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	<b>Paper Title:</b>	<b>Unified Power Flow Controller for Power Quality Improvement</b>	
	<p><b>Abstract:</b> The Unified Power Flow Controller (UPFC) is a typical FACTS (Flexible AC Transmission Systems) device that is the most sophisticated and complex power electronic equipment and has emerged for the control and optimization of power flow and also to regulate the voltage in electrical power transmission system. This project propose the real, reactive power and voltage control through a transmission line by placing UPFC at the sending end using computer simulation. The control scheme has the fast dynamic response and hence is adequate for improving transient behavior of power system after transient conditions. When no UPFC is installed, real and reactive power through the transmission line cannot be controlled. A control system which enables the UPFC to follow the changes in reference values like AC voltage, DC voltage and angle order of the series voltage source converter is simulated. In this control system, a generalized pulse width modulation technique is used to generate firing pulses for both the converters. Simulations will be carried out using MATLAB/PSCAD software to check the performance of UPFC.</p> <p><b>Keywords:</b> UPFC, FACTS, Power Quality, Transient, Control.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. N. G. Hingorani and L. Gyugyi, Understanding FACTS, Concepts, and Technology of Flexible AC Transmission Systems. Piscataway, NJ: IEEE Press, 2000.</li> <li>2. L. Gyugyi, "Dynamic compensation of ac transmission lines by solid-state synchronous voltage sources," IEEE Trans. Power Del., vol.9, no. 2, pp. 904-911, Apr. 1994.</li> <li>3. Eskandar Gholipur and Shahrokh Saadate, "Improving of Transient Stability is Power Systems Using UPFC" IEEE Trans. Power Del., vol. 20, no. 2, pp. 1677-1682, Apr. 2005.</li> <li>4. Q. Yu, S. D. Round, L. E. Norum, T. M. Undeland, "Dynamic Control of a Unified Power Flow Controller," IEEE Trans. Power Del., vol. 9, no. 2, pp.508-514, Apr. 1996.</li> <li>5. K. K. Sen, "SSSC—static synchronous series compensator: Theory modeling and application," IEEE Trans. Power Del., vol. 13, no. 1, pp. 241-246, Jan. 1998.</li> <li>6. Edris, A.; Gyugyi, L.; Hamai, D.M.; Lund, M.R.; Rietman, T.R.; Schauder, C.D.; Torgerson, D.R, 1998 "Operation of the unified power flow controller (UPFC) under practical constraints",Power Delivery, IEEE Transactions on , Volume: 13 Issue: 2 , Page(s): 630 –639.</li> <li>7. Aboreshaid, S.; Billinton, R.; Faried, S.O.; Fotuhi- Firuzabad, M, 2000, "Impact of unified power flow controllers on power system reliability", Power Systems, IEEE Transactions on , Volume: 15 Issue: 1, Page(s): 410 –415.</li> <li>8. Bruno, S.; De Tuglie, E.; La Scala, M.; Scarpellini, P,2001, " Dynamic security corrective control by UPFCs", Power Systems, IEEE Transactions on , Volume: 16 Issue:3 , Page(s): 490 –497.</li> <li>9. Bian, J.; Edris, A.; Nelson, R.J.; Ramey, D.G, 1997, ".A study of equipment sizes and constraints for a unified power flow controller", Power Delivery, IEEE Transactions on , Volume: 12 Issue: 3 , Page(s): 1385 –1391.</li> <li>10. T.T.Nguyen and V.L. Nguyen," Dynamic Model of Unified power Flow Controllers in load flow analysis", IEEE1- 4244-0493-2/06, 2006.</li> <li>11. Sen, K.K. and A.J.F. Keri, 2003. "Comparison of field results and digital simulation results of Voltage-Sourced Converter-based FACTS controller". IEEE Trans. Power Del., 18(1): 300-306</li> <li>12. S. Muthukrishna and A. Nirmalkumar, "Enhancement of power quality in 14- bus system using UPFC".Research Journal of Applied sciences, Engineers and Technology 2(4). Maxwell scientific organization, 2010.</li> </ol>		1-4
2.	<b>Authors:</b>	<b>Needhu Varghese, Reji P</b>	
	<b>Paper Title:</b>	<b>Short Term Load Forecasting Using ANN Considering Weather Information and Price</b>	
	<p><b>Abstract:</b> Short-term load forecast is an essential part of electric power system planning and operation. Forecasted values of system load affect the decisions made for unit commitment and security assessment, which have a direct impact on operational costs and system security. Conventional regression methods are used by most power companies for load forecasting. However, due to the nonlinear relationship between load and factors affecting it, conventional methods are not sufficient enough to provide accurate load forecast or to consider the seasonal variations of load. In recent years multilayered feed forward (MLFF) networks with back propagation learning algorithm have been extensively applied to short term load forecasting (STLF) in electric power systems with very good results. This paper presents an artificial neural network based approach for short-term load forecasting that uses temperature, humidity, wind speed and price as inputs. The results are compared by calculating mean Absolute percentage error (MAPE). The suitability of the proposed approach is illustrated through an application to the actual load data of the Kerala System for regulated system and Lanco Kondapilli for deregulated system.</p> <p><b>Keywords:</b> Artificial neural network, back propagation algorithm, deregulated system and short term load forecasting.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Wei-Chang Hong," Electric Load Forecasting by Support Vector Model",Applied Mathematical Modelling 33, 2444-2454,2009</li> <li>2. K.G.Upadhyay, M.M Tripathi, S.N. Singh," An approach to short term load forecasting using market price signal", 19th International Conference on Electricity Distribution, Vienna, March 2009</li> <li>3. S. Rahman,O. Hazim, "A generalized knowledge-based short term load forecasting technique",IEEE Trans. Power Syst., vol.8, no.2, May. 1993</li> <li>4. N. Amjady,"Short term hourly load forecasting using time-series modeling with peak load estimation capability", IEEE Trans. Power Syst., vol.16, no.4, Nov. 2001</li> <li>5. W. Charytoniuk, P.V. Olinda,"Nonparametric regression based short term load forecasting",IEEE Trans. Power Syst., vol.13, no.3, Aug. 1998</li> <li>6. M.M.Othman, K.A.Abd Rahman, I.Musirin, A.Mohammed, A.Hussain,"The application of Box-Jenkins models in short term load forecasting", International Journal of Power, Energy and Artificial Intelligence, vol.2, no.1, pp.104-110, March 2009</li> <li>7. Kuh-Long Ho,Yuah-Yih Hsu, Chih-Chien Liang, Tsau-Shin Lai, "Short term load forecasting of Taiwan power system using a knowledge basedexpert system",IEEE Trans. Power Syst., vol.5, no.4, Nov. 1990</li> </ol>		5-9

