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S. No	<b>Volume-5 Issue-6, August 2016, ISSN: 2249-8958 (Online)</b> <b>Published By: Blue Eyes Intelligence Engineering &amp; Sciences Publication Pvt. Ltd.</b>		Page No.
1.	<b>Authors:</b>	<b>Greeshma T S, Subu Surendren</b>	
	<b>Paper Title:</b>	<b>Community Detection on Social Network – A Survey</b>	
	<p><b>Abstract:</b> Social network is an important application in the internet which represent the geographically dispersed users. Social network provides a variety of methods for explaining patterns and entities. Social networks are mostly represented as graphs, which contain nodes and edges. Nodes are used to represent actors such as people and organizations whereas edges show the relationship between these nodes. Several data sources involved in the social network forms communities which work in self-descriptive manner. A collection of nodes which are connected by edges with high similarity is called a community. The community detection in social network, intend to partition the the graph with dense region which correspond to closely related entities. The selection of data sources and determination of community detection approaches can enhance the accuracy, efficiency and scalability of community. In this survey, different community detection approaches are discussed.</p> <p><b>Keywords:</b> social network, community detection, community structure</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Michel Plantic, Michel Crampes , "Survey on Social Community Detection" , Springer Publishers, 25 March 2013.</li> <li>2. James P Bagro, "Evaluating Local Community Method in Network " , Journals of Statistical Mechanism Theory and Experience, 2008.</li> <li>3. C.C Aggarwal, H.Wang, "Survey of clustering algorithm for graph data managing and Mining Graph Data " ,Springer, 2010.</li> <li>4. A.Pothen, "Graph Partitioning Algorithm with Application to Scientific Computing " , Springer, 1997.</li> <li>5. M.Girvan and M.E.Newman , "Community Structure in Social and Biological Networks", Proceeding of National Academy of Science, June 11,2002.</li> <li>6. A.Hasian and M.J Zahi, "A Survey of Link Prediction in Social Network", Springer , March 11,2011.</li> <li>7. J.Han,M.Konnber and J.Pei, "Datamining Concepts and Techniques", Morgen Kaufmann,2006.</li> <li>8. R.Xu and D.Wunsch, "Survey of Clustering Algorithm " ,Neural Network ,IEEE Transaction, May 2005.</li> <li>9. N.F.Chikki,B.Rothenburger and N.Aussenac Gilles, " Combining Link and Content for Community detection : a discriminative approach", Proceedings of 15th ACM SIGMM workshop on Social Media, June 28,2009.</li> <li>10. F.Moser, R.Ge and M. Ester, "Joint Cluster Analysis of Attribute and Relationship Data without a -prior-specification of number of clusters" Proceedings of 13th ACM SIGDD International Conference on Knowledge Discovery andDatamining, August 07, 2007.</li> <li>11. S.Fortunate, "Community Detection in Graph" , Physics report ,2009.</li> <li>12. S.Papadopoulos, Y.Kompatsiaris,A.Vakali, and P.Spyridones, "Community Detection in Social Media " , Datamining and Knowledge Discovery, June 14,2011.</li> <li>13. Yangyang Li,Ruachen Liu and Jiamhe Wu, "A Spectral Clustering Based Adapive Hybrid Multiojective Harmony Search Algorithm for Community Detection " , WCC12012 IEEE World Congress on Computational Intelligence, June 15,2012.</li> <li>14. Deepjyoti Chaudhery, Saprativa Bhattachayie , Anirban Das, "An Empirical Study of Community and Sub community Detection in Social Network Applying Newmann Girvan Algorithm," Emerging Trends and Application in Computer Science ,Sep 14,2013.</li> <li>15. Ganjaliyev.F," New Method for Community Detection in Social Network Extracted from the Web" , Problems of Cybernetics and Information ,Sep 14, 2012.</li> <li>16. Michael Ovelganne , "Distributed Community Detection in Website Network",Advance in Social Network Analysis and Mining ,IEEE, Aug 28, 2013.</li> <li>17. Guo-Jun Qil,Charu C,Aggarwal and Thomas Huangl , " Community Detection with Edge Content in Social Media Network " , Data Engineering ,IEEE , April 1,2012.</li> <li>18. Yomna M.ElBarawy, Ramedan F Mohammad and Naveen I Ghali, " Improving Social Network Community Detection Using DBSCAN Algorithm" , Computing Application and Research ,Jan 20,2014.</li> <li>19. Ahmed Ibrahim Hafez, Abaul Ella Hassanien , Aly A. Fahm and M.F. Talba, "Community Detection in Social Network by Using Bayesian Network and Expectation Maximization Technique", IEEE , Dec 16,2013.</li> <li>20. M .E.J .Newmann , "Community Structure in Social and Biological Network " IEEE, April 6, 2002.</li> <li>21. Hastic , T.R. Tibshirani and J.H Friedmann, "The elements of Statistical Learning," IEEE ,August 2008</li> <li>22. A.Y.Ng, M.I.Jordan, Weiss, "On Spectral Clustering Analysis and Algorithm " , Stanford Alhab, 2001.</li> </ol>		1-3
2.	<b>Authors:</b>	<b>Diejo Jara, Estefania Salinas, Julio Romero, Michael Valarezo</b>	
	<b>Paper Title:</b>	<b>Mathematical Modeling to Establish the Balance of Heat in a Capacitor</b>	
	<p><b>Abstract:</b> The teaching-learning process in the field of exact sciences strengthened by the practical activity of a technological nature, in which to facilitate the safe reasoning and concise leads to the application of principles of physics and chemistry as well as updating processes industrial in the field of Mining, Pulp, Forest, Food, Chemical and Process. Which have potentiated a high degree of modelling and automation? This automation involves some advantages that have just moved to the quality and improvement of the final product. In this case, establishing the heat balance in a condenser. Includes ensure both a more competitive cost and simultaneously strengthening formation activity and the mathematical model to determine the hot balance in a capacitor means using parameters dependent pressure define variables as the volume of water and the amount of steam saturation entry and quantified by developed and simplified quantification and analysis of material balance equations. Thus, in this article the calculations used are presented to establish the mathematical modeling for the heat balance in a capacitor, for it was selected and implemented, with teams making and data records, pointing to possible strategies to conceive established the study of the processes of heat transfer and control systems as an integral part of an automation project</p> <p><b>Keywords:</b> Automation, analytical calculation, mathematical modelling, analytical, design and construction.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Aplein Ingenieros: Diseño y realización de la sala de control y operaciones de la planta Bilbao Bizkaia Gas. En URL: <a href="http://www.apleiningenieros.com/bbg.pdf">http://www.apleiningenieros.com/bbg.pdf</a>, (2009)</li> <li>2. Beyer, H., Hotzblatt, K.: Contextual design. Defining customer-centered systems. Morgan Kaufmann, San Francisco, (1998)</li> <li>3. Constantine, L.L., Loockwood, L.A.D.: Software for use: a practical guide to the models and methods of usage-centered design. Addison-</li> </ol>		4-8

