of technology will be helpful when we deal with the exponential increase of digital data. With the help of by increasing spatial coherency, we have new physics based transform to get the image compression. There is a possibility to improve the JPEG and JPEG 2000 performance by using our new technology and showed by experimentally.</p> <p><b>Keywords:</b> Image Compression, Image De-Compression, Discrete Anamorphic transform, Spatial Coherency, JPEG and JPEG2000, Discrete Cosine Transform, Wavelet Transform, Frequency Decomposition</p> <p><b>References:</b></p>		11-15

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<b>Authors:</b>	<b>Porag Kalita</b>
<b>Paper Title:</b>	<b>Best Practices in Engineering College by TQC with Special Reference to North East India</b>

**Abstract:** Quality is never an accident, but result of intelligent effort”– John Young. For the rapid growth of population and industries, Total Quality Circle (TQC) has gained importance and being introduce and experimental with in Engineering College in India. In educational institutions, allocation procedure of TQC is complex, as it human beings as input to and output from the system. Students are input and customer too. Quality circle as a means, “ It is a small group of teachers in the same work area or doing similar type of work who voluntarily meet regularly for about to identify, analyse and resolve work related problems, not only improve quality of education and total performance of the engineering college Philosophy to contribute to the improvement and development of engineering institutions are consisting by following special references to the N E India.

- 1) Teachers develop their ability, wisdom and creativity by using their brain.
- 2) Teachers educate themselves by sharing experienced.
- 3) Teachers do not work in isolation but act as a them.
- 4) Display Human capabilities fully.
- 5) It promotes job involvement and participation etc.

Therefore, Total Quality Circles in tact represent the form of “self control”, suggested for higher educational institutions.

**Keywords:** Ability, job control TQC, Job involvement, wisdom.

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	<b>Paper Title:</b>	<b>Digital Topology and Edge Detection as Application</b>
	<b>Abstract:</b>	Digital topology refers to the use of topological properties and features that could be extracted from

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images defined as digital grid, In this paper we defined the basic and well known concepts of digital topology and how it represents an image as digital array of different dimension with some operations could be used for enhancing and processing the image for different practical purpose , Then producing an algorithm to detect the edges of images that are considered a type of crucial information needed for segmentation and recognition . and also presented a brief study of the fundamental concepts of the edge detection methods.

**Keywords:** Digital topology ,digital image processing , edge detection

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<b>Authors:</b>	<b>Khurshid Abdul Jabbar</b>
<b>Paper Title:</b>	<b>Effecting Transformation Towards a Green Computing Infrastructure: A Case Study on Asia Pacific University</b>

**Abstract:** Energy consumption and environmental concerns have become organizational priorities as sustainability becomes a business imperative. Within the last decade Green Computing has become a key dimension in IT management owing to the economic opportunities and stakeholder pressure, however, the strategic relevance of Green Computing has largely been neglected as a corporate strategy. This case study on Asia Pacific University aims to deliver a holistic Green Computing Framework for the University. This Framework addresses the key facets of an organization: strategy, technology, infrastructure, operations and administration, as an avenue for the University to assess its Green readiness as it moves towards a Green Computing infrastructure for competitive advantage. The absence of a Green Computing readiness framework is critical for the University to understand the key factors in implementing a sustainable business practice. A sustainable energy-efficient learning centre will account for a healthy environment while maintaining a high standard of educational excellence.

**Keywords:** Green Computing, Green Readiness, Sustainability

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<b>Authors:</b>	<b>Devikant Baviskar, Balbheem Kamanna, Gauri Tembe, Kajal Juikar</b>
<b>Paper Title:</b>	<b>Design and Analysis of Polymer PEK Spur Gear under Static Loading Condition using FEA</b>
<b>6. Abstract:</b>	<p>this work presents the design and Analysis of polymer PEK spur gear and Comparison of results of PEK with Metallic Cast Iron under limited loading conditions. Application of Plastic gear reduces the weight and noise vibration. Analytical Method is used to calculate Tooth load with help of Lewis equation &amp; dynamic tooth load with help of Buckingham equation. Gear profile modeling is done by using SOLIDWORKS 2015. Finite Element Method is used for Static analysis of the gear to find the Von-misses stress on the tooth of the gear using ANSYS and these values are compared with Analytical values.</p>
<b>Keywords:</b>	SOLIDWORKS, ANSYS, Lewis and Buckingham Equation, PEK.
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<b>Authors:</b>	<b>S. Santhosh Kumar, Anu R. G</b>	
<b>Paper Title:</b>	<b>Radiating Flare Design of Tapered Slot Loaded Vivaldi Antenna Using Fourier Series Approach</b>	
<b>Abstract:</b>	Federal communication commission has allocated a band from 3.1 GHz to 10.6 GHz for ultra wide band (UWB) applications. An antenna designed for UWB applications should be capable of offering a higher bandwidth, with minimum distortion of signals. One such antenna that satisfies this criterion is the Vivaldi antenna. The gain offered by a conventional exponentially tapered Vivaldi prototype is less, particularly at a lower giga hertz of frequencies. As the gain is dependent on the geometry of the radiating flare, an improvement in the gain is achieved by removing the restriction on the geometry of the flare. An antenna designed using Fourier series takes an optimized shape, such that the condition of maximum gain and minimum return loss is achieved corresponding to the design frequency. Antenna performance obtained from the simulation result and hardware prototype measurements shows a good agreement thereby verifying the design concept.	
<b>7. Keywords:</b>	Ultra wide band, Vivaldi Antenna, Fourier series, gain, Radiation flare	<b>39-43</b>
<b>References:</b>	<ol style="list-style-type: none"> <li>1. D.Ziani Kerarti, F.Z Marouf and S.M. Meriah, “New Tapered Slot Vivaldi antenna for UWB Applications in,” 24th International Conference on Microelectronics (ICM)}, 2012.</li> <li>2. Li Tianming, Rao Yuping and Niu Zhongxia, Analysis and Design of UWB Vivaldi Antenna, in IEEE International Symposium on Microwave, Antenna, Propagation, and EMC Technologies For Wireless Communications, 2007</li> <li>3. Aaron Zachary Hood, Tutku Karacolak and Erdem Topsakal, A small antipodal Vivaldi antenna for ultra wide band application, in IEEE Antennas And Wireless Propagation Letters, vol. 7, pp. 656--660, 2008.</li> <li>4. Satoru Sugawara, Yutaka Maita, Kazuhiko Adachi, Koji Mori and Koji Mizuno, Characteristics Of A MM-Wave Tapered Slot Antenna With Corrugated Edges, in IEEE MTT-S Digest, WE2A--5, 1998.</li> <li>5. Dalia M. Elsheakh and Esmat A. Abdallah, Novel Shapes of Vivaldi Antenna for Ground Penetrating Radar (GPR), in 7th European Conference on Antennas and Propagation, 2013</li> <li>6. Jeremy B. Muldavin and Gabriel M. Rebeiz, Millimeter-Wave Tapered-Slot Antennas on Synthesized Low Permittivity Substrates, in IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, . vol. 47, pages 1276--1280, July 15--17, 2009.</li> </ol>	

<b>Authors:</b>	<b>Esayas Alemayehu, Thamineni Bheema Lingaiah</b>	
<b>Paper Title:</b>	<b>Development of Iron Oxide Coated Sand (IOCS) Adsorbent for Defluoridation Technology</b>	
<b>Abstract:</b>	Although safe and reliable water supply is badly needed, the installation of advanced defluoridation plants in regions with low economic resources such as Ethiopia is, at present, very scarce mainly due to operational consideration and settlement characteristics of the people. In such cases the development and popularizing of low cost fluoride removal technologies, which does not demand much money and skilled manpower, is important. Therefore, this study focuses on the removal of fluoride from groundwater by using Iron oxide coated sand (IOCS), which could be used as an alternative defluoridation adsorbent. The influence of design parameters such as contact time, adsorbent dose, solution pH, and initial fluoride concentration was investigated. Basic process characteristics were determined under batch conditions. Fluoride adsorption onto IOCS was strongly pH dependent. The maximum adsorption capacity for IOCS was found to be 136 mg kg-1. This result was obtained at optimized conditions of solution pH (4.0), contact time (8.0 h), dose (15.0 g L-1) and initial fluoride concentration (5.0 mg L-1). The uptake of fluoride slightly increased with increasing equilibrium concentration of fluoride ion in solutions. By increasing the initial concentration of fluoride from 3.0 to 10.0 mg L-1, the adsorption capacity, increased from 90.73 mg kg-1 to 252.17 mg kg-1. IOCS was found to be promising adsorbent for defluoridation technology..	
<b>8. Keywords:</b>	Adsorption Technology, Batch Experiments, Defluoridation, IOCS	<b>44-51</b>
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	<b>Authors:</b>	<b>A. K. Rajak, S. K. Maity, Nagendra Prasad</b>	
	<b>Paper Title:</b>	<b>Improvement in Mechanical Properties of Ultra High Strength Steel through Induction Melting and Electroslag Refining</b>	
<b>9.</b>	<p><b>Abstract:</b> The objective of the present study is to develop the ultrahigh strength steel by induction melting and electroslag refining, which is followed by thermomechanical treatment with yield strength in excess of 1600 MPa and elongation of 9-10% . Ultrahigh strength steels are used in fabrication of rocket motor casings, aircraft undercarriages, turbine motors, pressure vessels and offshore platforms. Some of the currently employed imported steels, like maraging steel is highly alloyed and is expensive . In the first part, the alloys were prepared by induction melting with addition of calculated amount of scrap and ferroalloys. The molten metal was tapped at 16000C and poured in preheated cast iron mould of 48x52x250 mm in dimension. The other alloy is prepared by addition of 0.024% Ti to the base composition. This alloy exhibits better mechanical properties than previous one. In the second part of investigation, Attempts were made to develop steel containing low sulphur and low phosphorous through electroslag refining (ESR) process followed by thermomechanical treatment (TMT). The other alloy was prepared by inoculation of about 0.058% titanium during ESR process. Alloys developed by ESR process resulted in sound ingot</p>		<b>52-56</b>