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3.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"><b>Authors:</b></td> <td><b>Shailendra Kumar Singh, Narinder Kumar</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Optimizing the EDM Parameters to Improve the Surface Roughness of Titanium Alloy (Ti-6AL-4V)</b></td> </tr> </table> <p><b>Abstract:</b> The purpose of this paper is to optimize the EDM parameters to get the better surface finish on the Titanium alloys Ti- 6AL- 4V. The continuous advancement of the alloy is fulfilling the demand of the industry but for advance material like Titanium alloys Ti- 6AL- 4V partially adopted by industries cause of the difficulties in machining. Non Conventional machining process like Spark Erosion Electrical Discharge Machining (EDM) is the process of machining these hard alloys. The designs of experiment for machining process control parameter are Pulse Time (Ton), Pulse off (Toff) and Current (I), while tool used for machining alloy Ti- 6AL- 4V was Copper (Cu) electrode. The experimental results have given optimal combination of input parameters which give the optimum surface finish of the EDM machined surface.</p> <p><b>Keywords:</b> Surface Roughness, Taguchi, ANOVA, Current, EDM.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. DU Qiaolian, Study on high speed cutting machinability of titanium alloy ti-6ai-4v ( June 2006)</li> <li>2. Basil kuriachen, Modeling of Wire Electrical Discharge Machining Parameters Using Titanium Alloy (Ti-6AL-4V) April 2012</li> <li>3. Ahmet Hasc, alik, Electrical discharge machining of titanium alloy (May 2007).</li> <li>4. Annie Liew Ann Nee, Optimization of machining parameters of titanium alloy in electric discharge machining based on artificial neural network 2010</li> <li>5. K.P.Yuvara, Optimization of metal removal rate and surface roughness on wire EDM using taguchi method (March 2012)</li> </ol>	<b>Authors:</b>	<b>Shailendra Kumar Singh, Narinder Kumar</b>	<b>Paper Title:</b>	<b>Optimizing the EDM Parameters to Improve the Surface Roughness of Titanium Alloy (Ti-6AL-4V)</b>	10-13
<b>Authors:</b>	<b>Shailendra Kumar Singh, Narinder Kumar</b>					
<b>Paper Title:</b>	<b>Optimizing the EDM Parameters to Improve the Surface Roughness of Titanium Alloy (Ti-6AL-4V)</b>					
4.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"><b>Authors:</b></td> <td><b>E. K. Vellingiriraj, P. Balasubramanie</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>A Novel Approach for Recognition of Tamil Characters in Vehicle Number Plate based on Region Pixel through Surveillance Camera</b></td> </tr> </table> <p><b>Abstract:</b> Character segmentation is an important step in License Plate Recognition (LPR) system. There are many difficulties in this step, such as the influence of image noise, plate frame, rivet, the space mark, and so on. In natural language Number plate, there are additional problems faced to recognize the characters including Tamil characters. This work proposes a novel algorithm for character segmentation of degraded license plate based on Region pixel. Firstly, this algorithm performs preprocessing on the license plate, such as size normalization, uneven illumination correction, contrast enhancement, incline correction and edge enhancement; then, locates the character segments according to the vertical projection and merges the character segments that belong to the same character or splits the wider character segment according to the prior knowledge; finally, segments the characters according to the number and the width of the character segments. And last step convert the Tamil characters to equivalent English alphabets. This process is performed by the algorithm which takes the digital image as an input and gives textual form of license plate characters as an output. There are several methods used to perform this process.</p> <p><b>Keywords:</b> (LPR).</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Gonzalez, R. C.; Woods, R. E. Digital Image Processing, Prentice Hall, NewJersey, 2008.</li> <li>2. The Automatic Number Plate Recognition Tutorial. Quercus Technologies. 2006. URL: <a href="http://www.anpr-tutorial.com">http://www.anpr-tutorial.com</a> (15.08.2006.)</li> <li>3. Burger, W.; Burge, M. J. Digital Image Processing, Springer, NewYork, 2008.</li> <li>4. Fan, C. H.; Peng, Y. H. Vehicle License Plate Recognition System Design // Chung Hua Journal of Science and Engineering, 7, 2 (2009), 47-52.</li> <li>5. Burger, W.; Burge, M. J. Digital Image Processing, Springer, NewYork, 2008.</li> <li>6. Image processing learning resources, Morphology – Thinning. Hypermedia Image Processing Reference. 2003. URL:<a href="http://homepages.inf.ed.ac.uk/rbf/HIPR2/thin.htm">http://homepages.inf.ed.ac.uk/rbf/HIPR2/thin.htm</a> (2003.)</li> <li>7. Microsoft Developer Network Library - Bitmap Functions. Microsoft. 2012. URL: <a href="http://msdn.microsoft.com/enus/library/dd183385(v=vs.85).aspx">http://msdn.microsoft.com/enus/library/dd183385(v=vs.85).aspx</a> (07.03.2012.)</li> <li>8. Y. Lu, "Machine printed character segmentation-an overview," Pattern Recognition, Publisher, vol. 28, no.1, pp. 67-80, 1995.</li> <li>9. R.G. Casey, and E. Lecolinet, "A survey of methods and strategies in character segmentation," IEEE Transaction on Pattern Analysis and Machine Intelligence, vol.18, no.7, pp. 690-706, Jul.1996.</li> <li>10. S. Nomura, K. Yamanaka, O. Katai, H. Kawakami, and T. Shiose, "A novel adaptive morphological approach for degraded character image segmentation," Pattern Recognition, vol.38, no.11, pp. 1961-1975, Nov.2005.</li> <li>11. D. Michalopoulos, and C. Hu, "An error back-propagation artificial neural networks application in automatic car license plate recognition," Proceedings of the 15th international Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, Cairns, pp. 1-8, 2002.</li> <li>12. K.K.Kim, K.I.Kim, J.B.Kim, and H.J.Kim, "learning-based approach for license plate recognition," in Proceedings of the IEEE International Workshop on Neural Networks for Signal Processing, vol.2, pp. 614-623,2000.Giuseppe Pirlo, Donato Impedovo, "Adaptive Membership Functions for Handwritten Character Recognition by Voronoi-Based Image Zoning", IEEE Trans on Image Processing, Vol 21, No 9, PP 3827-3836, Sep 2012</li> </ol>	<b>Authors:</b>	<b>E. K. Vellingiriraj, P. Balasubramanie</b>	<b>Paper Title:</b>	<b>A Novel Approach for Recognition of Tamil Characters in Vehicle Number Plate based on Region Pixel through Surveillance Camera</b>	14-17
<b>Authors:</b>	<b>E. K. Vellingiriraj, P. Balasubramanie</b>					
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<b>Authors:</b>	<b>S. Suresh, S. Anbuarasan, M. Balachandhar</b>					
<b>Paper Title:</b>	<b>Structural Analysis and Modeling of Tonpiliz MEMS Acoustic Transmitter for High Power Imaging System</b>					



5.	<p><b>Abstract:</b> Imaging System requires High Power Transmitter with reduced weight. We carry out the design of Acoustic Transmitter. Since miniaturization in the field of sensors and transducer is rapid, a MEMS acoustic transmitter is designed. The transmitter along with the structural analysis and modeling has done by Intellisuite for the tonpiliz type design, where PZT Sol gel is used as active material. The simulation studies are done by varying the head mass, tail mass and length of the active material. This transmitter is suitable for the underwater target detection, object classification and localization, sub bottom profiling and ocean topography applications. The proof of concept of Tonpiliz type acoustic transmitter is achieved in this work.</p> <p><b>Keywords:</b> Intellisuite, PSPICE, Piezoceramic transducer, Tonpiliz, Equivalentcircuit, Radial vibration.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. PSPICE approach for designing the ultrasonic piezoelectric transducer for medical diagnostic applications Long Wu ), Yeong-Chin ChenDepartment of Electrical Engineering, National Cheng-Kung University, Tainan, Taiwan</li> <li>2. The analysis of the electro-mechanical model of the cylindrical radial composite piezoelectric ceramic transducer ShiqingLiu,*, ShuyuLinb</li> <li>3. On identification and analysis of fundamental issues in Terfenol-D transducer modeling.Marcelo J. Dapino_, Frederick T. Calkins,yand Alison B. Flatau AEEM Department, Iowa State University, Ames, IA 50011</li> <li>4. Analyses and measurements of acoustically matched, air-coupled tonpiliz transducers Charles Desilets2, Greg Wojcik1, Lisa Nikodym1, Kai Mesterton3</li> <li>5. Terfenol-D sensor design and optimization Frederick T. Calkins and Alison B. Flatau Aerospace Engineering and Engineering Mechanics Department, Iowa State University, Ames, IA 50011</li> <li>6. Analysis and computation of smart material for intelligent transduction. R.Satishkumar, A.Vimalajuliet. International journal of emerging technology and application in engineering, technology and sciences (IJ-ETA-ETS)date: July '09-dec '09</li> </ol>	18-20
6.	<p><b>Authors:</b> <b>Sruti V. S, Bobin K. Mathew</b></p> <p><b>Paper Title:</b> <b>Classification of Transmission Line Faults Using Discrete Wavelet Transform</b></p> <p><b>Abstract:</b> This paper proposes a method for classifying Transmission Line faults using Discrete Wavelet Transformation. The method utilizes current travelling wave generated during the fault conditions. Wavelet Transform is used for extracting these transient signals. An algorithm for classification of Transmission line faults is presented which utilizes the modulous maxima of current travelling waves as threshold values. The method is more efficient and accurate for classifying and phase selection of Transmission Line faults.</p> <p><b>Keywords:</b> Transmission line, DWT, Daubechies6 wavelet (Db4), Modulous maxima.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. DP Kothari and I J Nagrath, "Modern Power system Analysis," Tata Mcgraw Hill,New Delhi, 2009. pp.328-414</li> <li>2. Y.G Paithankar and S.R Bhide, "Fundamentals of Power system Protection", PHI publications.</li> <li>3. A.T John and J.R Platts, "Digital Protection of Power System", IEEE power series 15.</li> <li>4. Xinzhou Dong, Senior Member, IEEE, Wei Kong, and Tao Cui, " Fault classification and faulted phase selection based on initial current travelling wave", IEEE Transactions on Power Delivery, 24(2), 552 – 559, April 2009.</li> <li>5. D. Chanda, N.K Kishore, A.K Sinha, A wavelet multiresolution analysis for location of faults on transmission line", Science direct, 29, 59-69, 2003.</li> <li>6. Yang Chun-wen1,2, DuanMu Yong-guang1, Ma Dong-juan1, Li Lingling, „The Method of precise timing of grounding fault in power system based on wavelet theory", Science Direct,17, 1754- 1760, 2012.</li> <li>7. Jipin Lu, Jian Li, Wenyuan Li, Ying Li, Yi Xue, „A new approach of identifying faulty lines in distribution system based on travelling wave refraction and coupling", 78, 353-360, 2008.</li> <li>8. X Z Dong , M A Redfern , Z Bo and F Jiang , "Application of wavelet transform of Travelling Wave phenomena for transient based protection", International conference on Power system transients, 2003.</li> <li>9. Zhengyou He, Ling Fu, Sheng Lin, and Zhiqian Bo, „Fault detection and classification in EHV transmission line based on wavelet singular entropy",IEEE transactions on Power Delivery,25(4),2156-2163, 2010.</li> <li>10. Mehrdad Mallakia,, Rahman Dashtib, " Fault locating in transmission networks using Transient voltage data", science direct, pp no: 173-180.</li> <li>11. Robi Polikar,Wavelet Tutorial..</li> </ol>	21-24
7.	<p><b>Authors:</b> <b>Gagandeep Singh, Er. Rupinder Singh, Gurpreet Singh Batth</b></p> <p><b>Paper Title:</b> <b>Utilization of Rice Bran Oil and Ethanol blend in a Single Cylinder DI Diesel Engine</b></p> <p><b>Abstract:</b> The two alarming situations in front of the engineers worldwide are to reduce the load on conventional fuels and to reduce the ever increasing environmental pollution. This study is aimed to investigate experimentally the performance and exhaust emission characteristics of a diesel engine when fuelled with blends of rice bran oil and ethanol, over the entire range of load on the engine. The experiments were conducted on widely used diesel engine without major modifications. Experiment results shows that at full load condition, the RBO, RBO90, RBO80and RBO70 blends produce 1.9%, 4.1%, 7.8% and 6.2% higher brake thermal efficiency than sole Diesel respectively. The level of CO decreases with 26% at full load conditions with RBO80. The % of hydrocarbons and carbon dioxide emissions increases with the increase of ethanol in blends but the hydrocarbon emissions were still lower than that of diesel fuel. The use of rice bran oil as fuel in diesel engine is recommended for the use in diesel engine with ethanol blends on the basis of the results obtained from the study.</p> <p><b>Keywords:</b> Biodiesel, Rice Bran Oil, Transesterification, Ethanol, Performance, Emissions.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. "Report of the committee on development of Bio-fuel", Planning commission, Govt. of India, New Delhi, 2003.</li> <li>2. Senthil MK, Ramesh A,Nagalingham B, 2003;25:309-318., An experimental comparison of methods of use Methanol and Jatropa oil in a compression ignition engine, Biomass and Bioenergy</li> </ol>	25-28