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3.	<b>Authors:</b>	<b>Michael Valarezo, Estefanía Salinas, Julio Romero, Diejo Jara</b>
	<b>Paper Title:</b>	<b>Application of an OPC System for Mineral Extraction in a Copper Mine Laboratory Scale</b>
	<p><b>Abstract:</b> For their importance in the mining industry of copper in the south of the Ecuador, an application of a system of OPC is presented that transfers the copper mineral extracted using the action of a motor of C.A, which moves a transportable band. The programs MATLAB® and LabVIEW® possess an academic profile and for this reason, they have a very limited use inside this technology OPC. Also, these are part of the school formation of the students of the career of Electromechanical Engineering of the National University of Loja (UNL) in the Ecuador. Keeping in mind that pointed out, these programs will use the mark of the technology OPC in the process of extraction of the copper mineral. Finally, a comparison of the found results with these two programs is made</p> <p><b>Keywords:</b> Data exchange, OLE, OPC Client / Server, PLC.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Andariz Automation, «Solución de control para molinos SAG.» [En línea]. Available: <a href="http://www.andritz.com/de/aa-brainwave-sagmill-spa.pdf">http://www.andritz.com/de/aa-brainwave-sagmill-spa.pdf</a>. [Último acceso: 2015 Mayo 29].</li> <li>SIEMENS, «Un Sistema de Control de Procesos a la altura del proyecto minero Spence, Tecnología Minera,» 29 Mayo 2015. [En línea]. Available: <a href="http://www.tecnologiaminera.com/tm/novedad.php?id=76">http://www.tecnologiaminera.com/tm/novedad.php?id=76</a>. [Último acceso: 2015 Mayo 29].</li> <li>¿. s. p. a. a. u. P. S.-I. m. u. P. A. y. q. s. h. d. t. e. cuenta?, «SIEMENS,» 08 Agosto 2014. [En línea]. Available: <a href="https://support.industry.siemens.com/cs/document/41928929?dti=0&amp;lc=es-WW">https://support.industry.siemens.com/cs/document/41928929?dti=0&amp;lc=es-WW</a>. [Último acceso: 2015 Mayo 26].</li> <li>N. Instruments, «Comunicación del S7200 de SIEMENS con OPC Server,» [En línea]. Available: <a href="http://forums.ni.com/t5/Discusiones-sobre-Productos-NI/Comunicaci%C3%B3n-del-S7-200-de-Siemens-con-NI-OPC-Server-2009/td-p/1690440">http://forums.ni.com/t5/Discusiones-sobre-Productos-NI/Comunicaci%C3%B3n-del-S7-200-de-Siemens-con-NI-OPC-Server-2009/td-p/1690440</a>.</li> <li>M. d. Carmen, «Control PID de la velocidad de una banda transportadora para clasificación de objetos,» 2008.</li> <li>Mathworks, «Mathworks,» [En línea]. Available: <a href="http://www.mathworks.com">www.mathworks.com</a>.</li> <li>N. Instruments, «National Instruments,» [En línea]. Available: <a href="http://www.ni.com">www.ni.com</a>. [Último acceso: 10 octubre 2013].</li> <li>J. O. Caizaluisa, Escritor, Dosificador y Comunicación OPC LabView. [Performance]. Universidad Pontificia Salesiana, 2013.</li> <li>LabView-OPC-PLC. [Performance]. 2011.</li> <li>N. Instruments, «Comunicación del S7-200 de Siemens con NI OPC Server 2009 mediante el cable USB/PPI,» NI, 31 Agosto 2011. [En línea]. Available: <a href="http://forums.ni.com/t5/Discusiones-sobre-Productos-NI/Comunicaci%C3%B3n-del-S7-200-de-Siemens-con-NI-OPC-Server-2009/td-p/1690440">http://forums.ni.com/t5/Discusiones-sobre-Productos-NI/Comunicaci%C3%B3n-del-S7-200-de-Siemens-con-NI-OPC-Server-2009/td-p/1690440</a>. [Último acceso: 18 Mayo 2015].</li> </ol>	
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4.	<b>Authors:</b>	<b>Jiin-Yuh Jang, Chien-Nan Lin, Sheng-Chih Chang, Chao-Hua Wang</b>
	<b>Paper Title:</b>	<b>The 3-D Numerical Simulation of a Walking Beam Type Slab Heating Furnace with Regenerative Burners</b>
	<p><b>Abstract:</b> This study investigates the furnace thermal efficiency for a walking-beam type slab heating furnace with regenerative burners. The walking-beam type heating furnace is composed of five zones, namely, flameless, preheating, first heating, second heating and soaking zones with regenerator efficiency 90 %. The furnace uses a mixture of coke oven gas as a fuel to reheat the slabs. The numerical model considers turbulent combustion reactive flow coupled with radiative heat transfer in the furnace. It is shown that with regenerator burners, the furnace thermal efficiency is 72%, which is significantly higher than that of a furnace using the conventional burner without regenerator. Comparison with the in-situ experimental data from steel company in Taiwan shows that the present heat transfer model works well for the prediction of thermal behavior of the slab in the reheating furnace with regenerator burners.</p> <p><b>Keywords:</b> Reheating Furnace, Combustion, Radiative Heat Transfer, Regenerative burner</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>T. Ishii, C. Zhang, and S. Sugiyama, “Numerical simulations of highly preheated air combustion in an industrial furnace,” Transactions of the ASME, Vol. 120, 1989, pp. 276–284.</li> <li>Y. Suzukawa, S. Sugiyama, Y. Hino, M. Ishioka, and I. Mori, “Heat transfer improvement and NOx reduction by highly preheated air combustion,” Energy Convers, Mgmt Vol. 38, No. 10–13, 1997, pp. 1061–1071.</li> <li>J. G. Kim and K. Y. Huh, “Three-dimensional analysis of the walking-beam-type slab reheating furnace in hot strip mills,” Numerical Heat Transfer A38, 2000, pp. 589–609.</li> <li>T. Ishii, C. Zhang, and Hino. Y, “Numerical study of the performance of a regenerative furnace,” Heat Transfer Engineering, 23:4, 2002, pp. 23–33.</li> <li>N. Rafidi and W. Blasiak, “Thermal performance analysis on a two composite material honeycomb heat regenerators used for HiTAC burners,” Applied Thermal Engineering, Vol 25, 2005, pp. 2966–2982.</li> <li>J. P. Ou, A. C. Ma, S. H. Zhan, J. M. Zhou, and Z. O. Xiao, “Dynamic simulation on effect of flame arrangement on thermal process of regenerative reheating furnace,” J. Cent. South Univ. Technol., 2007.</li> <li>S. H. Han, D. Chang, and C. Y. Kim, “A numerical analysis of slab heating characteristics in a walking beam type reheating furnace,” International Journal of Heat and Mass Transfer, Vol 53, Issue 19–20, 2010, pp. 3855–3861.</li> <li>S. H. Han, D. Chang, and C. Huh, “Efficiency analysis of radiative slab heating in a walking-beam-type reheating furnace,” Energy, Vol 36, Issue 2, 2010, pp. 1265–1272.</li> <li>T. Morgado, P. J. Coelho, and P. Talukdar, “Assessment of uniform temperature assumption in zoning on the numerical simulation of a walking beam reheating furnace,” Applied Thermal Engineering, Vol 76, 2015, pp. 496–508.</li> <li>J. M. Casal, J. Porteiro, J. L. Míguez, and A. Vazquez, “New methodology for CFD three-dimensional simulation of a walking beam type reheating furnace in steady state,” Applied Thermal Engineering, Vol 86, 2015, pp. 69–80.</li> </ol>	
		13-19
5.	<b>Authors:</b>	<b>Nithin V G, Libish T M</b>
	<b>Paper Title:</b>	<b>Smart Grid State Estimation by Weighted Least Square Estimation</b>
	<p><b>Abstract:</b> The smart grid is an advanced power grid with many new added functions and more reliability than the traditional grid. More controlled power flow is enabled in the smart grid by use of features from fields of</p>	
		20-25