	<p>with low inclusions. The ESR ingots were further undergone for thermomechanical treatment (TMT) to convert it into plates. The process consist of pre-rolling of the ESR ingot to a bar at 1200°C, followed by hot rolling in two passes starting from 950°C and finishing at 850°C with equal deformation of 25% in each pass to convert the bar into plates and were immediately cooled in oil. The mechanical properties and some microstructural features were characterized with the specimens prepared from plates. The base alloy displayed UTS of 1792 MPa, yield strength of about 1580 MPa and elongation of 7.6%. Titanium inoculated alloy displayed UTS of 1885 MPa, yield strength of 1700 MPa and elongation of 8.3 %. It can be construed that the mechanical properties of the titanium inoculated alloy were substantially improved compared to base alloy. Optical and SEM microstructures of the TMT specimen's reveals predominantly lath martensites. However, the microstructure of titanium inoculated alloy consisted of small packets of finer lath martensite. Titanium addition reduces the grain size and refines the martensite laths that lead to improvement in mechanical properties.</p> <p><b>Keywords:</b> Ultrahigh strength steel, Electroslag refining, Thermomechanical treatment, Microstructure, Mechanical properties</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. T. V. Philip and T. J. McCaffy, Ultrahigh Strength Steel in Metals Handbook, 10th Ed., ASM International, USA, 1990, pp. 431-435.</li> <li>2. Bee, J. V., Howell, P. R. and Honeycombe, R. W. K., Metal.Trans., Vol. 10, 1979, .1207.</li> <li>3. Mazanec, K., Neue Hütte, Vol. 31, 1986, p.21.</li> <li>4. Hyspecka, L. and Mazanec, K., Iron and Steel Institute, Vol. 1,1973, p.375.</li> <li>5. J. Pacyna, Steel Research, 57 (1986) 586.</li> <li>6. K. Mazanec and E. Mazancova, Physical Metallurgy of Thermomechanical Treatment of Structural Steels, Mbridge International Science Publishing, London, 1997.</li> <li>7. C. Ouchi, Multipurpose Accelerated Cooling System, Kawasaki Steel Corporation, Report, 1985.</li> <li>8. W. E. Ducworth, G. Hoyle, "Electro-Slag Refining", British Iron and Steel Research Association, London, 1969, pp.1-50.</li> </ol>	
	<p><b>Authors:</b> <b>Yendrebam Arunkumar Singh, Taiborlang Lyngdoh Ryntathiang, Konjengbam Darunkumar Singh</b></p>	
	<p><b>Paper Title:</b> <b>Economic Evaluation of Plastic Filled Concrete Block Pavement</b></p>	
<p>10.</p>	<p><b>Abstract:</b> This paper presents economic evaluation of Plastic Cell filled Concrete Block Pavement (PCCBP) over conventional flexible and Concrete pavements for low volume rural roads. The cost comparison has been carried out considering both construction and maintenance cost for a period of 5 years, based on design analysis and performance studies of 100 mm thick PCCBP laid over 100 mm thick WBM sub-base course. It has been observed that the initial construction costs for both flexible and rigid pavement were higher than that of PCCBP by ~9% and~150% respectively and the total cost (including maintenance cost for 5 years) of flexible and rigid pavement are found to be higher by ~43% and~141% respectively as compared to that of PCCBP. Cent percent replacement of river sand in concrete by waste stone dust proved to be cost cutting without significant change in strength of the concrete.</p> <p><b>Keywords:</b> ABAQUS, BACKGA, Falling Weight Deflectometer (FWD), KENLAYER, Low volume roads, Plastic Cell Filled Concrete Block Pavement (PCCBP), Stone dust.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. AASHTO, 1993. Guide for design of pavement structures, AASHTO, Washington, D.C., II-12.</li> <li>2. ABAQUS, 2009. Dassault Systems Simulia Corp., Providence, RI, USA</li> <li>3. Huang, Y.H, 2010. Pavement Analysis and Design, Dorling Kindersley (India) Pvt. Ltd., licensees of Pearson Education of South Asia,Noida-201309 (U,P), New Delhi.</li> <li>4. IRC, 2001. Guidelines for the Design of Flexible Pavements. Indian Road Congress, New Delhi, IRC-37, New Delhi, India.</li> <li>5. IRC, 2002. Rural Roads Manual, Indian Road Congress Special Publication, IRC-SP: 20, New Delhi, India.</li> <li>6. IRC, 2004. Guidelines for the Design and Construction of Cement Concrete Pavements, Indian Road Congress Special Publication, IRC-SP: 62, New Delhi, India.</li> <li>7. IRC, 2007. Guidelines for the Design of Flexible Pavements for Low Volume Roads, Indian Road Congress Special Publication, IRC-SP: 72, New Delhi, India.</li> <li>8. IS 2720 (1975). Methods of Test for Soil, Determination dry density of soils in place by core cutter method, Part-XXIX, Bureau of Indian Standards, New Delhi.</li> <li>9. IS 2720 (1987). Methods of Test for Soil, Laboratory determination of CBR, Part-16, Bureau of Indian Standards, New Delhi.</li> <li>10. IS 383 (1970), Indian Standard Specification for coarse and Fine aggregates from Natural Sources for Concrete (Second Revision), Bureau of Indian Standards, New Delhi.</li> <li>11. MORTH (2001). Specifications for Roads and Bridge Works, Ministry of Shipping, Roads Transport and Highways (MORTH), Indian Road Congress, New Delhi.</li> <li>12. NHAI, 2011. Indian Road Network, National Highway Authority of India, Ministry of Road Transport and Highways, Government of India, <a href="http://www.nhai.org/roadnetwork.htm">http://www.nhai.org/roadnetwork.htm</a>, accessed on 21st August.</li> <li>13. OEA, 2010. Office of the Economic Advisory, Government of India, <a href="http://eaindustry.nic.in">http://eaindustry.nic.in</a>, accessed on 5th December.</li> <li>14. Panda, B.C. and Ghosh, A.K. (2002a). Structural Behaviour of Concrete Block Pavements I: Sand in Bed and Joints, Journal of Transportation Engineering, 128 (2), pp. 123-129.</li> <li>15. Panda, B.C. and Ghosh, A.K. (2002b). Structural Behaviour of Concrete Block Pavements II: Sand in Bed and Joints, Journal of Transportation Engineering, 128 (2), pp. 130-135.</li> <li>16. PMGSY, 2010. Pradhan Mantri Gram Sadak Yojna (online), <a href="http://www.harrida.gov.in/Maintenance%20Analysis.pdf">http://www.harrida.gov.in/Maintenance%20Analysis.pdf</a>, (Accessed on 10th June, 2010).</li> <li>17. PWD, 2007. Schedule of Rates for Road, Bridge and Culvert Works for all Divisions under PWD (Public Works Department), Assam for the year 2007-2008, Government of Assam, India.</li> <li>18. Reddy, M.A., Ready, K.S. and Pandey, B.B. (2002). Evaluation of Pavement Layer Moduli Using Genetic Algorithms, International Journal on Pavement Engineering and Asphalt Technology, October, pp. 6-19.</li> <li>19. Roy, S., Reddy, K.S., Pandey, B.B. (2009). Flexible-Rigid Pavement Materials- A Sustainable Solution for Village Roads, Journal of the Indian Roads Congress, 70 (3), pp. 261-273.</li> <li>20. Roy, S., Reddy, K.S., Pandey, B.B. (2011). An investigation on cell-filled pavements, International Journal of Pavement Engineering, 12 (3), pp. 229-237.</li> <li>21. Ryntathiang, T.L. (2005). An Investigation on Precast and Cast In-situ Concrete Block Pavements for Low Volume Roads, PhD Thesis,</li> </ol>	<p>57-65</p>