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<b>Authors:</b>	<b>N. P. Sonaje, M. B. Chougule</b>
<b>Paper Title:</b>	<b>Experimental Analysis of Washing and Rubbing Fastness of Cotton Fabric Processed With Recycled Wastewater Using Different Dyes</b>

**Abstract:** Water is essential natural resource for sustaining life and environment, which is always thought to be available in abundance and free gift of nature. Textile industries are one of the major consumers of water and disposing large volumes of effluent to the environment. The textile industry utilizes abundant water in dyeing and finishing processes. There is need to adopt economical practices for the use of water in textile industries. It has been estimated that 3.5 % of the total cost of running the industry is required for water utilization in textile industry. In India textile units are developed all over the country in the form of small industrial estates. Textiles are manufactured to perform a multitude of functions. They are produced to a range of specifications using a variety of fibers, resulting in a complex waste or effluent. Textile waste occurs in a variety of forms throughout production process. Therefore, the cost of water is rising steeply and the textile mills, which need a large quantity of water, have started taking measures to conserve and recycling. Wastewater can be recycled and used in textile wet processing. This paper focuses on Experimental analysis of Washing and Rubbing fastness of cotton fabric processed with recycled municipal wastewater using different dyes. Fastness values of fabric are compared with fabric processed with recycled water, ground water and municipal tap water.

**Keywords:** Washing fastness, rubbing fastness, cotton fabric, recycled municipal wastewater.

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<b>Authors:</b>	<b>A. Sasirekha, P. Ganesh Kumar</b>	
<b>Paper Title:</b>	<b>Support Vector Machine for Classification of Heartbeat Time Series Data</b>	
	<p><b>Abstract:</b> Support vector machine (SVM) is a relatively new machine learning tool and has emerged as a powerful technique for learning from data and in particular, for solving binary classification problems. In the literature several statistical-learning paradigms have been proposed for developing a heart rate variability analysis. SVM classification decision which is based on the feature extraction of Heart rate variability (HRV) analysis. Results on a real-life long-term ECG recordings of young and elderly healthy dataset show that understandable SVMs provide a anticipating tool for the prediction of heart rate signals, where as a feature of heart have been generated. Feature extraction describes a pattern or relationships between input features and output class labels directly from the data. This paper proposes several different techniques for Feature extraction. The accuracy is obtained by using the comparison of HRV features.</p> <p><b>Keywords:</b> QRS detection algorithm, heart rate variability (HRV), support vector machine (SVM).</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M. Teich, S. Lowen, K. Vibe-Rheymer, and C.Heneghan, "Heart rate variability: measures and models," in Nonlinear Biomedical Signal Pro-cessing, vol. II, Dynamic Analysis and Modeling. New York: IEEE Press, 2001, pp. 159–213.</li> <li>2. G. Berntson, J. Bigger, D. Eckberg, P. Grossman, P. Kaufmann, M.Malik, H. Nagaraja, S. Porges, J. Saul, P. Stone, and M. van der Molen, "Heart rate variability: Origins, methods, and interpretive caveats," Psychophys-iology, vol. 34, no. 6, pp. 623–648, Nov. 1997.</li> <li>3. M. Kamath and E. Fallen, "Power spectral analysis of HRV: A noninva-sive signature of cardiac autonomic functions," Crit. Rev. Biomed. Eng.,vol. 21, pp. 245–311, 1993.</li> <li>4. R. Silipo, G. Deco, R. Vergassola, and C. 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<b>Authors:</b>	<b>Subramanian Anbazhagan, K. Somasundaram</b>	
<b>Paper Title:</b>	<b>Cloud Security through Key Agreement</b>	
	<p><b>Abstract:</b> Cloud computing refers to applications and services that run on a distributed network using virtualized and accessed by common internet protocols and networking standards. It is distinguished by the notion that resources are virtual and limitless and that details of the physical systems on which software runs are abstracted from the user. Cloud Computing is a style of computing in which dynamically scalable and often virtualized resources are provided as a service over the Internet. Users need not have knowledge of, expertise in, or control over the technology infrastructure in the "cloud" that supports them. The concept incorporates technologies that have the common theme of reliance on the Internet for satisfying the computing needs of the users. Cloud Computing services usually provide applications online that are accessed from a web browser, while the software and data are stored on the servers. As the users deal their sensitive data to clouds i.e. public domains, the major hurdles for cloud adoption are lack of</p>	