	<p>communication, control system, signal processing etc. Knowing the present condition of the system is critical for signal processing applications and hence more accurate state estimation is important. State of the system along with information about the network topology will give complete information about the power grid network. In this paper the network topology is modeled using the MATPOWER package, a powerful software package of MATLAB. Weighted Least Square (WLS) state estimation is used to develop equations and algorithms for state estimation. The linear state estimation problem is formulated with linear methods using phasor measurement unit (PMU) data. The measurements which are included in the observation vector and also the size of the system (given by number of busses in the system) are important and these features affect the accuracy of the system state estimate. In this paper, state estimates of IEEE standard bus system of different size are stimulated using MATPOWER package. Also state estimates are stimulated, with different measurement parameters in the observation vector and the stimulation result obtained are compared.</p> <p><b>Keywords:</b> Smart Grid, State Estimation, Weighted Least Square Estimation, Modeling of Smart Grid.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M. Sasson, S. T. Ehrmann, P. Lynch, and L. S. Van Slyck, Automatic power system network topology determination," IEEE Trans. Power App. Syst., vol. PAS-92, no. 1, pp. 610–618, Mar. 1973.</li> <li>2. A.G. Phadke and J. S. Thorp, Synchronized Phasor Measurements and Their Application, Springer Science + Business Media, 2008.</li> <li>3. T. L. Baldwin, L. Mili, M. B. Boisen, Jr., and R. A. Adapa, "Power System Observability with Minimal Phasor Measurement Placement," Power Systems, IEEE Transactions on, vol. 8, pp. 707-715, 1993.</li> <li>4. R. D. Zimmerman, C. E. Murillo-Sanchez, and R. J. Thomas, "Matpower: Steady State Operations, Planning and Analysis Tools for Power Systems Research and Education," Power Systems, IEEE Transactions on, vol. 26, no. 1, pp. 12{19, Feb. 2011.</li> <li>5. Abur and A. G. Exposito, Power System State Estimation- Theory and Implementation: CRC, 2004.</li> <li>6. Yi Huang, Mohammad Esmalifalak, Yu Cheng, Husheng Li, Kristy A. Campbell, and Zhu Han, "Adaptive Quickest Estimation Algorithm for Smart Grid Network Topology Error", IEEE systems journal, vol. 8, no. 2, June 2014.</li> <li>7. Y. Huang, L. Lai, H. Li, W. Chen, and Z. Han, "Online quickest multiarmed bandit algorithm for distributive renewable energy resources," in Proc. IEEE Conf. Smart Grid Commun., Tainan, Taiwan, Nov. 2012, pp. 558–563.</li> <li>8. The Smart Grid: An Introduction, U.S. Department of Energy (DOE), Washington, DC, USA, Sep. 2010.</li> <li>9. J. Chen and A. Abur, "Placement of PMUs to enable bad data detection in state estimation," IEEE Trans. Power Syst., vol. 21, no. 4, pp. 1608–1615, Nov. 2006.</li> <li>10. Synchrophasor Based Tracking Three Phase State Estimator and It's Applications, A.G. Phadke Virginia Tech, Blacksburg, VA. DOE 2010 Transmission Reliability Program Peer Review, October 19-20, 2010.</li> <li>11. R. F. Nuqui and A. G. Phadke, "Phasor Measurement Unit Placement Techniques for Complete and Incomplete Observability," Power Delivery, IEEE Transactions on, vol. 20, pp. 2381-23</li> </ol>							
6.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Hamdy Mohamed Soliman</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Sinusoidal PWM to Drive the Induction Motor with Reducing the Torque Ripple and THD</b></td> </tr> <tr> <td colspan="2"> <p><b>Abstract:</b> Three phase voltage source inverter are widely used to drive the AC motors as the induction motor. There are many techniques to make the inverter reliable to treatment the AC motor. From among these techniques, the sinusoidal pulse width modulation. The paper used this technique due to have some advantages as, reduce the total harmonic distortion and torque ripples. Also in this Paper the open and closed loop scalar controls with the sinusoidal pulse width modulation are compared to show the advantages of the closed loop control. The torque ripples and total harmonic distortions is calculated through many modulation index. The PI current controlled is added to the closed loop drive system to minimize the torque ripple and total harmonic distortion this is to show the effect of adding these PIs on the performance overall.</p> <p><b>Keywords:</b> Induction motor, PI controller, Scalar control and SPWM.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M.D. Murphy, F.G Turnball: Power electronic control of A.C motors, Pergamon press, 1986.</li> <li>2. Bose B.K: Power Electronics and Variable Frequency Drives, IEEE Press, 1997.</li> <li>3. W.B Rosink: Analogue control system for A.C motor with PWM variable speed, in proceedings of Electronic Components and Application, Vol. 3, No.1, November 1980, pp. 6-15</li> <li>4. B.G. Starr, J.C.F. Van Loon: LSI circuit for AC motor speed control, in proceedings of Electronic Components and Application, Vol. 2, No.4, August 1980, pp. 219-229</li> <li>5. 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Hakim," Improved Hysteresis Current Controller to Drive Permanent Magnet Synchronous Motors Through the Field Oriented Control", International Journal of Soft Computing and Engineering , Vol. 2, No. 4, September 2012, pp. 40-46.</li> </ol> </td> </tr> </table>	<b>Authors:</b>	<b>Hamdy Mohamed Soliman</b>	<b>Paper Title:</b>	<b>Sinusoidal PWM to Drive the Induction Motor with Reducing the Torque Ripple and THD</b>	<p><b>Abstract:</b> Three phase voltage source inverter are widely used to drive the AC motors as the induction motor. There are many techniques to make the inverter reliable to treatment the AC motor. From among these techniques, the sinusoidal pulse width modulation. The paper used this technique due to have some advantages as, reduce the total harmonic distortion and torque ripples. Also in this Paper the open and closed loop scalar controls with the sinusoidal pulse width modulation are compared to show the advantages of the closed loop control. The torque ripples and total harmonic distortions is calculated through many modulation index. The PI current controlled is added to the closed loop drive system to minimize the torque ripple and total harmonic distortion this is to show the effect of adding these PIs on the performance overall.</p> <p><b>Keywords:</b> Induction motor, PI controller, Scalar control and SPWM.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M.D. Murphy, F.G Turnball: Power electronic control of A.C motors, Pergamon press, 1986.</li> <li>2. Bose B.K: Power Electronics and Variable Frequency Drives, IEEE Press, 1997.</li> <li>3. W.B Rosink: Analogue control system for A.C motor with PWM variable speed, in proceedings of Electronic Components and Application, Vol. 3, No.1, November 1980, pp. 6-15</li> <li>4. B.G. Starr, J.C.F. Van Loon: LSI circuit for AC motor speed control, in proceedings of Electronic Components and Application, Vol. 2, No.4, August 1980, pp. 219-229</li> <li>5. Shengxian Zhuang, Xuening Li and Zhaoji Li, " The application in the speed regulating of asynchronous machine vector frequency changing based on adaptive internal model control (Periodical style)," Journal of University of Electronic Science and Technology of China, vol. 28,no.5, pp.502-504, 1999.</li> <li>6. P. L. Jansen and R. D. Lorentz, "Transducerless position and velocity estimation in induction and salient AC machines", IEEE Trans. Ind. Applicat., vol. 31, pp. 240–247, Mar./Apr. 1995.</li> <li>7. Pankaj H Zope, Pravin G.Bhangale, Prashant Sonare ,S. R.Suralkar "Design and Implementation of carrier based Sinusoidal PWM Inverter." International journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering. Vol. 1, Issue 4, October 2012.</li> <li>8. "Performance of Sinusoidal Pulse Width Modulation based Three Phase Inverter." 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7.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Abhishek Pratap Singh, Manoj Gupta</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Robust Performance Comparison of Unstable Videos and their Quality Improvement Implementing Block-Based Frame Matching Technique for Obtaining Digital Video Stabilization</b></td> </tr> <tr> <td colspan="2"> <p><b>Abstract:</b> In the context of Digital Image stabilization (DIS), based on morphological frame division and comparing, to estimate matching between local and global motion vectors by the means of averaging pixel information</p> </td> </tr> </table>	<b>Authors:</b>	<b>Abhishek Pratap Singh, Manoj Gupta</b>	<b>Paper Title:</b>	<b>Robust Performance Comparison of Unstable Videos and their Quality Improvement Implementing Block-Based Frame Matching Technique for Obtaining Digital Video Stabilization</b>	<p><b>Abstract:</b> In the context of Digital Image stabilization (DIS), based on morphological frame division and comparing, to estimate matching between local and global motion vectors by the means of averaging pixel information</p>		34-41
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of frames; surprisingly proposes an indispensable Digital video stabilization (DVS) technique which can enhance the quality of an input video stream. Videos captured by hand-held devices (e.g. Cell phones, portable camcorders etc.) sometimes appear remarkably shaky hence Digital video stabilization technique can be implemented to refine the video quality by removing unwanted jitters. It's an important step for several video processing amenities to acquire video stream without intervening jerkiness, eliminating unnecessary camera movements and withdrawing the superfluous inter frame motion between two successive frames. In order to get the stabilized video sequence, first promising step is to check the validity of local motion vector (LMV), and finally global motion vector (GMV) is obtained by averaging to further enhance the reliability. Here low pass filters and moving average filters are used for smoothing estimated motion vectors to get a stabilized sequence. Experiments show that this video stabilization technique is an efficient method to stabilize the input unstable video stream. In this paper we study the digital video stabilization technique with the use of keen motion estimation and finally performance comparison and conclusion of un-stabilized and stabilized video sequence with the efficacy of our technique of digital video stabilization. .

**Keywords:** Digital Video Stabilization (DVS), Digital Image Stabilization (DIS), Inter Frame Motion, Local Motion Vector (LMV), Global Motion vector (GV).

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**Paper Title:** Video Denoising using Surfacelet Transform By Optimised Entropy Thresholding

8.

**Abstract:** The primary aim of all video denoising systems is to remove noise from a corrupted video sequence. A video is corrupted often due to the limitations of the acquisition and processing devices. Most of the conventional video denoising schemes employ the technique of motion estimation or the optical flow estimation. Motion estimation is mostly an arduous technique particularly in conditions with lighting variations. Motion estimation step is also worsened due to the aperture problem of the optical flow estimation. This limitation of motion estimation paved the way for wavelet transform based video denoising techniques. Unfortunately, those systems resulted in videos with jittery edges and curves. Surfacelet transform is a potential tool used for the processing of multidimensional data. Video signals, which can be dealt as a different type of 3D signal, can be processed using surfacelet transform which preserves the visual quality and edge information. Entropy thresholding optimized using Artificial Bee Colony(ABC) is used to threshold the surfacelet coefficients which can be used to reconstruct the video signal with improved visual quality and with a higher peak signal to noise ratio(PSNR) and structural similarity(SSIM) index.

**Keywords:** Surfacelet transform, Artificial Bee Colony Algorithm, Entropy Threshold, NDFB, PSNR, SSIM

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**Authors:** Madhuri Mhaske, Sachin Patil

**Paper Title:** An Image Reranking Model Based on Attributes and Visual Features Eliminating Duplication

**Abstract:** An image search on internet is increasing day by day. Users type keywords in various search engines like Google, Yahoo, Bing etc for retrieval of relevant images. These search engines search the images from large pool of database. But as the keywords entered by user are generally short and ambiguous, different kinds of images are retrieved and sometimes these results are irrelevant. In this paper, semantic approach is proposed to solve this ambiguity. An image search reranking is definitely a superior approach over the text based image search. Using single modality for image searching is not sufficient as the different images have different features. This paper considers both the textual features as well as visual features for reranking. Attributes of images are classified into the groups. Based on those attributes from classifiers and the visual features of the images, each image is represented. The ranking score is used to evaluate the relevance of the image with query image. Hypergraph models these images based on the ranking scores. Content based image retrieval (CBIR) technique is used for extracting visual features. CBIR focuses on the content of the images such as color, texture, shape or any other information related with the images. Duplicate images found in search results are detected and eliminated by using SURF (Speeded Up Robust Feature) technique.

**Keywords:** Attribute, Hypergraph, CBIR, SURF. Etc

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13. X. Tang, K. Liu, J. Cui, F. Wen and X. Wang., "IntentSearch: Capturing User Intention for One-Click Internet Image Search.", IEEE Transaction on Pattern Analysis and Machine Intelligence, vol.34, no.7, pp.1342-1353, 2012.