	<p>Department of Civil Engineering, Indian Institute of Technology, Kharagpur-721302, India.</p> <p>22. Ryntathiang, T.L., Mazumdar, M. and Pandey, B.B., 2009. Structural Behaviour of Concrete Block Pavements, Journal of Transportation Engineering, 131(9), 662-668.</p> <p>23. Sahoo, U.C., Reddy, K.S. and Pandey, B.B., 2006. Structural Evaluation of Concrete Filled Cell Pavement, International Journal of Pavement Engineering and Asphalt Technology, U.K., 7 (1), pp. 27-37.</p> <p>24. SHELL, 1978. Shell Pavement Design Manual – Asphalts Pavement and Overlay for Road Traffic, SHELL, International Petroleum Company Ltd, London.</p> <p>25. Srinivas, T., Suresh, K. and Pandey, B.B. (2007). Wheel Load and Temperature Stresses in Concrete Pavement, Highway Research Bulletin, Indian Road Congress, New Delhi, 76, pp. 11-24.</p> <p>26. Visser, A.T. (1994). A Cast In-situ Block Pavement for Labour-Enhanced Construction, Concrete Beton, Concrete Society of South Africa, 71, pp. 1-8.</p> <p>27. Visser, A.T. (1999). The Response of Flexible Portland Cement Concrete Pavements Under Ultra Heavy Loading, Concrete Beton, Concrete Society of South Africa, pp. 11-18.</p> <p>28. Visser, A.T. and Hall, S. (1999). Flexible Portland Cement Concrete Pavement for Low-Volume Roads, Transportation Research Record, 1652, Washington D. C., pp. 121-127.</p> <p>29. Visser, A.T. and Hall, S. (2003). Innovative and Cost Effective Solutions for Roads in Rural Areas and Difficult Terrain, Transportation Research Record, Journal of Transportation Research Board, (1819 A), pp. 169-173.</p> <p>30. Yendrembam, A.S., Teiborlang, L.R., Konjengbam, D.S. (2012). Structural Assessment of Plastic Cell Filled Concrete Block Pavement (PCCBP) - an experimental study, International Journal of Pavement Engineering, 13 (3), PP. 267-279.</p> <p>31. Yendrembam, A.S., Teiborlang, L.R., Konjengbam, D.S. (2012). An Investigation of Plastic Cell filled Concrete Block Pavement (PCCBP) overlay, Journal of Road Materials and Pavement Design, Taylor and Francis,13(2), 345- 359.</p> <p>32. Yendrembam, A.S., Teiborlang, L.R., Konjengbam, D.S. (2012). Distress Evaluation of Plastic Cell Filled Concrete Block Pavement, ,Int. J. Pavement Res. Technology, 5(4), 234-244.</p> <p>33. Yendrembam, A.S., Teiborlang, L.R., Konjengbam, D.S. (2015). Structural Analysis of Flexible Concrete Pavement - An Innovative Pavement Technique, International Journal of Engineering and Technical Research, 3(10) pp. 81-89.</p>					
11.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Ademola Abdulkareem, Awoso C. O. A., Samuel I., Agbetuyi A. F</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Contingency Analysis for Assessing Line Losses in Nigeria 330-kV Power lines</b></td> </tr> </table> <p><b>Abstract:</b> Line losses in transmission lines constitute one of the major problems affecting power generation and distribution systems. Losses have been found to affect the overall efficiency of a system. Therefore, to increase the efficiency of any system, losses must be minimized. This paper carried out a comprehensive study and analysis of line losses associated with Nigeria 330-kV power transmission lines. The work includes the power-flow analysis carried out on the existing network using both the Newton-Raphson (N-R) written in code-based MATLAB and the model-based N-R in Power World Simulator (PWS) environment. The power-flow analysis was further subjected to contingency analysis and simulation using the N-R in PWS. Two load-flows were performed to reveal voltage violated buses. The results showed that the bus voltages outside the statutory limit of 0.95 – 1.05p.u (i.e 313.5 – 346.5kV) occurred at buses 2-Birnin-Kebbi (0.9183pu), bus 9 Akangba (0.937pu), bus 18-Onitsha (0.935pu), bus 20-New-Haven (0.920pu), bus 25- Kaduna (0.9233pu), bus 26-Kano (0.776pu), bus 22-Jos (0.8192pu) and bus 28-Gombe (0.7247pu) under normal uncompensated condition. Capacitive shunt compensation was applied on these buses and the results recorded appreciable loss reduction (about 18.35%). The result of the single line contingency analysis for uncompensated and compensated indicates a total of 335 and 25 voltage bus violations respectively.</p> <p><b>Keywords:</b> Line losses, power line, power-flow analysis, voltage violations, compensation, contingency analysis .</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>R. Shankar and P. Kundur, “Power System Stability Control”, 1st. 2nd Edition New York, McGraw-Hill Books, pp581, 1994.</li> <li>H. Sadaat, “Power System Analysis”. Milwaukee School of Engineering, Tata McGraw-Hill Publishing Company Ltd. New Delhi, pp 189, 2002</li> <li>J. J. Grainger and W. D. Stevenson, “Power System Analysis”, New York, McGraw-Hill Inc. pp. 1994, 329-376</li> <li>Mehta and R. Mehta, “Principle of Power system”. New Delhi: S.Chand, 2010</li> <li>Isaac, S and A. Abdulkareem, “Investigating the Selection of a Suitable Slack bus: A Case Study of Multi-generating Stations of the Nigerian 330-kV Power Station”. International Journal of Electrical Electronic Engineering Studies, vol.2 No. 1 pp. 1-12.</li> <li>Power World Co-operation. ((2014 Version)). Power World Simulator, Version 18Glover/Sarma Build11/02/01, Licensed only for Evaluation and University Education use.</li> </ol>	<b>Authors:</b>	<b>Ademola Abdulkareem, Awoso C. O. A., Samuel I., Agbetuyi A. F</b>	<b>Paper Title:</b>	<b>Contingency Analysis for Assessing Line Losses in Nigeria 330-kV Power lines</b>	66-78
<b>Authors:</b>	<b>Ademola Abdulkareem, Awoso C. O. A., Samuel I., Agbetuyi A. F</b>					
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12.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Swetha Ajith Mathew, M. Nazeer</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Strength and Chemical Durability of PC-Slag-RHA Ternary Blended Concrete Mixes</b></td> </tr> </table> <p><b>Abstract:</b> Concrete is an important and commonly used man made construction material, which can be considered to have better strength and durability characteristics. Nowadays, ternary blended concrete is achieving popularity by overcoming the disadvantages of binary blended concrete. The present work deals with study of fresh properties, strength and durability of ternary blended concrete with Ground Granulated Blast Furnace Slag (GGBS) and Rice Husk Ash (RHA). Concrete mix is designed for strength of 40MPa. The study is limited to ternary blended concrete with 50% replacement of cement with GGBS and remaining 50% of cement is replaced with 5%, 10% and 15% RHA in different mixes. The chloride penetration resistance of the concrete is assessed by rapid chloride permeability test. The observations were critically analysed and the different attributes of the various mixes were correlated with the RHA content in the mix.</p> <p><b>Keywords:</b> Ground Granulated Blast Furnace Slag, Rice Husk Ash, ternary blended concrete, strength, durability</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Cheng and R. Huang, “Influence of GGBS on durability and corrosion behaviour of reinforced concrete,” Materials Chemistry and Physics, 93, pp. 404-411, 2005</li> <li>Elahi, P.A.M. Basheer, and S.V. Nanukuttan, “Mechanical and durability properties of high performance concrete containing supplementary cementitious materials”, Construction and Building Materials, 24, pp. 292-299, 2010.</li> <li>M.R. Karim, M.F.M. Zain, M.Jamil, F.C. Lai and M.N. Islam, “Strength of Mortar and Concrete as Influenced by Rice Husk Ash: A Review”, World Applied Sciences Journal, 10, pp. 1501-1503, 2012.</li> </ol>	<b>Authors:</b>	<b>Swetha Ajith Mathew, M. Nazeer</b>	<b>Paper Title:</b>	<b>Strength and Chemical Durability of PC-Slag-RHA Ternary Blended Concrete Mixes</b>	79-82
<b>Authors:</b>	<b>Swetha Ajith Mathew, M. Nazeer</b>					
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**Authors:** Haider Sh Hashim

**Paper Title:** Security Text Message Verification via Steganography and Color Image in Internet of Things Environment

**Abstract:** Internet of Things (IoT) technologies allow everyday objects including small devices in sensor networks to be capable of connecting to the Internet. Such an innovative technology can lead to positive changes in human life. However, if there is no proper security mechanism, private and sensitive data around humans can be revealed to the public Internet. In this aspect, this paper examines security issues of the IoT that major challenge is faced by IoT. In particular, we focus on the main challenge in exchanging information among devices in IoT's environment. We have combined the concept of attribute based on steganography and crypto hash function to process data with efficient exchange information between two or more entities in the IoT's environment. The proposed scheme has several important security features such as key agreement, resisting malicious attacks, and a good performance. The experimental results view the efficiency and sturdiness of our proposed scheme.

**Keywords:** (IoT), IoT's, However, performance, experimental, security, resisting

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14.	<b>Authors:</b>	<b>Debabrata Bhattacharya, Harinandan Tunga</b>	
	<b>Paper Title:</b>	<b>Encryption and Decryption Process of a Secret Natural Colour Image Based on K out of N VSS Scheme</b>	
	<b>Abstract:</b>	<p>The Visual Secret Sharing (VSS) scheme is a cryptographic tool used to encode a secret image into several shares, each of which separately does not reveal any information of the secret image. Visual Cryptography (VC) schemes hide the secret image into two or more images which are called 'shares'. The secret image can be recovered simply by stacking the shares together without any complex computation involved. The shares are very safe because separately they reveal nothing about the secret image. In this paper, a generalized version of Visual Cryptography is mentioned. Here an image (secret image) can be hidden in 'n' numbers of cover images. This generalized version helps the user to attain the desired level of encryption. Also after successful transmission the secret image can be re-discovered using a simple decryption algorithm. The aim of our paper is that a sender sends 'n' number of colored images with a hidden secret image in it by encryption and the receiver recovers the secret image from it by decryption. The proposed approach uses meaningful shares (cover images) to hide the colored secret image and the recovery process is lossless. In this paper, we propose a proportionate algorithm which successfully encrypts a secret image into any number of cover images as chosen by the user. Here the amount of original image share depends upon the pixel values of the cover images. Also a critical value on the number of images is determined which helps in optimizing our aim with the complexity.</p> <p><b>Keywords:</b> Visual Cryptography (VC), Secret Image, Hidden Secret Image, Proportionate Algorithm, Human Vision System (HVS)</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Adi Shamir, "How to Share a Secret", published in ACM, Laboratory for Computer Science, Massachusetts Institute of Technology, 1979</li> <li>2. Naor, M. and Shamir, A., "Visual cryptography", In Proc. Eurocrypt 94, Perugia, Italy, May 9-12, LNCS 950, pp. 1-12. Springer Verlag., 1994. <a href="http://www.wisdom.weizmann.ac.il/~naor/onpub.html">http://www.wisdom.weizmann.ac.il/~naor/onpub.html</a>.</li> <li>3. Moni Naor, Adi Shamir, "Visual Cryptography", Lecture Notes in Computer Science, 1995, <a href="http://citeseer.ist.psu.edu/naor95visual.html">http://citeseer.ist.psu.edu/naor95visual.html</a>.</li> <li>4. Mizuho NAKAJIMA, Yasushi YAMAGUCHI, "Extended Visual Cryptography for Natural Images", Department of Graphics and Computer Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 2002, <a href="http://wscg.zcu.cz/wscg2002/Papers_2002/A73.pdf">http://wscg.zcu.cz/wscg2002/Papers_2002/A73.pdf</a></li> <li>5. Harinandan Tunga, "A New Secret Coloured Image Encryption and Decryption Scheme Based on Extended Visual Technology."</li> <li>6. Verheul, E.R., van Tilborg, H.C.A., 1997 "Construction and Properties of k out of n visual secret sharing schemes" Designs Codes Cryptography. (11), 179-196.</li> <li>7. C. Chang, C. Tsai, and T. Chen. "A New Scheme For Sharing Secret Color Images In Computer Network", Proceedings of International Conference on Parallel and Distributed Systems, pp. 21-27, July 2000.</li> <li>8. Chin-Chen Chang, Tai-Xing Yu, "Sharing A Secret Gray Image In Multiple Images", Proceedings of the First International Symposium on Cyber Worlds (CW.02), 2002.</li> </ol>	
15.	<b>Authors:</b>	<b>Sree Vrinda G. M, Prasanth R. S</b>	
	<b>Paper Title:</b>	<b>A Survey on Person Reidentification</b>	
	<b>Abstract:</b>	<p>In recent years, person reidentification receives an intensive attention in the field of intelligent video surveillance (IVR). Recognizing an instance of a person captured by one camera to another instance of the person captured by different camera is mainly called as Person Reidentification. It's an important task for surveillance applications, either for on-line tracking of a person or off-line retrieval of all videos containing a person of interest. Person reidentification is considered as a challenging problem because the appearance of individuals varies greatly through the scenes, due to different acquisition devices, changes in viewpoints, illumination conditions, shadows, different pose or orientation of person that has to be searched for. This paper focuses on the survey of different techniques that are used for person reidentification and to tackle all the issues and challenging aspects of person reidentification while simultaneously describing previously proposed solutions for the problems.</p> <p><b>Keywords:</b> IVR, Person Reidentification</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Annan Li, Luoqi Liu, Kang Wang, Si Liu and Shuicheng Yan, "Clothing Attributes Assisted Person Re-identification," IEEE Transactions on Circuits and Systems for Video Technology, Vol:25, Issue:5, May 2015.</li> <li>2. Yanbing Geng, Hai-Miao Hu, Jin Zheng and Bo Li. "A person re-identification algorithm by using region-based feature selection and feature fusion," IEEE International Conference on Image Processing (ICIP), 2013.</li> <li>3. L. Ma, X. Yang, and D. Tao, "Person re-identification over camera networks using multi-task distance metric learning," IEEE Trans. Image Process, vol. 23, no. 8, pp. 3656-3670, Aug. 2014.</li> <li>4. R. Zhao, W. Ouyang, and X. Wang, "Unsupervised salience learning for person re-identification," in IEEE Conf. Computer Vision and Pattern Recognition, CVPR, 2013, pp. 4321-4328.</li> <li>5. Andy J. Ma, Jiawei Li, Pong C. Yuen and Ping Li, "Cross Domain Person Reidentification Using Domain Adaptation Ranking SVMs," IEEE Transactions on Image Processing, vol. 24, no. 5, May 2015.</li> <li>6. LI, W., WU, Y., MUKUNOKI, M., AND MINOH, M. 2012. Common-near-neighbor analysis for person reidentification. In International Conference on Image Processing, 1621-1624.</li> <li>7. D. Tao, L. Jin, Y. Wang, and X. Li, "Person reidentification by minimum classification error-based KISS metric learning," IEEE Trans. Cybern., 2014, 10.1109/TCYB.2014.2323992.</li> </ol>	
16.	<b>Authors:</b>	<b>Ahmed Abdulrasool, Hasan Abdulsahib Mezaal</b>	
<b>Paper Title:</b>	<b>Investigating the Influence of Hardness and Shape Recovery with Sintering Time of Cu-Al-Ni Smart Alloy</b>		
<b>Abstract:</b>	<p>In this study a Cu-Al-Ni alloy was manufactured by powder metallurgy (PM) method by mixing powder of 83%Cu-13%Al-4%Ni for 6 hrs. after that compacted at 650 mpa and sintered at 850 C for ( 3,4,5,6,7) hrs. and heat treated to investigate the influence of( hardness and shape recovery ) with multiple sintering time. To make sure that manufactured alloy are smart alloy XRD and SEM tests were done for 3 and 7 hrs . The result showed that</p>		