	<p>security and access control. The main setback is that the insecure information flows as service provider can access multiple virtual machines in clouds. So it is necessary to build up proper security for cloud implementation. Therefore the main aim of this paper is to provide cloud computing security through secret key using a public-key scheme. This article proposes a protocol which enables two users to establish a secret key using a public-key scheme based on discrete logarithms. The protocol is secure only if the authenticity of the two participants can be established.</p> <p><b>10. Keywords:</b> Cloud computing, cloud security, cloud services, domains, public-key scheme secret key ,virtualized resources, virtual machines.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Leavitt N, 2009, 'Is Cloud Computing Really Ready for Prime Time?', Computer, Vol. 42, pp. 15-20, 2009.</li> <li>Weinhardt C, Anandasivam A, Blau B, and Stosser J, 'Business Models in the Service World', IT Professional, vol. 11, pp. 28-33, 2009.</li> <li>Gens F, 2009, 'New IDC IT Cloud Services Survey: Top Benefits and Challenges', IDC eXchange, viewed 18 February 2010, from &lt;http://blogs.idc.com/ie/?p=730&gt;.</li> <li>A Platform Computing Whitepaper, 'Enterprise Cloud Computing: Transforming IT', Platform Computing, pp6, viewed 13 March 2010.</li> <li>Dooley B, 2010, 'Architectural Requirements Of The Hybrid Cloud', Information Management Online, viewed 10 February 2010, from &lt;http://www.informationmanagement.com/news/hybrid-cloudarchitectural-requirements-10017152-1.html&gt;.</li> <li>Global Netoptex Incorporated , 2009, Demystifying the cloud. Important opportunities, crucial choices, http://www.gni.com, pp 4-14, viewed 13 December 2009.</li> <li>Lofstrand M, 'The VeriScale Architecture: Elasticity and Efficiency for Private Clouds', Sun Microsystems, Sun Blueprint, Online, Part No 821-0248-11, Revision 1.1, 09/22/09</li> <li>Goia M, 'Cloud computing, grid computing, utility computing – list of top providers', http://www.123people.com/ext/frm?ti=personensuche%20telefonbuch&amp; search_term=infosolve%20technologies&amp;search_country=US&amp;st=suche%20nach%20personen&amp;target_url=http%3A%2F%2Frd.yahooapis.com%2F_ylc%3D%30DMTVnc2pvM2dpBF9TAZlwMjMxNTI3MDIEYXBwaWQDc1k3Wlo2clYzNEhSZm5ZdGVmcmkzRUx4VG5makpERG5QOWVVKV1NGSkJhcTJ1V1dFa0xVdm5lYnNBcUNyVkd5Y2REVElUX2lBGNsaWVudANib3NzBHlnclZpY2UDQk9TUwRzbGsDdGI0bGUEc3JjcHZpZANPUHZIVzJLSWVycVFRjFySGpwMDRDVzZODV4Wmt2bHMxTUFESnRt%2FSIG%3D13g7vo71f%2F**http%253A%2F%2Fwww.mytestbox.com%2Fmiscellaneous%2Fcloud-computing-gridcomputing-utility-computing-list-topproviders%2F&amp;section=biography&amp;wrt_id=110, viewed 22 Feb 2010.</li> <li>Brodtkin J, 2008, 'Gartner: Seven cloud-computing security risks', Infoworld, viewed 13 March 2009, from http://www.infoworld.com/d/security-central/gartner-seven-cloudcomputing-security-risks-853?page=0,1&gt;</li> <li>ISO. ISO 7498-2:1989. Information processing systems- Open Systems Interconnection. ISO 7498-2</li> <li>Klems, M, Lenk, A, Nimis, J, Sandholm T and Tai S 2009, 'What's Inside the Cloud? An Architectural Map of the Cloud Landscape', IEEEExplore, pp 23-31, viewed 21 June 2009.</li> <li>Dlamini M T, Eloff M M and Eloff J H P, 'Internet of People, Things and Services – The Convergence of Security, Trust and Privacy', 2009.</li> <li>Balachandra R K, Ramakrishna P V, Dr. Rakshit A, 'Cloud Security Issues', 2009 IEEE International Conference on Services Computing, viewed 26 October 2009, pp 517-520.</li> <li>S. Arnold, 2009, 'Cloud computing and the issue of privacy', KM World, vol July/August 2008, www.kmworld.com, viewed 19 August 2009, pp 14-22.</li> <li>Soghoian C, 2009 'Caught in the Cloud: Privacy, Encryption, and Government Back Doors in the Web 2.0 Era', The Berkman Cente for Internet &amp; Society Research Publication Series: http://cyber.law.harvard.edu/publications, viewed 22 August 2009.</li> <li>Gruschka N, Iancono LL, Jensen M and Schwenk J, 'On Technical Security Issues in Cloud Computing', '09 IEEE International Conference on Cloud Computing, pp 110-112, 2009.</li> <li>Armbrust M, Fox A, Griffith R, Joseph D A, Katz H R, Konwinski A, Lee Gunho, Patterson A D, Rabkin A, Stoica A, Zaharia M, (2009), Above the clouds: A Berkeley view of Cloud Computing, UC Berkeley EECS, Feb 2010</li> <li>Goldstein, P (2009), The Tower, the Cloud, and the IT leader andorkforce, in Katz, R (ed) (2009), The Tower and the Cloud: Higher Education in the Age of Cloud Computing, Educause http://www.educause.edu/thetowerandthecloud</li> <li>Cloud Security Alliance Web site, http://www.cloudsecurityalliance.org/, viewed 19 March 2010</li> <li>S. William, Cryptography and Network Security: Principles and Practice, 2nd edition, Prentice-Hall, Inc.,1999 pp 23-50</li> <li>S. Hebert, "A Brief History of Cryptography", an article available at http://cybercrimes.net/aindex.html</li> </ol>	42-46				
11.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>M. S. M. Aras, M. F. Basar, S. S. Abdullah, F. A. Azis, F. A. Ali</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Analysis Movement of Unmanned Underwater Vehicle using the Inertial Measurement Unit</b></td> </tr> </table> <p><b>Abstract:</b> In an Unmanned Underwater Vehicle (UUV), the craft's orientation, velocity, and gravitational forces are the important measurements to make sure the UUV's navigation system can be fully operated. Most of the current UUV system uses pressure sensor to control the navigation of the craft. But the pressure sensor is not suitable to use in getting UUV's navigation data or information. Without the information on UUV's navigation, there are difficult to monitor the movement of UUV. This project introduces a methodology to analyze the position, velocity vector and the rotation of UUV, using a combination of accelerometer and gyroscope. This sensing unit is a combination of Accelerometer ADXL-345 sensor and Gyroscope ITG-3200 sensor called as an Inertial Measurement Unit (IMU). The measurement unit will be programmed by an Atmel microcontroller (Arduino UNO) to get the important data of the UUV's navigation system. The real-time data of sensing unit communicated with Serial Chart and Processing software to get output graph and real-time 3D animation of UUV. From this project outcome, the movement of UUV is monitored in processing software. Hence, the navigation system of a UUV such as auto depth control, left-right movement and obstacle avoidance purpose can be improved.</p> <p><b>Keywords:</b> Unmanned underwater vehicle, navigation system, auto depth control, inertial measurement unit.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Paul A. Miller, Jay A. Farrell, Fellow, IEEE, Yuanyuan Zhao, and Vladimir Djapic. Autonomous Underwater Vehicle Navigation. IEEE JOURNAL OF OCEANIC ENGINEERING, VOL. 35, NO. 3, JULY 2010.</li> <li>M.S.M Aras, H.A. Kasdirin, M.H. Jamaluddin, M F. Basar, Design and Development of an Autonomous Underwater Vehicle (AUV-FKEUTeM), Proceedings of MUCET2009 Malaysian Technical Universities Conference on Engineering and Technology, MUCET2009, MS Garden, Kuantan, Pahang, Malaysia, 2009.</li> <li>Yanrui Geng, Ricardo Martins, Joao Sousa. Study of Inertial Measurement Unit Sensor Accuracy Analysis of DVL/IMU/Magnetometer</li> </ol>	<b>Authors:</b>	<b>M. S. M. Aras, M. F. Basar, S. S. Abdullah, F. A. Azis, F. A. Ali</b>	<b>Paper Title:</b>	<b>Analysis Movement of Unmanned Underwater Vehicle using the Inertial Measurement Unit</b>	47-53
<b>Authors:</b>	<b>M. S. M. Aras, M. F. Basar, S. S. Abdullah, F. A. Azis, F. A. Ali</b>					
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<b>Authors:</b>	<b>P. Sandhya, S. Poovizhi, R. Varun</b>
<b>Paper Title:</b>	<b>SHA-Based Mutual Authentication in Long Term Evolution Using Hyper Elliptic Curve Cryptography</b>

**Abstract:** Elliptic Curve Cryptography is used in Long Term Evolution (LTE) which uses large key size which fails to provide security against Denial of Services (DOS). In this paper, SHA-based mutual authentication is proposed for Long Term Evolution using Hyper Elliptic Curve Cryptography which is public key cryptography which helps in secure communication for exchanging the data. This reduces the communication complexity and computation cost using smaller key size which results in less processing time and provides security against DOS. Finally, simulation result shows the processing time between the ECC and HECC using MATLAB.