10.	<b>Authors:</b>	<b>Ronald Alexander Reyes Asanza, José Leonardo Benavides Maldonado</b>	
	<b>Paper Title:</b>	<b>Identification and Control based on PID and Smith Predictor Applied to a Prototype Crushing</b>	
	<p><b>Abstract:</b> This article discusses the identification of the crushing process, which widely used in copper mining discussed; this is done using the ident tool with MATLAB®. Then apply two strategies to control process one based on PID (Proportional out, integral, derivative) and another on the Smith Predictor, mainly by the big current delay in the process. Finally, the best option is chosen, and the results were shown.</p> <p><b>Keywords:</b> Identification Systems, PID control, Smith Predictor Control,</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Santos, L. R. (1999). Inexpensive apparatus for control laboratory experiments using advanced control methodolgies. Recuperado el 15 de 11 de 2014</li> <li>2. Moriano, P., &amp; Freddy, N. (Julio/Septiembre de 2012). Modelado y control de un nuevo sistema bola viga con levitación magnética. RIAI (Revista Iberoamericana de Automática e Informática Industrial), 9(3), 258. Recuperado el 08 de Marzo de 2015</li> <li>3. Ljung, L. (1999). System Identification Theory for the user (Second ed.). New Jersey: Prentice Hall . Recuperado el 10 de Noviembre de 2014</li> <li>4. Duthoit, V. (2000). Crushing and Grinding (Vol. 9). Balkema-Rotterdam: Louis Primel and Claude Tourenq. Recuperado el 22 de Noviembre de 2014</li> <li>5. Weiss, N. L. (1985). Jaw Crushers . (N. Weiss, Ed.) New York, EE-UU: SME Mineral Processing Handbook. Recuperado el 21 de Noviembre de 2014</li> <li>6. Donovan, J. G. (2003). FRACTURE TOUGHNESS BASED MFracture Toughness Based Models For The Prediction Of Power Consumption, Product Size, And Capacity Of Jaw Crushers. Faculty of the Virginia Polytechnic Institute and, Blacksburg, VA. Recuperado el 26 de Noviembre de 2014</li> <li>7. Gupta, S. (2003). Elements of Control Sitems. New Delhi: Prentice-Hall of India.</li> <li>8. Dorf, R., &amp; Bishop, R. (2008). Sistemas de Control Moderno. Madrid-España: Pearson Prentice-Hall.</li> <li>9. Mathworks. (s.f.). Mathworks. Obtenido de www.mathworks.com</li> <li>10. Aguado, A. (2010). Temas de Identificación de Control Adaptable. Habana, Cuba: ICIMAF.</li> </ol>		50-55
11.	<b>Authors:</b>	<b>Chae-sil. Kim, Jae-min. Kim, Chang-min. Keum, Min-jae. Shin</b>	
	<b>Paper Title:</b>	<b>A Study on the Vibration Reduction in Manufacturing the Deep Groove Holes with the Tool Holders and Sleeves using Design of Experiment (DOE)</b>	
	<p><b>Abstract:</b> Deep hole drilling is a machining process with a high ratio of length to diameter (L / D). If the depth is greater than the diameter, vibration frequently occurs at the end portion of the cutting tool resulting in a product with defective hole surface and size. To solve this problem, dampened bars are installed to absorb vibration. Depending on their length, the dampened bars can lower process efficiency. Instead, a mill turret developed with a holder and sleeve could enhance quality and improve productivity while reducing vibration. In this study, an optimized model of a mill turret holder and sleeve was developed to reduce vibration and replace the dampened bar. To optimize the design parameters, a Design of Experiment (DOE) was used. A finite element analysis was performed using ANSYS. Using Modal analysis and Harmonic analysis, the control factors affecting stress and displacement were examined using a derived signal to noise (S/N) ratio.</p> <p><b>Keywords:</b> Taguchi Method, Mill turret tool holder, Modal Analysis, Harmonic Analysis</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. W. S. Yoo, Q. Q. Jin and Y. B. Chung, "A Study on the Optimization for the Blasting Process of Glass by Taguchi Method," Journal of society of Korea Industrial and Systems Engineering Vol.30, No. 2, pp. 8 – 14, June 2007.</li> <li>2. W. G. Jang, "Optimal Design of the Front Upright of Formula Race Car Using Taguchi's Orthogonal Array," Journal of society of Korea Society of Manufacturing Technology Engineers Vol. 22, No. 1, pp. 112 – 118, 2013.</li> </ol>		56-59
12.	<b>Authors:</b>	<b>Vineeth Teeda, K.Sujatha, Rakesh Mutukuru</b>	
	<b>Paper Title:</b>	<b>Robot Voice A Voice Controlled Robot using Arduino</b>	
	<p><b>Abstract:</b> Robotic assistants reduces the manual efforts being put by humans in their day-to-day tasks. In this paper, we develop a voice-controlled personal assistant robot. The human voice commands are taken by the robot by it's own inbuilt microphone. This robot not only takes the commands and execute them, but also gives an acknowledgement through speech output. This robot can perform different movements, turns, wakeup/shutdown operations, relocate an object from one place to another and can also develop a conversation with human. The voice commands are processed in real-time, using an offline server. The speech signal commands are directly communicated to the server using a USB cable. The personal assistant robot is developed on a micro-controller based platform. Performance evaluation is carried out with encouraging results of the initial experiments. Possible improvements are also discussed towards potential applications in home, hospitals, car systems and industries.</p> <p><b>Keywords:</b> Robotic assistants, operations, wakeup/shutdown, USB cable, personal assistant and industries, systems, Performance</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. A Voice-Controlled Personal Robot AssistantAnurag Mishra, Pooja Makula, Akshay Kumar, Krit Karan and V.K. Mittal, IIIT, Chittoor, A.P., India.</li> <li>2. H.Uehara,H. HigaandT.Soken,"A Mobile Robotic Armfor people with severe disabilities", International Conference on Biomedical Robotics and Biomechatronics (BioRob), 3rd IEEE RAS and EMBS , Tokyo, pp. 126- 129, September 2010, ISSN:2155-1774.</li> <li>3. David Orenstein, "People with paralysis control robotic arms using brain", <a href="https://news.brown.edu/articles/2012/05/braingate2">https://news.brown.edu/articles/2012/05/braingate2</a> (Last viewed on October 23, 2014).</li> <li>4. Lin. H. C, Lee. S. T, Wu. C. T, Lee. W. Y and Lin. C. C, "Robotic Arm drilling surgical navigation system", International conference on Advanced Robotics and Intelligent Systems (ARIS), Taipei, pp. 144-147, June 2014.</li> <li>5. Rong-Jyue Wang, Jun-Wei Zhang, Jia-Ming Xu and Hsin-Yu Liu, "The Multiple-function Intelligent Robotic Arms", IEEE International</li> </ol>		60-67