	<p>Martensite layer was formed on surface. The result of hardness and recovery tests showed fluctuation of hardness and shape recovery with sintering time. The effect of sintering time on hardness is apposite on shape recovery. In this research artificial neural network was used to predict the behavior of alloy at sintering time between 3 and 7 hrs.</p> <p><b>Keywords:</b> powder metallurgy, hardness, shape recovery ,neural network</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Rupa Dasgupta, "Effect of alloying constituents on the martensitic phase formation in some Cu-based SMAs" journal of material research and technology, vol3 264-273 2014</li> <li>2. CimprićDarjan "shape memory alloy" UNIVERZA V LJUBLJANIFAKULTETA ZA MATEMATIKO IN FIZIKO ODDELEK ZA FIZIKO, 13 January 2007.</li> <li>3. M. Benke, "High-Temperature Transformation Processes in Cu-13.4Al-5Ni Shape Memory Alloy Single Crystals" ASM International, DOI: 10.1007/s11665-009-9397-7 2009</li> <li>4. Kathryn J. De Laurentis<sup>1</sup> and Constantinos Mavroidis<sup>2</sup>, "Mechanical Design of a Shape Memory Alloy Actuated Prosthetic Hand" Robotics and Mechatronics Laborato Department of Mechanical and Aerospace Engineering Rutgers University, The State University of New Jersey 98 Brett Rd, Piscataway, available on Webpage: <a href="http://cronos.rutgers.edu/~mavro/robot">http://cronos.rutgers.edu/~mavro/robot</a></li> <li>5. Ming H. "INDUSTRIAL APPLICATIONS FOR SHAPE MEMORY ALLOYS" Proceedings of the International Conference on Shape Memory and Superelastic Technolgies, Pacific Grove, California, P.171-182 (2000).</li> <li>6. E.PAUL DeGARMO" materials and processes in manufacturing, six edition" , macmillan publishing company 1984</li> <li>7. M. Reihanian" Application of neural network and genetic algorithm to powder metallurgy of pure iron" material and design journal, vol 32 3183–3188 2011</li> </ol>	
17.	<p><b>Authors:</b> Bahaa Hussein Taher</p> <p><b>Paper Title:</b> Driver Fatigue and Distraction Detection System</p>	<p><b>Abstract:</b> Driver monitoring system is a real-time system that can detect driver fatigue and distraction using image processing tools. In this paper, an algorithm is introduced for driver fatigue and distraction detection based on the relation between face and eye regions. We used the position of the face as indicator for distraction through tracking the face of the driver in the image taken by camera placed on the front upper mirror while for fatigue the eyes state was used to index sleeping situation ,the eyes state detected by the size and matching templates for opened and closed eyes .The algorithm tested laboratory and using of recorded videos and approved to be efficient in application for estimating the driver fatigue and distraction</p> <p><b>Keywords:</b> Driver monitoring system, driver fatigue, distraction detection</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Muhammad Fahad Khan and Farhan Aadil, Efficient Car Alarming System for Fatigue Detection during Driving, International Journal of Innovation, Management and Technology, Vol. 3, No. 4, August 2012,pages 480-486.</li> <li>2. Mohamad-Hoseyn Sigari et.al. ,A Driver Face Monitoring System for Fatigue and Distraction Detection, International Journal of Vehicular Technology ,Volume 2013, Article ID 263983, 11 pages</li> <li>3. Mandalapu Saradadevi and Dr. Preeti Bajaj,Driver Fatigue Detection Using Mouth and Yawning Analysis, IJCSNS International Journal of Computer Science and Network Security, VOL.8 No.6, June 2008,pages 183-188.</li> <li>4. Harini Veeraraghavan and Nikolaos P. Papanikolopoulos,Detecting Driver Fatigue Through the Use of Advanced Face Monitoring Techniques, ITS Institute Center for Transportation Studies 200 Transportation and Safety Building 511 Washington Ave. SE University of Minnesota September 2001.</li> <li>5. Jennifer F. May *, Carryl L. Baldwin ,Driver fatigue: The importance of identifying causal factors of fatigue when considering detection and countermeasure technologies, Transportation Research Part F 12 (2009) 218–224.</li> <li>6. Lawrence Barr ,et.al.,A REVIEW AND EVALUATION OF EMERGING DRIVER FATIGUE DETECTION MEASURES AND TECHNOLOGIES.</li> <li>7. Luke Fletcher,et.al.,Road Scene Monotony Detection in a Fatigue Management Driver Assistance System.</li> <li>8. Swapnil V. Deshmukh,et.al.,Driver fatigue Detection Using Sensor Network, International Journal of Engineering Science and Technology (IJEST), 2011,pages 89-92.</li> <li>9. Mahesh M. Bundele and Rahul Banerjee,Detection of Fatigue of Vehicular Driver using Skin Conductance and Oximetry Pulse: A Neural Network Approach, iiWAS2009, December 14–16, 2009, Kuala Lumpur, Malaysia. ACM 978-1-60558-660-1/09/0012</li> <li>10. MAHESH IYER ,et.al., DRIVER FATIGUE ACCIDENT PREVENTION USING EYEBLINK SENSOR ,SRM university,2010.</li> <li>11. Jung-Ming Wang ,et.al., DETECTING DRIVER'S EYES DURING DRIVING, 18th IPPR Conference on Computer Vision, Graphics and Image Processing (CVGIP 2005) 2005,pages 941-947.</li> <li>12. Abdulredha M.S.,Face detection and Tracking in video stream ,A MSC thesis ,Basrah university ,Iraq,2012.</li> <li>13. Wen-Bing Horng and Chih-Yuan Chen,Areal-time driver fatigue detection system based on eye tracking and dynamic template matching, Tamkang Journal of Science and Engineering, Vol. 11, No. 1, pp. 65_72 (2008).</li> <li>14. R.L. Hsu; A. M. Mottaleb and A. K. Jain, "Face Detection in Color Images," IEEE Trans. On Pattern Analysis and Machine Intelligence, vol.24, no.5, pp. 696–706, May 2002.</li> <li>15. D. Chai, K. N. Ngan, "Face Segmentation Using Skin-Color Map in Videophone Applications,"IEEE Trans on Circuits and Systems for Video Technology, vo.9, no.4,pp.551-564, June 1999.</li> <li>16. Yang M.,et.al.,Detaecting Faces in images :A survey,IEEE Trans on pattern Analysis and Machine Intelligence(PAMI), Vol.24 ,no.1,pp 34-58,2002.</li> <li>17. Monhi,M., Torkamani-Azar ,F. , face detection using learning Networks,M.Sc Thesis, The Graduate school of Natural and Applied Science ,The middle east technical university ,2002.</li> <li>18. S. B. Klein and B. M. Thorne, Biological Psychology, Worth Pub, 2007.</li> <li>19. Anon, "Perclos and eye tracking: Challenge and opportunity," Applied Science Laboratories, Bedford, MA. Tech.Rep., 1999.</li> <li>20. Cho, K. J., Roy, B., Mascaro, S. and Asada, H. H., "A Vast DOF Robotic Car Seat Using SMA Actuators with a Matrix Drive System," Proc. IEEE Robotics and Automation, New Orleans, LA, U.S.A., Vol. 4, pp. 3647_3652 (2004).</li> </ol>
18.	<p><b>Authors:</b> Kamalkishor G. Maniyar, Roshan V. Marode, S. B. Chikalthankar</p> <p><b>Paper Title:</b> Optimization of EDM Process Parameters on MRR &amp; TWR of Tungsten Carbide by Taguchi Method</p>	<p><b>Abstract:</b> Electrical discharge machining (EDM) is a process for shaping hard metals and forming deep complex shaped holes by arc erosion in all kinds of electro-conductive materials. The objective of this research is to study the influence of operating parameters current, voltage and pulse on time on material removal rate (MRR) and tool wear rate (TWR) in EDM of Tungsten carbide. The effectiveness of EDM process with tungsten carbide is evaluated in</p>