**Keywords:** LTE, ECC, HECC, DOS.

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<b>Authors:</b>	<b>Jagadeesh Patil, M. S. Aspalli</b>
<b>Paper Title:</b>	<b>Universal Integrated Smart Power Supply</b>

**Abstract:** This paper presents an integrated power system, in order to supply the energy demand of a low power residence, using photovoltaic modules and wind turbines. The main functions of the proposed system are the management of the load and the energy stored, in order to increase the autonomy and the integration of all equipment necessary for the system operation, reducing the complexity and cost. The system contains well defined concepts for continuous energy supply providing a good balance between various energy sources and their capabilities and load requirements. This system fulfills the small power ratings cover local demands, e.g. one house or a small village in remote location. Multiple inputs for renewable energy are proposed in combination with high-efficiency power electronic circuits. The proposed system uses both the on grid and off grid technologies and effectively managed

13.	<p>among them.</p> <p><b>Keywords:</b> DC-DC converter, H bridge Inverter, MOSFETs, SCR.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. L. L. Pfitscher and R. Gules, "Hybrid Power Conversion System: An Integrated Solution for Low Power Applications", IEEE transactions of Power Electronics in 2005, pp. 134-139.</li> <li>2. Helmut H. Weiss, Kayhan Ince, and Gennady St. Zinoviev, "Multi-Input Small-Power Renewable Energy Supply System Realized By Special Power Electronics", IEEE transactions of Power Electronics in 2009, pp. 602-607.</li> <li>3. Ulrich Hemmann and Hans Georg Langer "Low Cost DC to AC Converter for Photovoltaic Power Conversion in Residential Applications", IEEE transactions of Power Electronics in 1993, pp. 588-594.</li> <li>4. L Jonas Reginaldo de Britto, Fábio Vincenzi Romualdo da Silva, Ernane Antonio Alves Coelho, Luis Carlos de Freitas, and Valdeir Jose Farias, "Proposal Of A Dc-Dc Converter With Wide Conversion Range Used In Photovoltaic Systems And Utility Power Grid For The Universal Voltage Range", IEEE transactions of Power Electronics in 2010, pp. 2258-2263.</li> <li>5. Yuedong Zhan, Jianguo Zhu, Youguang Guo, Hua Wang, "Development of a Single-phase High Frequency UPS with Backup PEM Fuel Cell and Battery" Proceeding of International Conference on Electrical Machines and Systems 2007, Oct. 8-11, Seoul, Korea.</li> <li>6. Ulrich Boeke, Matthias Wendt, Lennart Yseboodt, "Combined Solar and AC Mains Powered LED Lighting System", Philips Research Laboratories Europe.</li> <li>7. Dong Dong, Dushan Boroyevich, Ruxi Wang, Cvetkovic, "A Two-stage High Power Density Single-phase ac-dc Bi-directional PWM Converter for Renewable Energy Systems", IEEE transactions of Power Electronics in 2010, pp. 3862-3869.</li> <li>8. Marcelo Paschoal Dias, Danilo Pereira Pinto e Henrique A. C. Braga, "A Simplified Technique Of Lighting Performance Evaluation Applied To Led-Based Modern Luminaires", IEEE transactions of Power Electronics in 2009, pp. 279-284.</li> <li>9. Wei Jiang, Student Member, IEEE, and Babak Fahimi, "Active Current Sharing and Source Management in Fuel Cell-Battery Hybrid Power System", IEEE transactions on industrial electronics, vol. 57, no. 2, February 2010, pp. 752-761.</li> <li>10. Weidong Gu, Chufu Li, Ming Gu, "Study on the Wind/Biogas Integration System for Power Generation and Gas Supply", IEEE transactions of Power Electronics in 2009.</li> <li>11. J. Bryan, R. Duke, and S. Round, "Decentralized Generator Scheduling in a Nanogrid Using DC Bus Signaling", IEEE transactions of Power Electronics.</li> <li>12. Riming Shao, Mary Kaye and Liuchen Chang, "Advanced Building Blocks of Power Converters for Renewable Energy Based Distributed Generators", 8th International Conference on Power Electronics - ECCE Asia May 30-June 3, 2011, The Shilla Jeju, Korea</li> <li>13. Liaoj hongkai, Xu chenghong, Song jinghui, Yu yuexi, "Green Power Generation Technology For Distributed Power Supply", Technical session 4, Electric power research Institute of Guangdong Power Grid corporation..</li> </ol>	56-59				
14.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Milind K. Wagh, Nilesh R. Jagtap, Sagar S. Jadhav, Pritamsing J. Salunkhe</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Passport Authentication System Using Visual Secret Sharing Scheme</b></td> </tr> </table> <p><b>Abstract:</b> Passport is the most important document while travelling from one country to another. It is the proof of citizenship of the country. Hence, it needs to keep it secure from unauthorized use. Authentication and security of passport and checking integrity of a person on the airport is a challenging task. In order to face this challenge of security and privacy, we propose a method based on Visual Secret Sharing (VSS) for black and white passport number. In our proposed method we have a new approach in VSS with improved contrast. Two shares of a passport number image are formed by applying 2-out-of-2 VSS. Shares generated will contain only black and white pixels, which make it difficult to retrieve any information about the image by viewing only one share. However, when the two shares are overlaid the secret image is retrieved.</p> <p><b>Keywords:</b> VSS.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M. Naor and A. Shamir, "Visual Cryptography," Advances in Cryptography-EUROCRYPT'94, Lecture Notes in Computer Science 950, 1995, pp. 1-12.</li> <li>2. A. Shamir, "How to Share a Secret," Communication ACM, vol. 22,1979, pp. 612-613.</li> <li>3. G. R. Blakley, "Safeguarding Cryptographic Keys," Proceedings of AFIPS Conference, vol. 48, 1970, pp. 313-317.</li> <li>4. A. Menezes, P. Van Oorschot and S. Vanstone, "Handbook of Applied Cryptography," CRC Press, Boca Raton, FL, 1997.</li> <li>5. B. Borchert, "Segment Based Visual Cryptography," WSI Press, Germany, 2007.</li> <li>6. W-Q Yan, D. Jin and M. S. Kananahalli, "Visual Cryptography for Print and Scan Applications," IEEE Transactions, ISCAS-2004, pp. 572-575.</li> <li>7. T. Monoth and A. P. Babu, "Recursive Visual Cryptography Using Random Basis Column Pixel Expansion," in Proceedings of IEEE International Conference on Information Technology, 2007, pp. 41-43.</li> <li>8. H. J. Kim, V. Sachnev, S. J. Choi and S. Xiang, "An Innocuous Visual Cryptography Scheme," in Proceedings of IEEE-8th International Workshop on Image Analysis for Multimedia Interactive Services, 2007.</li> <li>9. C. Blundo and A. De Santis, "On the contrast in Visual Cryptography Schemes," in Journal on Cryptography, vol. 12, 1999, pp. 261-289.</li> <li>10. P. A. Eisen and D. R. Stinson, "Threshold Visual Cryptography with specified Whiteness Levels of Reconstructed Pixels," Designs, Codes, Cryptography, vol. 25, no. 1, 2002, pp. 15-61.</li> <li>11. E. R. Verheul and H. C. A. Van Tilborg, "Constructions and Properties of k out of n Visual Secret Sharing Schemes," Designs, Codes, Cryptography, vol. 11, no. 2, 1997, pp. 179-196.</li> <li>12. H. Yan, Z. Gan and K. Chen, "A Cheater Detectable Visual Cryptography Scheme," Journal of Shanghai Jiaotong University, vol. 38, no. 1, 2004.</li> <li>13. G. B. Horng, T. G. Chen and D. S. Tsai, "Cheating in Visual Cryptography," Designs, Codes, Cryptography, vol. 38, no. 2, 2006,</li> </ol>	<b>Authors:</b>	<b>Milind K. Wagh, Nilesh R. Jagtap, Sagar S. Jadhav, Pritamsing J. Salunkhe</b>	<b>Paper Title:</b>	<b>Passport Authentication System Using Visual Secret Sharing Scheme</b>	60-64
<b>Authors:</b>	<b>Milind K. Wagh, Nilesh R. Jagtap, Sagar S. Jadhav, Pritamsing J. Salunkhe</b>					
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	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Neelam Mehala, Anand</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>IIR Multiple Notch Filter Design for Power Line Interference Removal</b></td> </tr> </table> <p><b>Abstract:</b> Digital IIR notch filter has been employed in various practical applications i.e in communication systems, medical science and many more to eliminate unwanted narrowband interference with known frequency. It is difficult to filter noise from these signals, and errors resulting from filtering can distort a biomedical signal. This paper presents the design technique and implementation of IIR multiple notch filter by the application of suitable pole placement technique. This technique gives the fixed value of parameters used to design of multiple IIR notch filter for removal this harmonically distributed kind of interference.</p>	<b>Authors:</b>	<b>Neelam Mehala, Anand</b>	<b>Paper Title:</b>	<b>IIR Multiple Notch Filter Design for Power Line Interference Removal</b>	
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15.	<p><b>Keywords:</b> Digital IIR multiple notch filters, mathematical modeling, Pole Re-position.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Lee Ju-Won and Lee Gun-Ki, "Design of an Adaptive Filter with a Dynamic Structure for ECG Signal Processing", International Journal of Control, Automation, and Systems, vol. 3, no. 1, pp. 137-142, March 2005.</li> <li>2. Lee "Introduction to Ultra-Wideband Communications" Nekoogar publication, Page 1-44 August5,2005.</li> <li>3. Bilmes J. "Lecture 16: Filter Design: Impulse Invariance and Bilinear Transform", Dept. of Electrical Engineering, University of Washington, Nov 26, 2001.</li> <li>4. C. C. Tseng and S. C. Pei, "IIR Multiple Notch Filter Design Base on All-pass Filter", IEEE Trans. on Circuits and Systems II: Analog and Digital Signal.</li> <li>5. Yashwant V. Joshi and S. C. Dutta Roy, "Design of IIR Multiple Notch Filters Based on All-Pass Filters", IEEE Trans. on Circuits and Systems II: Analog and Digital Signal Processing, Vol. 46, No. 2, February, 1999.</li> <li>6. C. C. Tseng and S. C. Pei, "Stable IIR Notch Filter Design with Optimal Pole Placement", IEEE Trans Signal Processing, Vol. 49, No. 11, pp. 2673-2681, November, 2001.</li> <li>7. Bartlett Bruce "Preventing HUM and RFI", www.bartlettmics.com, October 2009.</li> <li>8. J. G. Proakis and D. G. Manolakis, "Digital Signal Processing Principle, Algorithms, and Applications", Prentice, 1996.</li> <li>9. Amnart Thamrongmas and Chalie Charoenlarnpparut, "Modified Pole Re- position Technique for Optimal IIR Multiple Notch Filter Design" www.ecti-thailand.org/assets/papers 1feb2011.</li> <li>10. S. K. Mitra, "Digital Signal Processing, A Computer-Base Approach", McGraw-Hill, 2001.</li> <li>11. Moler Cleve "Experiments with MATLAB" Electronic edition, Math Works,Inc., 2011.</li> </ol>	65-68				