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	<p><b>Authors:</b> Nizar Hussain M.</p>	
	<p><b>Paper Title:</b> Analytic Hierarchy Process based Methodology for Ranking Healthcare Management Information Systems</p>	
13.	<p><b>Abstract:</b> Ranking of Healthcare Management Information System (HMIS) help practitioners to select the best from the trivial many for the success of the organization. The objective of this study is to rank the CSF of HMIS using a suitable Multi-Criteria Decision Making technique (MCDM). Here, Analytic Hierarchy Process (AHP) is the tool used to determine the relative importance of the CSF in influencing the adoption and use of HMIS. In order to rank the factors, this study is planned and performed in two stages. At the first stage to identify the critical success factors of HMIS, a through literature review is made. At the second stage, a pair wise comparison is designed based on AHP method. The weightage got from AHP can also be used for ranking of various HMIS installations in different hospitals.</p> <p><b>Keywords:</b> Critical Success Factors, Healthcare Management Information System, Multi Criteria Decision Making, Analytic Hierarchy Process.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Al Farsi, M., and West, D. J., Jr., Use of electronic medical records in Oman and physician satisfaction. <i>J. Med. Syst.</i> 30:17–22, 2006.</li> <li>Alquraini, H., Alhashem, A.M., Shah, M.A., Chowdhury, R.I., Factors influencing nurse's attitudes towards the use of computerized health information systems in Kuwaiti hospitals, <i>J. Adv. Nurs.</i> 57 (4) (2007) 375–378.</li> <li>Barbeite, F.G., E.M. Weiss, Computer self-efficacy and anxiety scales for an Internet sample: testing measurement equivalence of existing measures and development of newscales, <i>Comput. Hum. Behav.</i> 20 (1) (2004) 1–15.</li> <li>Barsukiewicz, C. 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	<b>Authors:</b>	<b>Nasr Litim, Ayda Baffoun</b>	
	<b>Paper Title:</b>	<b>Investigation of Acrylic Resin Treatment and Evaluation of Cationic Additive Quality Impact on the Mechanical Properties of Finished Cotton Fabric</b>	
14.	<p><b>Abstract:</b> Statistical design of experiment (DOE) is an important tool to improve and developed of existing products or processes. This paper investigates the effect of essential finishing factors; curing temperature, curing time, resin, catalyst and cationic additive concentrations on the mechanical properties, especially on 3D ranks of cotton treated fabric with a copolymer acrylic resin. After that, it evaluates the impact of cationic additive class on 3D ranks and mechanical properties loss (breaking strength, breaking elongation and tear strength) of treated fabric with acrylic resin. The results, showed that cationic type effect; firstly (Electroprep) has the best quality on 3D rank of treated fabric and effect a little loss on mechanical properties, secondly (Easy stone super X), whereas (Easystone K) lead to a negatively loss on mechanical properties and gives undesired 3D rank. In order to investigate the causes of resin finish resumption and downgrading of garments in textile industry caused by ingredient concentration in bath resin. The main effect plot, interaction plot and contour plot method applied give to the textile engineer the possibility to predict the effect of resin treatment factors on the final quality desired of 3D rank and preserving the mechanical characteristics of treated fabric.</p> <p><b>Keywords:</b> Mechanical properties, Cotton, Resin, 3D ranks, Cationic</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. H. Tavanail, S. M .Taheri, M. Nasiri. (2005), “Modelling of Colour Yield in Polyethylene Terephthalate Dyeing with Statistical and Fuzzy Regression”, <i>Iranian Polymer Journal</i>, 14 (11), pp 954-967</li> <li>2. F. Asim, Mahmood, (2012), “Optimization of process parameters for simultaneous fixation of reactive printing and crease resistant finishing”. <i>Journal of Textile and apparel Technology Management</i>, 7(3).</li> <li>3. Y. H. El Hamaky, S. Tawfeek, D. F. Ibrahim, D. Maamoun, S. Gaber (2007), “Printing Cotton Fabrics with Reactive Dyes of High Reactivity from an Acidic Printing Paste”, <i>Coloration Technology</i>, 123(6), pp 365-373.</li> <li>4. M . S. Hassan (2009), “Crease Recovery Properties of Cotton Fabrics Modified by Urea Resins under the Effect of Gamma Irradiation”. <i>Radiation Physics and Chemistry</i>. 78(5), pp 333-337.</li> <li>5. W.Udomkichecha, S.Kittinaovarat, U.Thanasoonthornroek, P. Potiyaraj, and P.Likitbanakorn, (2003), <i>Textile Research Journal</i>. 73, 401.</li> <li>6. Pastore and P. Kiekens (2000), “Surface Characteristics of Fibers and Textiles”, <i>Surfactant Science Seriesm</i> Vol. 94, pp.3-30</li> <li>7. C.R. Hicks. (1982), ”Fundamental concepts in the design of experiments”, 3rd Ed, CBC College Publishing.</li> <li>8. W. Weishu and Y. Charles Q, <i>AIP Conference Proceedings</i>, Athens, August, 1997, Georgia, USA, pp 10-15.</li> <li>9. Cooke, T.F. and Weigmann, H.D., (1982).<i>Textile Chemical Coloris</i>. Vol.14, pp 100-106.</li> </ol>		76-84

	<b>Authors:</b>	<b>Mohammad Reza Elyasi, Mahmoud Saffarzade, Amin Mirza Boroujerdian</b>	
	<b>Paper Title:</b>	<b>A PLS/SEM Approach Risk Factor Analysis in Road Accidents Caused by Carelessness</b>	
15.	<p><b>Abstract:</b> Many developed countries in line with the increase in road transport, and consequently an increase in the rate of accidents, are searching for effective ways to reduce road accidents. In the area of traffic safety, in order to identify factors contributing to accidents, conventional methods which generally based on regression analysis are used. However, these methods only detect accidents in different roads, but cannot clearly identify the cause of accidents and define the relationship between them. In addition, the methods used have two major limitations: 1- Postulate the</p>		85-93

structure of the model, and, 2- Observability of all variables. Due to the limitations discussed and also due to the complex nature of human factors, and the impact of road conditions, vehicle and environment on human factors, the aim of this study is to provide a useful tool for defining and measuring road, traffic and human factors, to evaluate the effect of each of them in accidents which caused by carelessness, directly and indirectly by using structural equation modeling with the partial least squares approach. Compared with the regression-based techniques or methods of pattern recognition that only a layer of relationships between independent and dependent variables is determined, the SEM approach provides the possibility of modeling the relationships between multiple independent and dependent structures. Moreover, the ability to use unobservable hidden variables, by using observable variables would be possible.

**Keywords:** Human factors, Road safety, Road factors; accident analysis; Partial Least Square (PLS); Structural Equation Modeling (SEM).

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	<b>Authors:</b>	<b>Raad Farhood Chisab, Begard Salih Hassen, Aassyia Mohammed Ali Jasim Al-A'assam</b>		
	<b>Paper Title:</b>	<b>Performance of Single Carrier Frequency Division Multiple Access Under Different Channel Cases</b>		
	<p><b>Abstract:</b> Single Carrier Frequency Division Multiple Access (SCFDMA) is currently a favorable tool for uplink broadcast in 4G mobile communications method. It merges the “single carrier frequency domain equalization (SC-FDE)” and “frequency division multiple access (FDMA)” methods. It inserts DFT before OFDMA modulation to drawing the sign from every operator to a subsection of the existing subcarriers. It is a new system joining best of the benefits of OFDMA with the small “Peak-to-Average Power Ratio (PAPR)”. For that aims, it accepted as a promising technique on the uplink of wireless systems. In this paper the performance of SCFDMA was measured under different variable parameter in order to verify the robustness of the system. The system is tested under parameters like modulation type, subcarrier mapping, Doppler frequency, time of sample, second path gain and roll-off factor.</p> <p><b>Keywords:</b> SCFDMA, 4G, PAPR, BER, SNR.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Wafaa Radi, Hesham Elbadawy and Salwa Elramly, “Peak to Average Power Ratio Reduction Techniques for Long Term Evolution- Single Carrier Frequency Division Multiple Access System”, <i>International Journal of Advanced Engineering Sciences and Technologies</i>, <a href="http://www.ijaest.iserp.org">http://www.ijaest.iserp.org</a> , ISSN: 2230-7818, Vol No. 2, Issue No. 6, 230 – 236, 2011.</li> <li>2. Masayuki Nakada, Kazuki Takeda and Fumiuyuki Adachi, “Channel Capacity of SCFDMA Cooperative AF Relay Using Spectrum Division &amp; Adaptive Subcarrier Allocation”, <i>Proceedings of IC-NIDC2010</i>, 978-1-4244-6853-9/10/IEEE, 2010.</li> <li>3. Tae-Won Yune, Jong-Bu Lim, and Gi-Hong Im, “Iterative Multiuser Detection with Spectral Efficient Relaying Protocols for Single-Carrier Transmission”, <i>IEEE Transactions on Wireless Communications</i>, Vol. 8, NO. 7, July 2009.</li> <li>4. Zid Souad and Bouallegue Ridha, “SOCP Approach for Reducing PAPR System SCFDMA in Uplink via Tone Reservation”, <i>International Journal of Computer Networks &amp; Communications (IJCNC)</i> Vol.3, No.6, , DOI : 10.5121/ijcnc.2011.3610 157, November 2011</li> <li>5. Yibing LI, Xin GUI and Fang YE, “Analysis of BLER Performance for LTE Uplink Baseband Simulation System” <i>Journal of Computational Information Systems</i> , <a href="http://www.Jofcis.com">http://www.Jofcis.com</a> , (2012) 2691–2699, 1553–9105 / 2012.</li> <li>6. Pochun Yen and Hlaing Minn, “Low complexity PAPR reduction methods for carrier-aggregated MIMO OFDMA and SC-FDMA systems”, <i>EURASIP Journal on Wireless Communications and Networking</i> 2012, 2012:179, <a href="http://jwcn.eurasipjournals.com/content/2012/1/179">http://jwcn.eurasipjournals.com/content/2012/1/179</a> , 2012.</li> <li>7. Gaurav Sikri and Rajni, “A Comparison of Different PAPR Reduction Techniques In OFDM Using Various Modulations”, <i>International Journal of Mobile Network Communications &amp; Telematics (IJMNCT)</i> Vol.2, No.4, , DOI : 10.5121/ijmnct.2012.2406 53, August 2012.</li> <li>8. Md. Masud Rana, Jinsang Kim and Won-Kyung Cho, “An Adaptive LMS Channel Estimation Method for LTE SC-FDMA Systems”, <i>International Journal of Engineering &amp; Technology IJET-IJENS</i> Vol: 10 No: 05, 2015.</li> <li>9. Uyen Ly Dang, Michael A. Ruder, Robert Schober and Wolfgang H. Gerstacker, “MMSE Beamforming for SC-FDMA Transmission over MIMO ISI Channels”, <i>EURASIP Journal on Advances in Signal Processing</i>, Hindawi Publishing Corporation, Volume 2011, Article ID 614571, 11 pages, doi:10.1155/2011/614571, 2011.</li> <li>10. Faisal S. Al-kamali, Moawad I. Dessouky, Bassiouny M. Sallam, Farid Shawk and Fathi E. Abd El-Samie, “Carrier Frequency Offsets Problem in DCT-SC-FDMA System: Investigation and Compensation”, <i>International Scholarly Research Network ISRN Communications and Networking</i>, Volume 2011, Article ID 842093, 7 pages, doi:10.5402/2011/842093, 2011.</li> </ol>			<b>94-98</b>