	<p>terms of the material removal rate and tool wear rate produced. It is observed that copper is most suitable for use as the tool electrode in EDM of Tungsten carbide. In this research, trials are conducted on Tungsten carbide to observe the influence of the parameters such current, voltage and pulse on time on output characteristic MRR and TWR. The experiments are conducted by using Taguchi, DOE technique and analysis is confirmed by ANOVA and regression method. This study presented the optimal machining condition which can be used for maximize MRR and minimize TWR. The tests are confirmed by confirmation test and results are validated mathematical analysis.</p> <p><b>Keywords:</b> ANOVA analysis, EDM Parameters, Material Removal Rate, Tool Wear Rate, Taguchi Method</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. R. Karthikeyan, P.R. Lakshmi Narayanan, and R.S. Naagarazan, "Mathematical modeling for electric discharge machining of aluminium-silicon carbide particulate composites", <i>Journal of Materials Processing Technology</i>, vol. 87 (1-3), 1999, pp. 59-63.</li> <li>2. H. Yan, C.C. Wang, H.M. Chow, and Y.C.Lin, "Feasibility study of rotary electrical discharge machining with ball burnishing for Al<sub>2</sub>O<sub>3</sub>/6061Al composite", <i>International Journal of Machine Tools and Manufacture</i>, vol. 40(10), 2000, pp. 1403-1421.</li> <li>3. S.H. Lee, and X.P. Li, "Study of the effect of machining parameters on the machining characteristics in electrical discharge machining of tungsten carbide", <i>Journal of Materials Processing Technology</i>, vol. 115(3), 2001, pp. 344-358.</li> <li>4. B. Mohan, A. Rajadurai, and K.G. Satyanarayana, "Effect of sic and rotation of electrode on electric discharge machining of Al-sic composite", <i>Journal of Materials Processing Technology</i>, vol. 124(3), 2002, pp. 297-304.</li> <li>5. H. C. Tsai, B. H. Yan, and F.Y. Huang, "EDM performance of Cr/Cu-based composite electrodes", <i>International Journal of Machine Tools and Manufacture</i>, vol. 43(3), 2003, pp. 245-252.</li> <li>6. P.N. Singh, K. Raghukandan, M. Rathinasabapathi, And B.C. Pai, "Electric discharge machining of Al-10%sic as-cast metal matrix composites", <i>Journal of Materials Processing Technology</i>, vol. 155-156(1-3), 2004,</li> <li>7. Y. Lin, C. Cheng, and L. Hwang, "Machining characteristics and optimization of machining parameters of SKH 57 high-speed steel using electrical-discharge machining based on Taguchi method", <i>Materials and Manufacturing Processes</i>, vol. 21(8), 2006, pp. 922- 929.</li> <li>8. S. Dhar, R. Purohit, N. Saini and G.H. Kumar, "Mathematical modeling of electric discharge machining of cast Al-4Cu-6Si alloy-10 wt.% sicp composites", <i>Journal of Materials Processing Technology</i>, vol. 193(1-3), 2007, pp. 24-29.</li> <li>9. Yan-Cherng Lin, Yuan-feng chen, Ching-tien Lin, and Hsinn-jyh Tzeng, "Feasibility study of rotary electrical discharge machining with ball burnishing for Al<sub>2</sub>O<sub>3</sub>/6061Al composite", vol.23, 2008, pp. 391-399.</li> <li>10. T.A. El-Taweel, "Multi-response optimization of EDM with Al-Cu-Si-tic P/M composite electrode", <i>International Journal of Advanced Manufacturing Technology</i>, vol. 44(1-2), 2009, pp. 100-113.</li> <li>11. S. H. Tomadi, M. A. Hassan, Z. Hamedon, Member, IAENG R.Daud, A. G. Khalid, "Analysis of the Influence of EDM Parameters on Surface Quality, Material Removal Rate and Electrode Wear of Tungsten Carbide", <i>Proceeding of the International Multi Conference of Engineers and Computer Scientists</i>, vol. II, 2009, pp 01-06.</li> <li>12. Pandey, P.C., and Shah, H.S. (1980), "Modern Machining Processes", New Delhi. Tata Mcgraw-Hill.</li> <li>13. Puertas, I., Luis, C.J . and Alvarez , L. (2004), "Analysis of the Influence of EDM Parameters on Surface Quality , MRR and EW of WC-Co", <i>Journal of Material Processing Technology</i>.</li> </ol>					
19.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><b>Authors:</b></td> <td><b>Mohamed Hanaoui, Rachid Aouami, Mounir Rifi</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Smart Antenna System for Wireless Sensor Networks to Improve Energy Efficiency</b></td> </tr> </table> <p><b>Abstract:</b> This paper presents the design and implementation of smart antenna system in wireless sensor network severely to minimize the energy consumption due a interference constraints. The integration of in wireless sensor networks is a challenging and very attractive technical solution to improve the system capacity, the quality of service, and the power control. Smart antenna system has the advantage over traditional omnidirectional antennas system), of being able to orientate signals into the desired direction in either transmission node or reception node. In this paper, we create a view of ground with nodes by using MATLAB, then we compare active communication using SAS and active communication using OAS using the static topology. The designed system provides a flexible and low cost solution for us to make in the smart-home and office smarter. The energy efficiency to bring by smart antenna system is described.</p> <p><b>Keywords:</b> smart antenna, omnidirectional antenna, wireless sensor network, nodes, energy efficiency.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Frank B. Gross. "Smart Antenna for Wireless Communication with Matlab". McGraw-Hill Companies, Inc. United States of America 2005.</li> <li>2. C.A. Ballanis. "Antenna theory analysis and design". 3rd edition, John wiley and Son's Inc, New York 2005.</li> <li>3. Luca Catarinucci, Sergio Guglielmi, Riccardo Colella, Luciano Tarricone . "Switched-Beam antenna for WSN nodes enabling Hardware-driven power saving". <i>Proceedings of the 2014 federated conference on computer science and information systems</i> pp. 1079-1086 . DOI: 10.15439/2014F82 ACSIS, Vol. 2</li> <li>4. Luca Catarinucci, Sergio Guglielmi, Luigi Patrono, Luciano Tarricone . "Switched-Beam antenna for Wireless Sensor Networks nodes". <i>Progress in electromagnetics research C</i>, Vol. 39, 193-207,2013</li> <li>5. G. Giorgetti, A. Cidronali, S.K.S. Gupta, G. Manes, "Exploiting LowCost Directional Antennas in 2.4 GHz IEEE 802.15.4 Wireless Sensor Networks", in <i>Proc. 10th European Conference on Wireless Technology</i>, Oct. 2007, pp. 217-220.</li> <li>6. D.-C. Chang, B.-H. Zeng, J.-C. Liu, "Reconfigurable angular diversity antenna with quad corner reflector arrays for 2.4 GHz applications," <i>IET Microw., Antennas Propag.</i>, vol. 3, no 3, pp. 522-528, Apr. http://dx.doi.org/2009, 10.1049/iet-map.2008.0119</li> <li>7. L. Ming-lu, W. Tzung-Yu, H. Jung-Chin, W. Chun-Hsiung, J. ShyhKang, "Compact Switched-Beam Antenna Employing a Four-Element Slot Antenna Array for Digital Home Applications," <i>IEEE Trans. Antennas Propag.</i>, vol. 56 ,no.9, pp 2929-2936, Sept. 2008.</li> <li>8. Tian-Hong Loh, Ke Liu, Fei Qin, Haitao Liu . "Assessment of the adaptive routing performance of a wireless sensor network using smart antennas". <i>IET wireless sensor systems</i>, 5th November 2014, DOI: 10.1049/iet-wss.2014.0066.</li> <li>9. A. Ansari, "Performance Comparison for Omnidirectional and Directional MAC Protocols for Ad hoc Network," <i>Int. J. Comput. Appl.</i>, vol. 70, no. 21, pp. 26-31, 2013.</li> <li>10. R.Aouami.E.Said. M.Rifi and M.Ouzzif 'Fountain code enabled of IEEE 802.11DCF for optimization throughput in Wireless Sensors The 10th International Conference for Internet Technology and Secured Transactions (ICITST-2015)', London, UK .14-16 December 2015.</li> <li>11. M. N. Alam, M. A. Hussain, and K. S. Kwak, "Neighbor initiated approach for avoiding deaf and hidden node problems in directional MAC protocol for ad-hoc networks," <i>Wirel. Networks</i>, vol. 19, pp. 933-943, 2013.</li> <li>12. M. Hanaoui, M. Rifi, H. Bouassam, H. Terchoune, "Improvement of energy efficiency of GSM BTS by using smart antenna system" <i>Revue Méditerranéenne des Télécommunications</i>, Vol. 5, N° 2, June 2015. ISSN 2458-6765</li> </ol>	<b>Authors:</b>	<b>Mohamed Hanaoui, Rachid Aouami, Mounir Rifi</b>	<b>Paper Title:</b>	<b>Smart Antenna System for Wireless Sensor Networks to Improve Energy Efficiency</b>	117-121
<b>Authors:</b>	<b>Mohamed Hanaoui, Rachid Aouami, Mounir Rifi</b>					
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<b>Authors:</b>	<b>Devarshi Chaurasia, Yogesh Garg</b>					