16.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Neelam Mehala</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Online Condition Monitoring to Diagnose Bearing Faults of Induction Motor</b></td> </tr> </table> <p><b>Abstract:</b> With advances in digital technology over the last years, adequate data processing capabilities is now available on cost effective hardware platforms, to monitor motors for variety of abnormalities on a real time basis. For this reasons, this paper is devoted to investigate the application of advanced signal processing techniques for detection of bearing fault of induction motor. In this study, bearing faults are successfully diagnosed by monitoring the stator current of motor. The experiments were conducted 0.5 hp, 415V induction motor. Virtual instrument was developed with help of programming in software 'LabVIEW'. This instrument was used to obtain the current spectrum of stator current. The different spectrums of healthy motor and faulty motor were than compared to diagnose the bearing faults. The experimental results show that FFT based spectral analysis may be adequate to indicate the presence of bearing faults of induction motors. This may be achieved at a relatively low cost, eliminating need for expensive spectrum analyzers.</p> <p><b>Keywords:</b> Fault detection, signal processing, motor current signature analysis.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. R. R. Schoen and T. G. Habetler, and F. Kamran et al, "Motor bearing damage detection using stator current monitoring," IEEE Trans. Ind. Applicat., vol. 31, pp. 1280-1286, Nov./Dec. 1995.</li> <li>2. Eschmann P, Hasbargen L, Weigand K, "Ball and roller bearings: Their theory, design, and application" (London: K G Heyden), 1958.</li> <li>3. Riddle J, "Ball bearing maintenance" (Norman, OK: Univ. of Oklohama Press), 1955.</li> <li>4. Benbouzid, M. E. H., "A Review of Induction Motors Signature Analysis as a Medium for Faults Detection", IEEE Transactions on Industrial Electronics, Vol. 47, October, No. 5, pp. 984-993, 2000.</li> <li>5. M. Blodt, P. Granjon, B. Raiso, and G. Rostaing, "Models for bearing damage detection in induction motors using stator current monitoring," Ind. Electronics, 2004 IEEE International Symposium, Vol. 1, pp. 383-388, May 2004.</li> <li>6. J. R. Stack, T. G. Habetler, and R. G. Harley, "Fault classification and fault signature production for rolling element bearings in electric machines," IEEE Trans. Ind. Applicat., Vol. 40, pp. 735-739, May/June 2004.</li> <li>7. Richard G. Lyons, "Understanding digital signal processing", Pearson Education, 2009.</li> <li>8. Boashash B., "Time frequency signal analysis" in: Advances in spectrum estimation and array processing, Ed. S. Haykin, Printice Hall, 1990.</li> <li>9. Leon Cohen, "Time frequency Analysis", Prentice Hall PTR, 1995.</li> <li>10. Lokenath Debnath, "Wavelet Transforms and Time Frequency signal analysis", Birkhauser Boston, 2001.</li> </ol>	<b>Authors:</b>	<b>Neelam Mehala</b>	<b>Paper Title:</b>	<b>Online Condition Monitoring to Diagnose Bearing Faults of Induction Motor</b>	69-73
<b>Authors:</b>	<b>Neelam Mehala</b>					
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17.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Vairam T, Kalaiarasan C</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Interference Aware Multi-path Routing in Wireless Sensor Networks</b></td> </tr> </table> <p><b>Abstract:</b> Routing in wireless sensor networks has been considered an important field of research over the past decade. Wireless sensor network essentially consists of data Sensor Nodes and Video Sensor Nodes, which senses both sound and motion of events. Single path routing protocol has been used for route discovery. Though this protocol reduces computation complexity and resource utilization, there are some disadvantages like reduced network throughput, network performance, increased traffic load and delay in data delivery. To overcome these drawbacks a new protocol called Interference Aware Multi-path Routing(IAMR) is proposed to improve the reliability of data transmission, fault-tolerance, Quality of Service. Here, the traffic intersection spread out among the multiple paths. This technique is applied between the sources and sink to reduce routing overhead and energy consumption. The proposed protocol is simulated using NS2.</p> <p><b>Keywords:</b> Wireless sensor network (WSN), Single path routing, Multipath routing , path cost.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Shuang Li, Raghu KisoreNeelisetti, Cong Liu and Alvin Lim, "Efficient Multipath protocol for Wireless Sensor Networks", In Proc International Journal of Wireless and Mobile Networks (IJWMN), Vol.2, No.1, February 2010.</li> <li>2. Jonathan L. Bredin, Erik D. Demaine, Mohammad Taghi Hajiaghayi, and Daniela Rus, "Deploying Sensor Networks With Guaranteed Fault Tolerance", In Proc IEEE/ACM Transactions on Networking, Vol.18, NO.1, February 2010.</li> <li>3. Lou, W, Liu, W and Zhang, Y. "Optimizations in Mobile AdHoc", In Proc. Combinator Optimization, 2006.</li> <li>4. Zijian Wang, Eyuphan Bulut, and Boleslaw K.Szymanski, "Energy Efficient Collision Aware Multipath Routing for Wireless Sensor Networks", In Proc. International Conference on Communication, pp.1-5, June 2009.</li> </ol>	<b>Authors:</b>	<b>Vairam T, Kalaiarasan C</b>	<b>Paper Title:</b>	<b>Interference Aware Multi-path Routing in Wireless Sensor Networks</b>	74-78
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18.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Kashan Hussain, Aleem Ahmed, Muhammad Junaid Rabbani, Abdullah Ali, Muhammad Khawaja Kashif Masood</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Application of Nanoelectronics in Medical Science: A Case Study</b></td> </tr> </table> <p><b>Abstract:</b> The recent advancements in the field of nanoelectronics have revolutionized the performance of electronic devices. Miniaturization of electronic components and as a result devices has reached the new world of single particle which is benefiting the human being in almost every walk of life. In this paper we present the brief introduction to nanoelectronics and majorly its application in the field of medical science.</p> <p><b>Keywords:</b> Nanorobotics, Nanobioelectronic, Quantum Capacitance limit, tunneling transistor.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. ChristinM.Shea.(2005,September).Futur management research directions in nanotechnology: A case study. E lsevier (online). Volume 22, Issue 3, 185-200, Available:<a href="http://www.sciencedirect.com/science/article/pii/S0923474805000184">http://www.sciencedirect.com/science/article/pii/S0923474805000184</a></li> <li>2. K.John, Morrow Jr., Raj Bajwa, Chiming Wei. (2007, September), Recent Aadvances in Basic and Clinical Nanomedicine. Elevier (online), volume 91, Issue 5, 805-843, Available:<a href="http://www.sciencedirect.com/science/article/pii/S0025712507000727">http://www.sciencedirect.com/science/article/pii/S0025712507000727</a></li> <li>3. Michael Berger. (2012, August). The future of nanoelectronics in medicine. Nanowerk(online) Available: <a href="http://www.nanowerk.com/spotlight/spotid=26366.php">http://www.nanowerk.com/spotlight/spotid=26366.php</a></li> <li>4. <a href="http://www.iopscience.iop.org/0957-4484/19/1/015103/pdf/0957-448419_1_015103.pdf">http://www.iopscience.iop.org/0957-4484/19/1/015103/pdf/0957-448419_1_015103.pdf</a></li> <li>5. Mark Ming-Cheng Cheng, Giovanni Cuda, Yuri L Bunimovich, Marco Gaspari, James R Heath. (2006, February). Nanotechnologies for biomolecular detection and medical diagnostics. Elsevier (online). Volume 10, Issue 1, 11-19 Aavailable: <a href="http://www.sciencedirect.com/science/article/pii/S136759310600007x">http://www.sciencedirect.com/science/article/pii/S136759310600007x</a></li> <li>6. <a href="http://www.physics.mcgill.ca/~peter/nanoelectronics.htm">http://www.physics.mcgill.ca/~peter/nanoelectronics.htm</a></li> <li>7. <a href="http://www.ee.washington.edu/faculty/hawck/publications/Nanosurvey.pdf">http://www.ee.washington.edu/faculty/hawck/publications/Nanosurvey.pdf</a></li> <li>8. <a href="http://www.imec.be/ScientificReport/SR2011/1414174.html">http://www.imec.be/ScientificReport/SR2011/1414174.html</a></li> <li>9. <a href="http://www.wtec.org/nano2/Nanotechnology_Research_Directions_to_2020/Chapter_08.pdf">http://www.wtec.org/nano2/Nanotechnology_Research_Directions_to_2020/Chapter_08.pdf</a></li> </ol>	<b>Authors:</b>	<b>Kashan Hussain, Aleem Ahmed, Muhammad Junaid Rabbani, Abdullah Ali, Muhammad Khawaja Kashif Masood</b>	<b>Paper Title:</b>	<b>Application of Nanoelectronics in Medical Science: A Case Study</b>	79-81
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19.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>SaekaRahman, Mohammad Anwar Rahman</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Assessment of Hamilton-Tompkins Algorithm in a Noise Contaminated ECG Signal Environment</b></td> </tr> </table> <p><b>Abstract:</b> Accurate parameter detection is an integral part of the use of electrocardiograms (ECGs) in the healthcare system. Advances in technology have resulted in a considerable increase in the number of portable, battery-operated ECG instruments including in developing countries. A growing concern is that algorithms that diagnose ECG signals should be tested at different noise circumstances to verify the reliability and efficiency of signal interpretation. This study investigates the accuracy and reliability of the Hamilton-Tompkins (H-T) algorithm using simulated ECG signals generated by MATLAB. In the test process, randomly generated noises are added to simulated input signals to represent high-level noise contaminated surroundings. Simulation results show that the H-T algorithm accurately detected peaks every time it has been tested. The algorithm's performance parameter diagnosis for the Q, R and S wave peak was 99.96%, 99.97% and 99.93% accuracy, respectively. Test results indicate the H-T algorithm is reliable in detecting accurate ECG signals even in aggravated noise surroundings.</p> <p><b>Keywords:</b> ECG, Hamilton-Tompkins algorithm, Noise, QRS complex.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. C. Li, and C. Tai Zheng, "Detection of ECG characteristic points by wavelet transforms," IEEE Transactions on Biomedical Engineering, 42(1), 1995, 21–28.</li> <li>2. R. Gautam, "Detection of QRS Complexes of ECG recording Based on Wavelet Transform using MATLAB," International Journal of Engineering Science and Technology, 2(7), 2010, 3038-3044.</li> <li>3. Cardiovascular Physiology Concepts, available: <a href="http://www.cvphysiology.com/Arrhythmias/A009.htm">http://www.cvphysiology.com/Arrhythmias/A009.htm</a>, last accessed December, 30, 2012.</li> <li>4. P.S. Hamilton and W. J. Tompkins, "Quantitative investigation of QRS detection rules using the MIT/BIH arrhythmia database," IEEE Transactions on Biomedical Engineering, 12, 1986, 1157–1165.</li> <li>5. P. A. Lynn, "Online digital filters for biological signals: Some fast designs for a small computer," Medical and Biological Engineering and Computer, 15, 1979, 534-540.</li> <li>6. J. Pan and W. Tompkins, "A real-time QRS detection algorithm," IEEE Transactions on Biomedical Engineering, 32(3), 1985, 230–236.</li> </ol>	<b>Authors:</b>	<b>SaekaRahman, Mohammad Anwar Rahman</b>	<b>Paper Title:</b>	<b>Assessment of Hamilton-Tompkins Algorithm in a Noise Contaminated ECG Signal Environment</b>	82-86
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<b>Authors:</b>	<b>Abdelelah Kidher Mahmood, Bassam Fadel Mohammed</b>					
<b>Paper Title:</b>	<b>Design Optimal Fractional Order PID Controller Utilizing Particle Swarm Optimization Algorithm and Discretization Method</b>					