	<b>Authors:</b>	<b>Anderson Rigoberto Cuenca S, Jose Leonardo Benavides M, Manuel Augusto Pesantez G</b>		
	<b>Paper Title:</b>	<b>Comparison PID and MPC Control, Applied to a Binary Distillation Column</b>		
<b>17.</b>	<p><b>Abstract:</b> Using binary distillation column in the industry is currently imperative, the reason why the control parameters that are highly nonlinear necessary to apply classic strategies as advanced control and raised here. These techniques are the PID controller and the MPC; the data that are to perform the calculations are of IFAC event whose mixture is alcohol with water. Finally with the help of software MATLAB® / Simulink simulations for comparing which of the two drivers is the best delivery results when controlling the composition on the bottom, top and pressure in binary distillation column performed.</p>			<b>99-108</b>

**Keywords:** Chemical Industry, Distillation Columns, MPC (Predictive Control Method), PID Control.

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<b>Authors:</b>	<b>Sonal Yadav, Sharath Naik</b>
<b>Paper Title:</b>	<b>Shortest Path Computation in Multicast Network with Multicast Capable and Incapable Delay Associated Nodes</b>

**Abstract:** Multicast transmission results in a bandwidth and cost efficient solution for transmission purpose .If we consider the real life scenario then the nodes considered can either be multicast capable nodes or multicast incapable nodes. In this paper, a method is proposed to increase the success rate of finding the minimum cost path within a given network with both multicast incapable and capable nodes. For this, a real life network is considered with 80 nodes complied within it. The nodes considered can either be multicast capable nodes or multicast capable nodes conforming with real life situations .It is shown that if we make use of algorithm proposed in the paper along with delay association and proper bandwidth consideration then success rate of finding the minimum cost path can be increased up to a significant value

**Keywords:** Multicast capable nodes, multicast incapable nodes, minimum cost path

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19.	<b>Authors:</b>	<b>CH. Bhanu Prakash, M.N.V.S.A. Sivaram.K, G.H. Tammi Raju, CH.N.V.S. Swamy</b>	114-117
	<b>Paper Title:</b>	<b>Comparative Experimental study on a Photovoltaic Panel with Low Cost Performance Improvement Techniques</b>	
	<p><b>Abstract:</b> The main objective of our project is to increase the efficiency of the solar panel by removing the heat from it. The photovoltaic (PV) cells suffer efficiency drop as their operating temperature increases especially under high insolation levels. The operating temperature is one of the important factors that can affect the efficiency of the PV panels. We rectified this problem by using two techniques which reduces the temperature of the panel. One is cooling the solar panel by water where heat transfer takes place and reduces the panel temperature and the other is placing the Low E-glass which allows only visible light and reflects the non-visible light. In the solar spectrum heat is produced due to non-visible light, temperature of solar panel is reduced by the reflection of non-visible light. Decrease in temperature of the solar panel results increase in the efficiency.</p> <p><b>Keywords:</b> Photovoltaic (PV) cells, Efficiency, Cooling, Resistance temperature detector, low E-glass.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J.K. Tonui, Y. Tripanagnostopoulos, "Air-cooled PV/T solar collectors with low cost performance improvements". Solar Energy 81 (4) (2007) 498e511.</li> <li>2. W. He, T. T. Chow, J. Ji, et al., "Hybrid Photovoltaic and Thermal Solar-Collector Designed for Natural Circulation of Water," Applied Energy, Vol. 83, No. 3, 2006, pp. 199- 220.</li> <li>3. Z. J. Weng and H. H. Yang, "Primary Analysis on Cooling Technology of Solar Cells under Concentrated Illumination," Energy Technology, Vol. 29, No. 1, 2008, pp. 16-18.</li> <li>4. M. Brogren and B. Karlsson, "Low-Concentrating-Water Cooled PV-Thermal Hybrid Systems for High Latitudes," 29th IEEE PVSC, New Orleans, May 2002, pp. 1733- 1736.</li> <li>5. G. Anderson, P. M. Dussinger, D. B. Sarraf and S. Tamanna, "Heat Pipe Cooling of Concentrating Photovoltaic Cells," 33rd IEEE Photovoltaic Specialists Conference, San Diego, May 2008, pp.</li> <li>6. Raghuraman. P "Analytical predictions of liquid and air photovoltaic/thermal", flat-plate collector performance. J Solar Energy Eng 1981, 103:291-8.</li> <li>7. S. Krauter, "Increased electrical yield via water flow over the front of photovoltaic panels", Solar Energy Materials &amp; Solar Cells, 82, 2004, 131-137.</li> <li>8. Hongbing Chen, Xilin Chen, Sizhuo Li, Hanwan Ding, "Comparative study on the performance improvement of photovoltaic panel with passive cooling under natural ventilation", International Journal of Smart Grid and Clean Energy, 3(4), 2014, 374-379.</li> <li>9. Shiv Lal, Pawan Kumar, Rajeev Rajora, "Performance analysis of photovoltaic based submersible water pump", International Journal of Engineering and Technology, 5(2), 2013, 552-560.</li> <li>10. P. Gang, Fu Huide, Z. Huijuan, JiJie, "Performance study and parametric analysis of a novel heat pipe PV/T system", Energy, 37(1), 2012, 384-395.</li> <li>11. H. Bahaidarah, Abdul Subhan, P. Gandhidasan, S. Rehman, "Performance evaluation of a PV (photovoltaic) module by back surface water cooling for hot climatic conditions", Energy, 59, 2013, 445-453.</li> <li>12. H.G. Teo, P.S. Lee, M.N.A. Hawlader, "An active cooling system for photovoltaic modules", Applied Energy, 90, 2012, 309-3105.</li> </ol>		
20.	<b>Authors:</b>	<b>Geethu S S, Sreeletha S H</b>	118-120
	<b>Paper Title:</b>	<b>An Efficient Depth Segmentation Based Conversion of 2d Images to 3d Images</b>	
	<p><b>Abstract:</b> In the 3D consumer electronics world have a wide increase in demands of more and more 3D technology, so this has led to the conversion of many existing two-dimensional images to three-dimensional images. The depth is an important factor in the conversion process. Determining the depth for a single image is very difficult. There are many techniques widely used for the depth estimation process. In this paper we propose an automatic depth estimation technique. Firstly, we partition the image using graph cut segmentation method. The main goal of segmentation is to simplify or change the representation of an image into something that is more meaningful and easier to analyze. Then we construct a higher order statistics map. The HOS is mainly used for solving detection and classification problems. We can estimate depth map from HOS mean. Finally, creating left view image and right view image and combined with depth map to generate an enhanced stereoscopic image.</p> <p><b>Keywords:</b> 2D to 3D, Segmentation, Graph cut, HOS, Filtering, Stereoscopic image.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Saravanan Chandran , Novel Algorithm for Converting 2D Image to Stereoscopic Image with Depth Control using Image Fusion, Vol. 2, No. 1, March 2014 J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68-73.</li> <li>2. J. Konrad, M. Wang, and P. Ishwar, 2D-to-3D image conversion by learning depth from examples, , in Proc. IEEE Comput. Soc. CVPRW, Jun. 2012, pp. 16-22. K. Elissa, "Title of paper if known," unpublished.</li> <li>3. Zeal ganatra, conversion of 2d images to 3d using data mining algorithm, international journal of innovations and advancement in computer science, ijiacs , vol. 22, no. 9, september 2013.</li> <li>4. Janusz Konrad, Learning-Based, Automatic 2D-to-3D Image and Video Conversion, Fellow, IEEE, Meng Wang, Prakash Ishwar, Senior Member, IEEE, Chen Wu, and Debargha Mukherjee, 2012.</li> <li>5. Raymond Phan, Richard Rzeszutek, Dimitrios Androutsos, semi- automatic 2d to 3d image conversion using scale-space random walks and a graph cuts based depth prior,18th IEEE International Conference on Image Processing, 2011.</li> <li>6. Q. Wei,2D to 3D: A Survey, Information and Communication Theory Group (ICT) Faculty of Electrical Engineering, Mathematics and Computer Science Delft University of Technology, the Netherlands, December.</li> <li>7. M. H. Feldman and L. Lipton, "Interactive 2D to 3D Stereoscopic Image Synthesis", in Proc. of the SPIE, Vol. 5664, pp. 186-197 (2005).</li> <li>8. Battiato, S.; Capra, A.; Curti, S.; and La Cascia, M, "3D Stereoscopic Image Pairs by Depth-Map Generation", in Proc. of 2nd International Symposium on 3D Data Processing Visualization and Transmission, 3DPVT (2004).</li> <li>9. W.J Tam, F. Speranza, L.Zhang, R. Renaud, J. Chan, and C. Vazquez, " Depth image based rendering for multiview stereoscopic displays: Role of information at object boundaries ", in Proc. of the SPIE, Vol. 6016, pp. 75-85 (2005).</li> <li>10. W. J. Tam and L. Zhang, "Non-uniform smoothing of depth maps before image-based rendering", in Proc. of the SPIE, Vol. 5599, pp. 173-183 (2004).</li> <li>11. Jaeseung Ko, Manbae Kim and Changick Kim, School of Engineering, Information and Communications University Munji-dong, Yuseong-</li> </ol>		