	<b>Paper Title:</b> Assessment of Building Architecture Design Parameters by Applying Fuzzy Logic Concepts	
	<p><b>Abstract:</b> The field of Building Architecture and Design is considered as multidisciplinary science with a very important dimension as ‘Art’. Architecture and design requires more artistic aptitude than engineering. As far as engineering and science are concerned, phenomenological paradigms are sufficient. However, need to explore new approaches as far as Art and Architecture are concerned. In architecture we make perceptions on the bases of knowledge and experience. Recently, Fuzzy Logic has been among new scientific paradigms to assess the architecture and Design quality, which actually differ or vary person to person. The research focuses on scope of application of fuzzy logic concepts and theory on architecture and design quality assessment. Architectural design quality assessment may consider as science with full of soft and flexible variables. In such situations, assessment on the subject in fuzzy logic terms plays the essential role.</p> <p><b>Keywords:</b> smart antenna, omnidirectional antenna, wireless sensor network, nodes, energy efficiency.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Zubkov, A. Quality Control of Building Projekt. Akadeemia tee. 5A(019).</li> <li>Zadeh, L. A., Fuzzy Sets, Information and Control. Vol. 8, pp. 335-353, 1965.</li> <li>Woodcock, C.E. and S. Gopal, Fuzzy set theory and thematic maps: accuracy assessment and area estimation. International Journal of Geographical Information Science, 2000. 14(2): p.153-172.</li> <li>LA, Z., The Concept of a linguistic variable and its application to approximate reasoning. Journal of Information Science, 1975. 8(1): p. 199-249.</li> <li>Jang J.S., Sun C.T. and Mizutani E., Fuzzy-Neuro and Soft Computing, Prentice-Hall International, Inc., Upper saddle River, NJ 07458.</li> <li>Clitcioglu ö., Durmisevic S., Fuzzy Logic in Architecture Design. TU Delft, Faculty of Architecture, Building Technology, Berlageweg 1, 2628 CR Delft, Netherlands.</li> <li>www.eusflat.org/proceedings/EUSFLAT_2001/.../265_Ciftcioglu.pdf</li> <li>Bansal. Sunita, Biswas. Srijit, Singh S.K., Selection of most economical Green Building out of n-Alternatives: Approach of Vague Fuzzy Logic, International Journal of Engineering and Technology, Vol.-4 No.-2 pp 164-168, Feb.2015 http://esatjournals.org/Volumes/IJRET/2015V04/I02/IJRET20150402020.pdf.</li> <li>Jang J-SW.R., at al., Neuro-fuzzy and Soft Computing: A Computational Approach to Learning Maching Intelligence. Prentice Hall, 1996.</li> <li>Fuzzy Control Programming. Technical Report, International Electronical Commision, 1997. http://cs.bilkent.edu.tr/~zeynep/files/short_fuzzy_logic_tutorial.pdf</li> <li>J. Mendel., Fuzzy Logic system for engineering: A Tutorial. Proceeding of the IEEE, 83(3): 345-377, March 1995. http://cs.bilkent.edu.tr/~zeynep/files/short_fuzzy_logic_tutorial.pdf</li> <li>Bansal. Sunita, Biswas. Srijit, Singh S.K., Approach of Fuzzy Logic for Evaluation of Green Building Rating System, International Journal of Innovative Research in Advance Engineering, Issue-3, Vol.-2 March 2015 http://www.ijrae.com/volumes/Vol2/iss3/08.MRCE10080.pdf</li> </ol>	122-127
21.	<p><b>Authors:</b> Sabah Khan</p> <p><b>Paper Title:</b> Analysis of Wear Rate and Tribological Behavior of Aluminum Cast Alloy A356 and Granite Composite at Different Speeds</p> <p><b>Abstract:</b> Most of the machine elements have surface contacts with friction between them. The presence friction tends to wear off the surface leading to failure of the machinery. In today’s world almost all material scientists are striving to develop materials with low wear rate to improve the life expectancy and performance efficiency of the components. In this paper, I have carried out a comparative analysis of the effect of presence of reinforcing granite particles on A356/LM25 cast alloy of aluminum. The wear rates of both the alloy and composite are analyzed at different speeds and pressures. The results are used to analyze the tribological behavior, of the alloy and the composite.</p> <p><b>Keywords:</b> Granite, LM 25, Tribology, Wear rate .</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>N.Axen, I.M. Hutchings and S. Jacobson, “A Model for the friction of multiphase materials in abrasion”,Tribology International Vol.29, No.6. pp467-475,1996.</li> <li>Krutz, Schueller, Claar, “Machine Design for Mobile and Industrial applications”,SAE International, 1999, pp25,26.</li> <li>Brady, GS., H.R. Clauser and JA Vaccari “ Materials Handbook” 14th ed., McGraw-Hill, NY, 1996.</li> <li>Krishan K. Chawla “Composite materials : science and engineering”. New York : Springer-Verlag, c1987.WALTER TA418.9 .C6 C43 1987</li> <li>Mel Schwartz,”Composite materials”, Upper Saddle River, N.J. : Prentice Hall PTR, c1997.WALTER TA418.9 .C6 S37 1997</li> <li>R.K Dogra , A.K Sharma “ Advances in Material Science”, S. K. Kataria and Sons.pp 389-394.</li> <li>Engineered materials handbook, v. 1. Composites / Handbook Committee Metals Park, Ohio : ASM International, c1987 WALTER Quarto TA403 .E497 1987</li> <li>Bharat Bhushan, “Principles and Applications of Tribology”, John-Wiley &amp; Sons, 1999.</li> <li>Elwin L. Rooy, “Aluminium and Aluminium alloys”, Aluminium Company of America, 2002.</li> <li>S. Nafisi, D. Emadi, M.T. Shehata and R. Ghomashchi, Effects of electromagnetic stirring and superheat on the microstructural characteristics of Al-Si-Fe alloy, Materials Science and Engineering A, 432, 71-83, 2006.</li> <li>Stowe R L, “Strength and deformation properties of granite, basalt, limestone and tuff at various loading rates”, sponsored by Defence Atomic Support Agency, 1969.</li> <li>Sabah Khan, “Effect of Sliding Surface Temperature on the Sliding Wear Behavior of Natural Mineral Reinforced Aluminium Alloy Composite”, International Journal of Scientific Research, Vol 4, Issue 3, March, 2015.</li> <li>Radhika, R. Subramanian , S. Venkat Prasad, “Tribological Behaviour of Aluminium/Alumina/Graphite Hybrid Metal Matrix Composite Using Taguchi’s Techniques”, JMMCE, Vol. 10, No.5, pp.427-443, 2011.</li> <li>Sabah Khan, “Analysis of Tribological Applications of Functionally Graded Materials in Mobility Engineering”, International Journal of Scientific and Engineering Research, March 2015, pp 1150- 1160.</li> <li>Zeeshan Ahmad, Sabah Khan, ”Evaluation of Effective Thermal Properties of Aluminum Metal Matrix Composites Reinforced by Ceramic Particles”, IJCET, Volume 5, No4. July- August, 2015. Pp2884-2897.</li> </ol>	128-131
22.	<p><b>Authors:</b> Swapna P. S, Susan R. J, Sakuntala S. Pillai</p>	