20.	<p>whose derivative and integral order are fractional rather than integer which has five tuned parameters. The closed loop system for a plant cascaded with the fractional order PID (<math>PI\lambda D\mu</math>) controller has been built utilizing a MATLAB/Simulink with application of intelligent optimization algorithm (PSO) as a sub program. The parameters of the <math>PI\lambda D\mu</math> controller found and injected to the controller structure. The main specification of this method is that the all five parameters of <math>PI\lambda D\mu</math> controller have been found directly without spreading the steps of computation. The results show performance of the closed loop system with FOPID controller is much better than integer order PID controller for the same system and with better robustness. The <math>PI\lambda D\mu</math> controller converted to z domain and programmed to PIC microcontroller using new PIC Development Board.</p> <p><b>Keywords:</b> Fractional calculus, fractional order controller, fractional order toolbox for MATLAB, MATLAB Simulink, PSO algorithm, continued fraction expansion (CFE), programming in C, PIC microcontroller.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. V. Shekher, P. Rai, and O. Prakash, "Tuning and Analysis of Fractional Order PID Controller," International Journal of Electronic and Electrical Engineering, vol. 5, no. 1, 2012, pp.11-21.</li> <li>2. D. Xue, C. Zhao, and Y. Q. Chen, "Fractional Order PID Control of a DC Motor with Elastic Shaft: A Case Study," Proc. of the 2006 American Control Conference, Minneapolis, Minnesota, USA, June 14-16, 2006, pp. 3182-3187.</li> <li>3. K. J. Åström and T. Hägglund, PID controllers: Theory, Design and Tuning, 2nd Edition, Instrument society of America, 1995.</li> <li>4. A. Oustaloup, F. Levron, B. Mathieu, and F. M. Nanot, "Frequency-Band Complex Non integer Differentiator: Characterization and Synthesis," IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications, vol. 47, no. 1, 2000, pp.25-39.</li> <li>5. I. Podlubny, "Fractional-order systems and <math>PI\lambda D\mu</math> controllers," IEEE Transactions on Automatic Control, vol. 44, no. 1, 1999, pp.208-214.</li> <li>6. B. M. Vingare, I. Podlubny, L. Dorcak, and V. Feliu, "On fractional PID controllers: A frequency domain approach," IFAC workshop on digital control. Past, present and future of PID control, 2000, pp.53-58.</li> <li>7. Y. Q. Chen, and K. L. Moore, "Discretization schemes for fractional order differentiators and integrators," IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications, vol. 49, no. 3, 2002, pp.363-367.</li> <li>8. C. A. Monje, B. M. Vingare, V. Feliu, and Y. Q. Chen, "Tuning and auto-tuning of fractional order controllers for industry applications," Control Engineering Practice, vol. 16, no. 7, 2008, pp.798-812.</li> <li>9. C. A. Monje, A. J. Calderon, B. M. Vingare, Y. Q. Chen, and V. Feliu, "On Fractional PI<math>\lambda</math> Controllers: Some Tuning Rules for Robustness to Plant Uncertainties," Nonlinear Dynamics, vol. 38, 2004, pp.369-381.</li> <li>10. R. Caponetto, G. Dongola, L. Fortuna, and I. Petráš, Fractional Order Systems: Modeling and Control Applications, Series A, vol. 72, Singapore: World Scientific Series on Nonlinear Science, 2010.</li> <li>11. D. Baleanu, J. A. T. Machado, and A. C. J. Luo, Fractional Dynamics and Control, USA: Springer Science+Business Media, LLC, 2012.</li> <li>12. C. A. Monje, Y. Q. Chen, B. M. Vinagre, D. Xue, and V. Feliu, Fractional-order Systems and Controls: Fundamentals and Applications, London: Springer-Verlag London Limited, 2010.</li> <li>13. V. Gazi, and K. M. Passino, Swarm Stability and Optimization, German: Springer Science + Business Media, 2011.</li> <li>14. D. Valério, Ninteger v. 2.3 Fractional control toolbox for MatLab, Lisboa: Instituto Superior Técnico da Universidade Técnica de Lisboa, 2005. Available:</li> <li>15. M. A. Al-Alaoui, "Al-Alaoui Operator and <math>\square</math>-Approximation for Discretization of Analog Systems," SER.: ELEC. ENERG. vol. 19, no. 1, 2006, pp.143-146.</li> <li>16. M. A. Al-Alaoui, "Novel digital integrator and differentiator," IEE Electronics Letters, vol. 29, no. 4, 1993, pp.376-378.</li> <li>17. H. Sheng, Y. Q. Chen, and T. S. Qiu, Fractional Processes and Fractional-Order Signal Processing, London: Springer-Verlag London Limited, 2012.</li> <li>18. PIC Development Board (EasyPIC v7 Development System). Available: <a href="http://www.mikroe.com">http://www.mikroe.com</a>.</li> </ol>	87-92				
21.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Gayathri Vijayachandran, Bobin K. Mthew</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Arcing Fault Detection in Feeder Networks Using Discrete Wavelet Transform and Artificial Neural Networks</b></td> </tr> </table> <p><b>Abstract:</b> Arcing faults in transmission networks are caused when a current carrying conductor makes an unwanted electrical contact with ground or is temporarily short circuited with another current carrying conductor through a high impedance medium. High impedance arcing faults restricts the flow of current below the detection level of the protective devices and hence cannot be detected by conventional relays. In this paper a new method is proposed for the detection of arcing faults due to leaning trees in medium voltage (MV) networks. Firstly, an arc model is developed in order to reproduce the fault circumstances. Then based on a fault detection algorithm the fault features are extracted using a signal processing technique called Discrete Wavelet Transform (DWT). The proposed algorithm is implemented in a simple MV network to identify the faulty phase and in a feeder network to identify both the faulty phase and feeder. Further the results obtained using DWT is validated with the help of Artificial Neural Networks (ANN). The results obtained above validate the effectiveness of the proposed methodology.</p> <p><b>Keywords:</b> Absolute sum, Arc model, Artificial Neural Networks, Back propagation algorithm, Discrete Wavelet Transform, High impedance fault, Universal Arc representation.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M. Sedighzadeh, A. Rezazadeh, Nagy I. Elkalashy, 'Approaches in High Impedance fault detection—A chronological Review', Advances in Electrical and Computer Engineering, 10(3), 114-128, 2010.</li> <li>2. Pieter H. Schavemaker and Lou VanderSluis, 'An improved Mayr-type model based on current-zero measurements', IEEE Transactions on Power Delivery, 15(2), 580-584, April 2000.</li> <li>3. J.L. Guardado, S.G. Maximov, E. Melgoza, J.L. Naredo and P. Moreno, 'An improved arc model before current zero based on the combined Mayr and Cassie arc models', IEEE Transactions on Power Delivery, 20(1), 138-142, January 2005.</li> <li>4. Karel Jansen van Rensburg, 'Analysis of Arcing Faults on Distribution lines for Protection and Monitoring', Ph.D Thesis, School of Electrical and Electronic Systems Engineering, Queensland University of Technology, 2003.</li> <li>5. Nagy Ibrahim Elkalashy, 'Modeling and Detection of High Impedance Arcing Fault in Medium Voltage Networks', Ph.D Thesis, Department of Electrical and Communications Engineering, Helsinki University of Technology, Finland, 2007.</li> <li>6. H. A. Darwish and N. I. Elkalashy, "Universal Arc Representation Using EMTP", IEEE Transactions on Power Delivery, 20(2), 772-779, April 2005.</li> <li>7. Nagy. I. Elkalashy, M. Lehtonen, H. A. Darwish, A.M.I. Taalab and M. A. Izzularab, 'A Novel Selectivity Technique for High Impedance Arcing Fault Detection in Compensated MV networks', European Transactions on Electrical Power, ETEP, in press, published online on 23</li> </ol>	<b>Authors:</b>	<b>Gayathri Vijayachandran, Bobin K. Mthew</b>	<b>Paper Title:</b>	<b>Arcing Fault Detection in Feeder Networks Using Discrete Wavelet Transform and Artificial Neural Networks</b>	93-102
<b>Authors:</b>	<b>Gayathri Vijayachandran, Bobin K. Mthew</b>					
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**Paper Title:** Performance Evaluation of Path loss Exponents on Rate Algorithms in Vehicular Networks