	<p>gu, Deajeon, Korea, Proc. of SPIE Vol. 6696 66962A-1.</p> <p>12. Salvatore Curti, Daniele Sirtori, and Filippo Vella, "3D Effect Generation from Monocular View", in Proc. of the First International Symposium on 3D Data Processing visualization and Transmission, 3DPVT (2002).</p> <p>13. S. A. Valencia and R. M. Rodriguez-Dagnino, "Synthesizing Stereo 3D Views from Focus Cues in Monoscopic 2D Images", in Proc of the SPIE, Vol. 5006, pp.377-388 (2003).</p> <p>14. Pedro F. Felzenszwalb and Daniel P. Huttenlocher, "Efficient Graph-Based Image Segmentation", International Journal of Computer Vision, Vol. 59, Number 2, Sept. 2004.</p> <p>15. O. Chapelle, B. Schölkopf and A. Zien. <i>Semi-Supervised Learning</i>. MIT Press, Cambridge, MA, 2006.</p>	
	<p><b>Authors:</b> Chanchal Verma, B. Anjanee Kumar</p> <p><b>Paper Title:</b> Improvement of Output Power for Wind Driven Induction Generator using SEPIC Converter</p>	
21.	<p><b>Abstract:</b> This paper deals with dc-dc converter known as SEPIC stands for single ended primary inductor converter. SEPIC is integrated with wind energy in order to maximize the performance of the system. With the help of simple method of tracking maximum power from wind energy to extract maximum power. Basically wind energy is used to generate electricity and the wind is not in uniform speed. So, by using different electronic components .The main part is dc-dc converter and by using SEPIC in place of normal dc-dc converter the output power i.e. THD will enhanced .Here DBR is used to convert AC to DC. The SEPIC can perform both bucks as well as boost converter. It gives the result in microseconds. The simple algorithm is the main advantage of the proposed work. The output is shown in DC microgrid and AC microgrid. It is for the small scale WECS.The work is supported with experimental results and also the output i.e. THD is calculated and compared with Cuk converter.</p> <p><b>Keywords:</b> MPPT, SEPIC (single ended primary inductor converter), THD, wind energy.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Nayanar, V., Kumaresan, N. and Ammasai Gounden, N., "A single sensor based MPPT controller for wind driven Induction Generators Supplying DC Microgrid", IEEE Transactions on Power Electronics ,Vol.31, Issue: 2 ,pp1161 – 1172,feb. 2016.</li> <li>2. A.Yazdani and P.P. Dash,"A control methodology and characterization of dynamics for a photovoltaic (PV) system interfaced with a distribution network," IEEE Tans. Power Del.,vol.23,no.3,pp.1538-1551.jul 2009.</li> <li>3. H.Li and Z. Chen," Overview of different wind generator systems and their comparisons," IEEE Renew. Power Gener.,vol.2,no.2,pp123-138,jun.2008.</li> <li>4. Monica Chinchilla, Santiago Arnaltes, Juan Carlos Burgos: "Control of permanent magnet generators applied to variable speed wind energy systems connected to the grid", IEEE Transaction on energy conversion ,vol.21, NO.1, MARCH 2006.</li> <li>5. K. Padmanabham and K. Balaji Nanda Kumar Reddy:" A New MPPT Control Algorithm for Wind Energy Conversion System", (IJERT) ISSN: 2278-0181 ,Vol. 4 Issue 03, March-2015</li> <li>6. Gayathri Deivanayaki. VP, Dhivyabharathi. R,Surbhi. R and Naveena. P." comparative analysis of bridgeless CUK and SEPIC converter."IJCSE, vol.3,issue1,jan-feb 2016,pp15-19.</li> <li>7. Notes of IIT, Kharagpur, DC to DC Converters, Module -3.</li> </ol>	121-123
	<p><b>Authors:</b> Joseph Zacharias, Celine George, Vijayakumar Narayanan</p> <p><b>Paper Title:</b> Hybrid Wired and Wireless System Involving Non-upling Technique</p>	
22.	<p><b>Abstract:</b> A hybrid Radio over Fiber (RoF) system which is compatible with both wired and 90 GHz wireless transmission is proposed in this paper. Baseband and millimeter wave signals are considered as wired and wireless signal respectively. Hybrid signal consisting of wired and wireless signal is generated using a single Dual Drive Mach-Zehnder Modulator (MZM). Using a 10 GHz local oscillator, non-upling (nine times) increase in signal is achieved. As the system uses low frequency local oscillator and a single modulator, overall cost of the system can be reduced considerably. Results obtained show that the system can transmit both wired and wireless signals over a fiber of length 70 km with acceptable bit error rate (BER).</p> <p><b>Keywords:</b> Fiber-to-the-Home, Radio-over-Fiber, W-Band</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. S. E. Alavi, I. S. Amiri, M. Khalily, N. Faisal, A. S. M. Supa'at, H. Ahmad, and S. M. Idrus., "W-Band OFDM for Radio-Over-Fiber Direct Detection Link Enabled by Frequency Nonupling Optical Up-Conversion," IEEE Photon. J., vol. 6, no.6, Dec. 2014.</li> <li>2. C. H. Chang, P. C. Peng, Q. Huang, W. Y. Yang, H. L. Hu, W. C. Wu, J. H. Huang, C. Y. Li, H. H. Lu and H. H. Yee, "FTTH and Two-Band RoF Transport Systems Based on an Optical Carrier and Colorless Wavelength Separators," IEEE Photon. J., vol. 8, no.1, Feb. 2016.</li> <li>3. Tong Shao, F. Paresys, Y. Le Guenneq, G. Maury, N. Corrao and B. Cabon, "Convergence of 60 GHz Radio Over Fiber and WDM PON Using Parallel Phase Modulation With a Single Mach-Zehnder Modulator," IEEE Light Wave Technol. J, vol.30, no.17, Sep. 2012.</li> <li>4. C. W. Chow, and Y. H. Lin, "Convergent optical wired and wireless long-reach access network using high spectral efficient modulation," Opt. Exp., vol. 20, no. 8, pp. 9243-9248, Apr. 2012.</li> <li>5. H. T. Huang, Chun-Ting Lin, Chun-Hung Ho, Wan-Ling Liang, Chia-Chien Wei, Yu-Hsuan Cheng and Sien Chi, "High Spectral Efficient W-band OFDM-RoF System with Direct-Detection by Two Cascaded Single-Drive MZMs," Opt. Exp., vol. 21, no. 14, pp. 16615-16620, Jul. 2013.</li> <li>6. G. H. Nguyen, B. Cabon and Y. Le Guenneq, "Generation of 60-GHz MB-OFDM Signal-Over-Fiber by Up-Conversion Using Cascaded External Modulators," Journal of Lightwave Technology, vol. 27, pp. 1496-1502, Jun. 2009.</li> <li>7. Jianxin Ma, J.Yu, Chongxiu Yu, Xiangjun Xin, Xinzhu Sang and Qi Zhang, "64 GHz Optical Millimeter-Wave Generation by Octupling 8 GHz Local Oscillator via a Nested LiNbO3 modulator," Opt. Laser Technol., vol. 42, pp. 264-268, 2010.</li> <li>8. Jianjun Yu, Zhensheng Jia, L. Yi, Y. Su, Gee-Kung Chang and Ting Wang, "Optical Millimeter-Wave Generation or Up-Conversion using External Modulator," IEEE Photon. Technol. Lett., vol. 18, no. 1, pp. 265-267, Jan. 2006.</li> <li>9. H. C. Chien, Y. T. Hsueh, A. Chowdhury, J. Yu and G. K. Chang, "Optical millimeter-wave generation and transmission without carrier suppression for single- and multi-band wireless over fiber applications," J. Lightw. Technol., vol. 28, no. 16, pp. 2230-2237, Aug. 2010.</li> </ol>	124-127
	<p><b>Authors:</b> J. Srinivasan, S. Audithan</p> <p><b>Paper Title:</b> Anonymous Secure Routing Protocol for Multi hop Wireless Mesh Network (ASRP)</p>	
23.	<p><b>Abstract:</b> Anonymous communications are important for many applications of the Wireless Mesh Networks (WMNs) deployed in adversary environments. A major requirement on the network is to provide unidentifiability and unlinkability for nodes and their traffics. The existing protocols are vulnerable to the attacks of fake routing packets or</p>	128-132