	<b>Paper Title:</b> <b>Analysis of Spectral Efficiency in OFDMA Fem to Cell Networks</b>
	<p><b>Abstract:</b> Orthogonal Frequency Division Multiple Access (OFDMA) is a promising multiple access technique for next generation wireless communication such as WiMAX, LTE, IMT-A etc because of its high spectral efficiency and inherent robustness against frequency selective fading. Recently fem to cell has been proposed for indoor coverage extension and to reduce traffic within macrocells. Fem to cells are deployed in an ad-hoc manner by different consumers in the same frequency band, causing interference with each other. To fully realize the potential of these networks, it is necessary to allocate resources to them in such a way that interference is mitigated. This work aims to improve the performance of uplink OFDMA fem to cell networks by joint subchannel and power allocation. Joint subchannel and power allocation using Hungarian and water filling algorithm performs better than the existing fem to cell resource allocation algorithms with respect to spectral efficiency.</p> <p><b>Keywords:</b> Orthogonal Frequency Division Multiple Access (OFDMA); femtocell; resource allocation; subchannel allocation; power allocation.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Lee, Hyuntai Kim, Jinhyun Park, and Jitae Shin, " An Efficient Resource Allocation in OFDMA Fem to cell Networks", IEEE 72nd Vehicular Technology Conference Fall (VTC 2010-Fall), 2010.</li> <li>2. G. Li and H. Liu, "Downlink radio resource allocation for multi-cell OFDMA system," IEEE Trans. Wireless Commun., vol. 5, no. 12, pp. 3451–3459, Dec. 2006.</li> <li>3. L. Garcia, K. Pedersen, and P. Mogensen, "Autonomous component carrier selection: Interference management in local area environments for lte-advanced," IEEE Communications Magazine., 2009.</li> <li>4. R. Madan, J. Borran, A. Sampath, N. Bhushan, A. Khandekar, and T. Ji, "Cell association and interference coordination in heterogeneous LTE-A cellular networks," IEEE Journal on Selected Areas in Communications., 2010.</li> <li>5. R. Chang, Z. Tao, and C.-C. Zhang, J.and Kuo, "A graph approach to dynamic fractional frequency reuse (ffr) in multi-cell ofdma networks," in IEEE ICC, 2009.</li> <li>6. David Lopez, Akos Ladanyi, Alpar Juttner and Jie Zhang, "OFDMA femtocells: A Self Organizing approach for frequency assignment" IEEE 20th International Symposium on Personal, Indoor and Mobile Radio Communications, 2009.</li> <li>7. K. Sundaresan, S. Rangarajan, " Efficient Resource Management in OFDMA Femto Cells," Proceedings of the tenth ACM international symposium on Mobile ad hoc networking and computing, May. 2009.</li> <li>8. Hojoong Kwon and Byeong Gi Lee, " Distributed Resource Allocation through Noncooperative Game Approach in Multi-cell OFDMA Systems," IEEE conference publications,2006.</li> <li>9. L. Giupponi and C. Ibars, "Distributed interference control in OFDMAbased femtocells," in Proc. 2010 IEEE Int. Symp. on Personal, Indoor and Mobile Radio Commun., pp. 1201–1206.</li> <li>10. Stephen Schedler and volker Kuhn, "Resource allocation for the multiple access relay channels and OFDMA," EURASIP Journal on Advances in Signal Processing 2013.</li> <li>11. Qilin Qi, Andrew Minturn, and Yaoqing (Lamar) Yang, "An Efficient Water-Filling Algorithm for Power Allocation in OFDM-Based Cognitive Radio Systems", 2012 International Conference on Systems and Informatics (ICSAI 2012).</li> <li>12. R. Jain, A. Duresi, and G. Babic, "Throughput fairness index: Anexplanation," ATM Forum Document Number: ATM Forum/990045, Feb. 1999.</li> <li>13. Vu Nguyen Ha and Long Bao Le, "Fair resource Allocation for OFDMA Fem to cell Networks with Macro cellProtection", IEEE Transactions On Vehicular Technology, Vol. 63, No. 3, March 2014.</li> <li>14. Prabhu Chandhar, Suvra Sekhar Das, " Analysis of Area Spectral Efficiency for Co-Channel Deployed Macrocell-Fem to cell OFDMA Networks", wireless communications symposium IEEE ICC, 2013.</li> </ol>
	<b>Authors:</b> <b>Faisal Ahmad</b>
	<b>Paper Title:</b> <b>Comparative Analysis of Sediment Removal Efficiency Parameters of Settling Basin</b>
23.	<p><b>Abstract:</b> The mechanism of flow in settling basin is so complicated that it is very difficult to establish a general regression model to accurately estimate the sediment removal efficiency. No general relationship is available which can be used for estimation of sediment removal efficiency of settling basin under flushing condition as well as without flushing condition. Even in the absence of flushing, considerable differences exist in efficiencies given by different methods. The present study aims to re-analyze the databases to develop a general regression model for the determination of sediment removal efficiency of settling basin. The equation for sediment removal efficiency of settling basin given by Ranga Raju et al. (1999) has been checked and it was observed that the Ranga Raju et al. (1999) predictor does not give the reasonable estimate of sediment removal efficiency of settling basin. Therefore, the data have been re-analyzed and a new equation is developed which is recommended in order to predict the sediment removal efficiency of settling basin. The qualitative performance of present predictor indicated that it has lowest AAD, RMSE, APE and highest R as compared to Ranga Raju et al. (1999) predictor.</p> <p><b>Keywords:</b> settling basin, sediment removal efficiency, regression model, R</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Atkinson, E. (1992). "The design of sluiced settling basins—A numerical approach." Rep. No. OD 124, Overseas Development Unit, HR Wallingford, U.K.</li> <li>2. Camp, T. R. (1946). "Sedimentation and the design of settling tanks." Trans., ASCE, 3, 895-958.</li> <li>3. Dobbins, W.E. (1944). "Effect of turbulence on sedimentation." Trans. ASCE, 109, 629-653.</li> <li>4. Garde, R. J., Ranga Raju, K. G., and Sujudi, A. W. R. (1990). "Design of settling basins." J. Hydraul. Res., 28(1), 81–91.</li> <li>5. Jain, A. K. (2009). "Fluid mechanics including hydraulic machines." Tenth edition, Khanna publishers, New Delhi.</li> <li>6. Kerssens, P. J. M., Prins, A., and Van Rijn, L. C. (1979). "Model for suspended sediment transport." J. Hydr. Div., 105(5), 461–471.</li> <li>7. Ranga Raju, K. G., Kothiyari, U. C., Srivastav, S., and Saxena, M. (1999). "Sediment removal efficiency of settling basins." J. Irrig. Drain. Eng., 125(5), 308–314.</li> <li>8. Saxena, M. (1996). "Effect of flushing on efficiency of settling basins," ME thesis, Dept. of Civil Engineering, Univ. of Roorkee, Roorkee (U.P.), India.</li> <li>9. Schrimpf, W. (1991). "Discussion of Design of settling basins," by R. J. Garde, K.G. Ranga Raju, and A.W.R. Sujudi." J. Hydraul. Res., 29(1), 136-142.</li> <li>10. Singh, K.K. (1987). "Experimental study of settling basins." ME thesis, Dept. of Civil Engineering, Univ. of Roorkee, Roorkee (U.P.), India.</li> <li>11. Singh, K. K., Pal, M., Ojha, C. S. P., and Singh, V. P. (2008). "Estimation of removal efficiency for settling basins using neural networks and</li> </ol>

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	<p>support vector machines.” J. Hydrol. Eng., ASCE, 13(3), 146-155.</p> <p>12. Srivastav, S. (1997). “Effect of flushing on the efficiency of settling basin,” ME thesis, Dept. of Civil Engineering, Univ. of Roorkee, Roorkee (U.P.), India.</p> <p>13. Stamou, A. I., Adams, E. W., and Rodi, W. (1989). “Numerical modeling of flow and settling in primary rectangular clarifier.” J. Hydraul. Res., 27(5), 665–682.</p> <p>14. Sujudi, A. W. R. (1987). “Design of settling basins.” ME thesis, Dept. of Hydrology, Univ. of Roorkee, Roorkee (U.P.), India.</p> <p>15. Sumer, M. S. (1977). “Settlement of solid particles in open channel flow.” J. Hydr. Div., 103(11), 1323–1337.</p> <p>16. United States Bureau of Reclamation (1949). “Design and construction of the imperial dam and desilting work”. Boulder canyon project final report, Denver, Colorado, United states of America.</p> <p>17. Vanoni, V. A. (1975). “Sedimentation engineering.” Manuals and Reports on Engineering Practice No. 54, ASCE, New York, 22–25 and 582–583.</p>	
	<p><b>Authors:</b> Reshmalakshmi C, Sasikumar M</p> <p><b>Paper Title:</b> Fuzzy Rule Based Color Space</p>	
24.	<p><b>Abstract:</b> Color prediction is still a critical issue in computer vision and image processing. It is necessary to ensure that the perceived color of object remains constant under varying illumination conditions. Novelty of this paper lies in introduction of new color space called linguistic color space designed using fuzzy system for better color constancy. In addition, mapping from RGB to linguistic space retains the precision and accuracy. While evaluating the algorithm, it is clear that the color components are preserved effectively and accurately with the help of combination of different types of membership functions. Inference rules with membership functions results intuitive and efficient color space.</p> <p><b>Keywords:</b> Color Space, Fuzzy inference, linguistic variable, membership functions.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. R. S. Berns, F. W. Billmeyer, and M. Saltzman, Billmeyer and Saltzman’s Principles of Colour Technology, 3rd ed. New York: Wiley, 2000</li> <li>2. L. Hildebrand and M. Fathi. “Knowledge -based fuzzy colour processing” IEEE Trans. Syst. Man. Cybern. Part C, 34(4): 499-505, Nov. 2004.</li> <li>3. G. Louverdis, I. Andreadis, and Ph. Tsalides. “New fuzzy model for morphological colour image processing,” IEEE Proc. Vis. Image Signal Processing, vol.149, June 2002.</li> <li>4. J. Chamorro- Martinez, D. Sanchez, and J. M. Soto- Hidalgo. “A Novel Histogram Definition for Fuzzy Colour Spaces”. IEEE Conf. 2008.</li> <li>5. L. A. Zadeh, “Outline of a new approach to the analysis complex systems and decision process,” IEEE Trans. Syst. Man. Cybern., vol. SMC-3, no. 1, pp. 28-44, Jan.1973.</li> <li>6. H. J. Jimmernann, Fuzzy Set Theory and its Applications, Second ed. Norwell, MA: Kulwer, 1991.</li> <li>7. J.M. Soto-Hidalgo, J. Chamorro- Martinez, and D. Sanchez. “A New Approach for Defining a Fuzzy Colour Space”. IEEE Conf. 2010.</li> <li>8. Amine AIT YOUNES, Isis TRUCK, and Herman AKDAG. “Image retrieval using fuzzy representation of colours”. Soft Computing Manuscript.</li> <li>9. R.C. Gonzalez, R.E. Woods, Digital Image Processing. (Prentice hall Upper Saddle River, New Jersey 2006.</li> <li>10. C. Reshmalakshmi, and M. Sasikumar, “Image Contrast Enhancement using Fuzzy Technique”. IEEE Conference ICCPCT (2013), pp. 861–865</li> <li>11. C. Reshmalakshmi, and M. Sasikumar, “Content-based Algorithm for Colour Image Enhancement Using Fuzzy Technique” . Artificial Intelligence and Evolutionary Algorithms in Engineering systems and computing”. Vol. 325 , 2015, pp 343-352</li> </ol>	141-144
	<p><b>Authors:</b> Juan Ochoa Aldeán, Edison D. Troya Chanta</p> <p><b>Paper Title:</b> A Method for Identification of White Spaces in the VHF/UHF Band for the Future Deployment of Cognitive Radio Networks in the City of Loja</p>	
25.	<p><b>Abstract:</b> This project aims to carry out the identification of White Spaces within the VHF / UHF, corresponding to the range of frequencies ranging from 54 to 686 MHz, for possible use in cognitive radio systems bands. The methodology consisted of a spectrum monitoring performed in order to know their spectral occupancy in six parishes of the City of Loja. For that, a spectrum analyzer system was used, in order to evaluate the implementation Cognitive Radio Networks (CRN’s).</p> <p><b>Keywords:</b> Spectrum, Wireless Communication, Cognitive Radio, White Spaces, National Frequency Plan.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J. H. Aguilar y A. Navarro, «Radio Cognitiva - Estado del Arte,» Revista Sistemas y Telemática, vol. IX, n° 16, pp. 31-53, 2011.</li> <li>2. S. M. Corbacho, «Análisis y caracterización de la ocupación espectral en entornos urbanos exteriores e interiores en el contexto de redes Cognitive Radio de acceso dinámico al espectro,» 23 julio 2009. [En línea]. Available:</li> <li>3. <a href="http://upcommons.upc.edu/bitstream/handle/2099.1/7614/Susana%20Molina%20Corbacho.pdf?sequence=1&amp;isAllowed=y">http://upcommons.upc.edu/bitstream/handle/2099.1/7614/Susana%20Molina%20Corbacho.pdf?sequence=1&amp;isAllowed=y</a>. [Último acceso: 23 febrero 2015].</li> <li>4. Agencia de Regulación y Control (ARCOTEL), «Plan Nacional de Frecuencias,» 2012. [En línea]. Available:</li> <li>5. <a href="http://www.arcotel.gob.ec/wp-content/uploads/downloads/2013/07/plan_nacional_frecuencias_2012.pdf">http://www.arcotel.gob.ec/wp-content/uploads/downloads/2013/07/plan_nacional_frecuencias_2012.pdf</a>. [Último acceso: 13 marzo 2015].</li> <li>6. ARCOTEL, «Listado Mensual de radiodifusión FM y TV abierta VHF/UHF,» Agosto 2015. [En línea]. Available: <a href="http://www.arcotel.gob.ec/estadisticas/">http://www.arcotel.gob.ec/estadisticas/</a>. [Último acceso: 12 Septiembre 2015].</li> <li>7. D. A. S. Briones, «Análisis de factibilidad para la utilización de Cognitive Radio en las radiocomunicaciones necesarias para casos de emergencia en el Ecuador,» Diciembre 2010. [En línea]. Available: <a href="http://bibdigital.epn.edu.ec/bitstream/15000/2602/1/CD-3284.pdf">http://bibdigital.epn.edu.ec/bitstream/15000/2602/1/CD-3284.pdf</a>. [Último acceso: 12 Febrero 2015].</li> </ol>	145-151
	<p><b>Authors:</b> R. Abd Allah</p> <p><b>Paper Title:</b> Unbalance Current Detection for Synchronous Generator Using Alienation Concept</p>	
26.	<p><b>Abstract:</b> In modern digital power protection systems, statistical coefficients technique is recently used for fault analysis. An alienation technique is developed for protecting synchronous generators against unbalance currents conditions. The proposed technique is able to accurately identify the conditions of unbalance phase(s) currents involved in all different types of shunt faults that may locate on stator windings of synchronous generator. Case studies are processed under different loading levels, fault resistances and fault inception angles. It does not need any</p>	152-162