**Abstract:** One of The major drawbacks for mobile nodes in wireless networks is power management. Our goal is to proposed a power control scheme that will help minimize energy consumption by appropriate adjustment of vehicles transmitter power, reduce network congestion, improve quality of service and collision avoidance in vehicular networks. Some of the importance of power control (PC) is improving spatial reuse, and increasing network capacity in mobile wireless communications. In this simulation we have evaluated the performance of existing rate algorithms compared with ACARS. Results show that ACARS is able to minimize the total transmit power in presence of propagation processes and mobility of vehicles, by adapting to the fast varying channels conditions more than the other algorithms, which has some applications in vehicular networks as mentioned above.

**Keywords:** DSRC; Wireless networks; Mobility; Vehicular communication; IEEE 802.11p; Rate adaptation ; Propagation, Power control, Fading.

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	<p><b>Authors:</b> <b>Johevajile K. N. Mazima, Michael Kisangiri, Dina Machuve</b></p>	
	<p><b>Paper Title:</b> <b>Deign of Low Cost Blood Pressure and Body Temperature Interface</b></p>	
<p>23.</p>	<p><b>Abstract:</b> The objective of this work is to design a non-intrusive, accurate, and low cost biomedical sensor interface for processing blood pressure and body temperature vital signs. The work purposely deals with the signal conditioning of two vital signs: blood pressure, and body temperature. Blood pressure uses the methodology of Photoplethysmography to continuously monitor the systolic and diastolic blood pressure. Body temperature is dealt with a LM35 sensor. We design the signal conditioning interface based on the type of sensor such as pressure and temperature sensor. We simulate the circuits in proteus software to verify their accuracy. We also simulate the temperature simulated results in MATLAB to verify the linearity of the temperature against the output voltage. Therefore, the design will be useful for the patient monitoring systems which use microcontroller for interpretation before sending them to the doctor through mobile phone network assisted by GSM/GPRS modem.</p> <p><b>Keywords:</b> Blood pressure uses the methodology of Photoplethysmography.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. T. G. Pickering, et al., "Ambulatory blood-pressure monitoring," New England Journal of Medicine, vol. 354,2006, pp. 2368-2374.</li> <li>2. V. Aubuchon, "Blood Pressure Chart," 2009.</li> <li>3. A. H. Association, "Blood Pressure &amp; Heart Rate Chart " 2011.</li> <li>4. W. F. Inc. (2013, 10 August). Blood pressure. Available: <a href="http://en.wikipedia.org/wiki/Blood_pressure">http://en.wikipedia.org/wiki/Blood_pressure</a></li> <li>5. T. K. a. K. Tobias, "PEDIATRIC AGE SPECIFIC Self Learning Module For Clinical Staff," ed, 2013.</li> <li>6. V. 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