	<p>extra equipment as it depends only on the three-line currents measurements which are mostly available at the relay location. This technique is able to detect the unbalance current conditions, in about a one-cycle period. Thus, the alienation technique is well suited for implementation in digital protection schemes. The proposed methodology is applied for El-kuriemat power station unit that produces 320 MVA and a part of 500 KV Egyptian network. Alternative transient program (ATP) and MATLAB programs are used to implement the proposed technique.</p> <p><b>Keywords:</b> Generator protection, unbalance currents, alienation coefficient, internal and external fault..</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. "Protective Relays Applications Guide," The English Electric Company Limited, Relay Division, Stafford, 1975.</li> <li>2. C. J. Mozina, "IEEE Tutorial on the Protection of Synchronous Generators", IEEE Tutorial Course, IEEE Power Engineering Society Special Publ., no. 95 TP102, 1995.</li> <li>3. M. S. Sachdev and D. W. Wind, "Generator differential protection using a hybrid computer," IEEE Trans. Power Apparatus System, PAS-92 (1973) 2063-2072.</li> <li>4. N.W. Kinhekar, Sangeeta Daingade and Ajayshree Kinhekar, "Current Differential Protection of Alternator Stator Winding," Paper submitted to the International Conference on Power Systems Transients (IPST2009) in Kyoto, Japan June 3-6, 2009.</li> <li>5. Grainger J, Stevenson Jr WD. Power systems analysis electrical engineering. McGraw-Hill International Editions; 1994.</li> <li>6. ABB Automation Products, 'Negative sequence overcurrent relay and protection assemblies' 1999. Available: <a href="http://www.abb.mu/product/us/9AAC710454.aspx">http://www.abb.mu/product/us/9AAC710454.aspx</a> Accessed on: 15 Feb 2012.</li> <li>7. P. K. Dash, O. P. Malik, and G. S. Hope, "Digital differential protection of a generating unit scheme and real-time test results," IEEE Transactions on Power Apparatus and Systems, vol. PAS-96, no. 2, March/April 1977.</li> <li>8. P. K. Dash, O. P. Malik, and G. S. Hope, "Fast generator protection against internal asymmetrical faults," IEEE Transactions on Power Apparatus and Systems, vol. PAS-96, no. 5, September/October 1977.</li> <li>9. Q. Usta, M. Bayrak, M.A. Redfern, "A New Digital Relay for Generator Protection against Asymmetrical Faults", IEEE Transaction on Power Delivery, Yol. 17, No.1, January 2002, pp. 54-59.</li> <li>10. T. Bach, et al., "Determining negative sequence currents of turbine generator rotors," in Electrical Machines and Systems, 2009. ICEMS 2009. International Conference on, 2009, pp. 1-6.</li> <li>11. F. Elnewehi, et al., "Negative-sequence overcurrent element application and coordination in distribution protection," Power Delivery, IEEE Transactions on, vol. 8, pp. 915-924, 1993.</li> <li>12. Muhammad Mohsin Aman, Muhammad Qadeer Ahmed Khan and Mohd Noor Abdullah, "Modeling and Simulation of Digital Negative Sequence Relay for Unbalanced Protection of Generator" 2012 IEEE international power engineering and optimization conference (PEOCO2012), Melaka, Malaysia: 6-7 June 2012.</li> <li>13. ATP - version 3.5 for Windows 9x/NT/2000/XP - Users' Manual Preliminary Release No. 1.1 - October 2002.</li> <li>14. W. Hauschild, and W. Mosch, "Statistical Techniques for High Voltage Engineering", hand book, English edition published by peter pere grinus Ltd., London, United Kingdom, chapter 2, pp. 78-79, 1992.</li> <li>15. Edwards, A. L. "The Correlation Coefficient." Ch. 4 in an Introduction to Linear Regression and Correlation. San Francisco, CA: W. H. Freeman, pp. 33-46, 1976.</li> <li>16. Snedecor, G. W. and Cochran, W. G. "The Sample Correlation Coefficient r and Properties of r." 10.1-10.2 in Statistical Methods, 7th ed. Ames, IA: Iowa State Press, pp. 175-178, 1980.</li> <li>17. Press, W. H.; Flannery, B. P.; Teukolsky, S. A.; and Vetterling, W. T. "Linear Correlation", Cambridge, England: Cambridge University Press, pp. 630-633, 1992.</li> <li>18. Spiegel, M. R. "Correlation Theory." Ch. 14 in Theory and Problems of Probability and Statistics, 2nd ed. New York: McGraw-Hill, pp. 294-323, 1992.</li> <li>19. Instruction Manual for Generator Electrical Equipment, Upper Egypt Electricity Production Company, Elkureimat II 750 MW Combined Cycle Project, Steam Turbine Generator &amp; Auxiliaries (Generator Electrical Equipment), Hitachi, Ltd., Tokyo Japan, 2006.</li> </ol>	
<p><b>Authors:</b></p>	<p><b>Baydaa Hussain Maula</b></p>	
<p><b>Paper Title:</b></p>	<p><b>Generation of p-y curves based on Decomposition Method for Pore Water Pressure</b></p>	
<p>27.</p>	<p><b>Abstract:</b> To highlight the importance and strengthen the prominent role of a pore pressure generation on p-y behavior under different parameters a numerical study will be conducted depending on previous research of shaking table tests. Accordingly, we recognize that the relationship and the mechanism of the dynamic factors is not easy to predict and explain. Estimating lateral resistance and displacement's demands on a soil-pile-structure in a liquefiable ground required an accurate measurements for PWP along the quake period. The decomposition method results explain the mechanical effect of PWP generation with time intervals on pile lateral deformation for cases the presence of a single pile or with a group.</p> <p><b>Keywords:</b> Pile group foundation, Sand blow, OpenSeesPL, Generation of p-y, decomposition method.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Daniel W. Wilson , Ross W. Boulanger and Bruce L. Kutter (2000) , " Observed Seismic Lateral Resistance of liquefying Sand" Journal of geotechnical and geoenvironmental engineering , 899-905</li> <li>2. LinJiCong and LingXianChang (2012) " Simplified Seismic Analysis Method of Bridge Pile-group Foundation in Liquefiable Ground" - Master's thesis - Dissertation: School: Harbin Institute of Technology Course</li> <li>3. Mokhtar Abel –Salam, Mohamed Ahmed Abdel-Motaal and Mohamed Mustafa Wahidy (2014), "Lateral displacement and pile instability due to soil liquefaction using numerical model," Ain- Shams Engineering journal, 2014(5), 1019-1032.</li> <li>4. Parra E (1996), "Numerical Modeling of Liquefaction and Lateral Ground Deformation Including Cyclic Mobility and Dilation Response in Soil Systems," PhD Thesis, Rensselaer Polytechnic Institute, Troy, NY.</li> <li>5. Phanikanth V.S. , Srinivas K., Deepankar Choudhury and Reddy G.R (2013), "Behavior of single piles in liquefied soils during earthquake" International Journal of Geomechanics (Impact Factor: 1.2). 08/2013; 13(4):454-462. DOI: 10.1061/(ASCE)GM.1943-5622.0000224.</li> <li>6. Tang Liang, Baydaa Hussain Maula, Ling Xianzhang, and Su Lei(2014). " Numerical simulations of shake-table experiment for dynamic soil-pile-structure interaction in liquefiable soils" Earth Quack Engineering and Engineering Vibration, Vol.13, No.1(2014) 13: 171-180.</li> <li>7. Tang Liang. "P-Y Model of Dynamic Pile-soil Interaction in Liquefying Ground," PhD Thesis, Dissertation, Harbin Institute of Technology, Harbin, China</li> <li>8. <a href="http://mptuttle.com/newmadrid3.html">http://mptuttle.com/newmadrid3.html</a> Earthquake induced liquefaction in the NMSZ</li> </ol>	<p><b>163-170</b></p>