	<p>denial-of-service (DoS) broad- casting, even the node identities are protected by pseudonyms. In this paper, we propose Anonymous Secure Routing Protocol for Multi hop Wireless Mesh Network (ASRP) to protect the attacks and multi hop secure data transmission in WMN. ASRP offers anonymous connections that are strongly resistant to both eavesdropping and traffic analysis. The key-encrypted onion routing is designed to prevent intermediate nodes from inferring a real receiver node. Simulation results indicate that the efficiency of the proposed ASRP protocol with improved performance as compared to the existing protocols.</p> <p><b>Keywords:</b> Anonymous, Onion Routing, Encryption, Decryption, Wireless Mesh Networks.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Asad Amir Pirzada a, Marius Portmanna,b, Ryan Wishart a, Jadwiga Indulska, SafeMesh: A wireless mesh network routing protocol for incident area communications, Pervasive and Mobile Computing, vol.5, pp.201-221, 2009.</li> <li>2. J. Sun, C. Zhang ; Y. Fang, A Security Architecture Achieving Anonymity and Traceability in Wireless Mesh Networks, IEEE 27th Conference on Computer Communications, 2008.</li> <li>3. Yahui Li, Xining Cui, Linping Hu, Yulong Shen, Efficient Security Transmission Protocol with Identity-based Encryption in Wireless Mesh Networks,IEEE, 2010.</li> <li>4. D. Benyamina A. Hafid, M. Gendreau b, J.C. Maureira, “On the design of reliable wireless mesh network infrastructure with QoS constraints”, Computer Network, vol.55, pp. 1631-1647, 2011.</li> <li>5. Jaydip Sen, “Security and Privacy Issues in Wireless Mesh Networks: A Survey”, Innovation Labs, Tata Consultancy Services Ltd. Kolkata, INDIA.</li> <li>6. Kamran Jamshaid Basem Shihada Ahmad Showail, Philip Levis, Deflating link buffers in a wireless mesh network, Ad Hoc Networks 16 (2014) 266–280.</li> <li>7. J. Kong and X. Hong, “ANODR: ANonymous On Demand Routing with Untraceable Routes for Mobile Ad hoc networks,” in Proc. ACM MobiHoc’03, Jun. 2003, pp. 291–302.</li> <li>8. MASK: Anonymous On-Demand Routing in Mobile Ad Hoc Networks Yanchao Zhang, Student Member, IEEE, Wei Liu, Wenjing Lou, Member, IEEE, and Yuguang Fang, Senior Member, IEEE.</li> <li>9. K. E. Defrawy and G. Tsudik, “ALARM: Anonymous Location-Aided Routing in Suspicious MANETs,” IEEE Trans. on Mobile Computing, vol. 10, no. 9, pp. 1345–1358, Sept. 2011.</li> <li>10. Z. Wan, K. Ren, and M. Gu, “USOR: An Unobservable Secure On-Demand Routing Protocol for Mobile Ad Hoc Networks,” IEEE Trans. on Wireless Communication, vol. 11, no. 5, pp. 1922–1932, May. 2012.</li> <li>11. Yanchao Zhang, and Yuguang Fang. ARSA: An Attack-Resilient Security Architecture for Multi hop Wireless Mesh Networks, IEEE Journal On Selected Areas in Communications, Vol. 24, no. 10, 2006.</li> </ol>	
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	<p><b>Authors:</b> Aleena Xavier T, Rejimoan R.</p>	
	<p><b>Paper Title:</b> A Particle Swarm Optimization Approach With Migration for Resource Allocation in Cloud</p>	
<p>24.</p>	<p><b>Abstract:</b> Cloud computing is an emerging technology. The main motivation behind the proposed work is to design a Cloud Broker for efficiently managing cloud resources and to complete the jobs within a deadline. The proposed approach intends to achieve the objectives of reducing execution time, cost and workload based on the defined fitness function. The work is simulated in CloudSim and the results prove the effectiveness of the proposed work. A better allocation was achieved when all of the three factors were considered. The analysis of work was done by comparing one of the previous works where only time and cost were the objectives. By plotting a graph against Response time and deadline and another graph depicting the relation between the idle time and deadline this result has been proved.</p> <p><b>Keywords:</b> Resource allocation, Job scheduling, Cloud Computing, IaaS, Particle Swarm Optimization</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. S. Binitha, S.Siva Sathya, A survey of bio inspired optimization algorithms, Int.J. Soft Comput. Eng. (IJSCE) (ISSN: 2231-2307) 2 (2) (2012).</li> <li>2. J. Kennedy, R. Eberhart, Particle swarm optimization (PSO), in: Proc. IEEE International Conference on Neural Networks, Perth, Australia, 1995, pp. 1942–1948.</li> <li>3. Aman kumar, Emmanueel S.Pilli and R.C.Jshi,” An efficient framework for resource allocation in cloud computing” ,in IEEE 4th ICCCNT - 2013, Tiruchengode, India</li> <li>4. M. c. D. Pandit and N. Chaki, “Resource allocation in cloud computing using simulated annealing,” IEEE applications and innovations in mobile computing, 2014.</li> <li>5. Suraj Pandey, Linlin Wu, Siddeswara Mayura Guru, Rajkumar Buyya, “A particle swarm optimization-based heuristic for scheduling workflow applications in cloud computing environments, in: AINA’10 Proceedings of the 2010 24th IEEE International Conference on on Advanced Information Networking and Applications</li> <li>6. Chandrashekar S.Pawar and Rajnikant B.Wagh, Priority Based Dynamic Resource Allocation in Coud Computing, International Symposium on Cloud ans Services Computing, 2012, pp.1-6.</li> <li>7. Biao Song, Mohammad Mehedi Hassan, Eui-nam Huh, A novel heuristicbased task selection and allocation framework in dynamic collaborative cloud service platform, in: CloudCom 2010, pp. 360–367</li> <li>8. Eun-Kyu Byuna, Yang-Suk Keeb, Jin-Soo Kimc, Seungryoul Maeng, Cost optimized provisioning of elastic resources for application workflows, Future Gener. Comput. Syst. 27 (2011) 1011–1026.</li> <li>9. M. Mezmaz, Choon Lee Young, N. Melab, E.-G. Talbi, A.Y. Zomaya, A bi-objective hybrid genetic algorithm to minimize energy consumption and makespan for precedence-constrained applications using dynamic voltage scaling, in: 2010 IEEE Congress on Evolutionary Computation, CEC, 18–23 July 2010</li> <li>10. O.O. Sonmez, A. Gursoy, A novel economic-based scheduling heuristic for computational grids, Int. J. High Perform. Comput. Appl. 21 (1) (2007) 21–29.</li> <li>11. S. Chaisiri, Bu-Sung Lee, D. Niyato, Optimization of resource provisionin cost in cloud computing, IEEE Trans. Serv. Comput. 5 (2) (2012) 164–177.</li> <li>12. M.F. Tasgetiren, Y.-C. Liang, M. Sevkli, G. Gencyilmaz, A particle swarm optimization algorithm for makespan and total flowtime minimization in the permutation flowshop sequencing problem, European J. Oper. Res. 177 (3) (2007) 1930–1947</li> <li>13. M. Dorigo, V. Maniezzo, A. Colorni, Ant system: optimization by a colony of cooperating agents, IEEE Trans. Syst. Man Cybern. B 26 (1) (1996) 29–41.</li> <li>14. Genetic Algorithm, J.H. Holland, Genetic algorithms and the optimal allocation of trials, SIAM J. Comput. 2 (2) (1973) 88–105.</li> <li>15. Thamarai Selvi Somasundaram, Kannan Govindarajan, “CLOUDRB: A framework for scheduling and managing High-Performance Computing (HPC) applications in science cloud”, Future Generation Computer Systems 34 (2014) 47–65.</li> </ol>	<p>133-137</p>
<p>25.</p>	<p><b>Authors:</b> C. Ramachandra, Sarat Kumar Dash</p>	

	<b>Paper Title:</b>	<b>ESD Induced Reliability Problems in Space Grade Devices</b>	
	<b>Abstract:</b>	ESD induced reliability problems in an IC have been studied in detail. PEM (Photon Emission Microscopy) analysis has indicated characteristic emission spots at same location from all the failed devices. Reprocessing of the failed device reveals Gate oxide rupture as root cause of the failure. Protection circuits have been designed to prevent ESD induced damage to the devices. The devices are found to be safe till 4500 V stress after protection circuit is implemented.	
	<b>Keywords:</b>	ESD (Electro Static Discharge), HBM (Human Body Model), PEM (Photon Emission Microscope), BPSG (Boron Phosphorous silicate glass)	
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	<b>Authors:</b>	<b>Neethu.M.S, Jayalekshmi.S</b>	
	<b>Paper Title:</b>	<b>Dependency Based Scheme for Load Balancing in Cloud Environment</b>	
	<b>Abstract:</b>	Cloud computing provides an opportunity to dynamically share the resources among the users through virtualization technology. In this paper, a scheme for load balancing is proposed on the basis of dependency among the tasks. CMS consists of three algorithms including Credit-based scheduling for independent tasks, Migrating Task and Staged Task Migration for dependent tasks. The Credit-based method is used for scheduling the independent tasks considering both user priority and task length. Each task will be assigned a credit based on their task length and its priority. In the actual scheduling of the task, these credits values will be considered. Task Migration algorithm is used to guarantee balancing of loads among the virtual machines. Task migration is done such that the tasks gets migrated from heavily loaded machines to comparatively lighter ones. Thus, no rescheduling is required. For dependent tasks, the dependencies between tasks are considered and the technique termed as data shuffling is used. In data shuffling, a job is divided into several tasks according to the execution order. The method used here is that the tasks in one stage run independently, while the tasks in different stages must be executed serially. Finally the system is simulated and experiments are conducted to evaluate the proposed methods. This work also concentrates on a simulated study among some common scheduling algorithms in cloud computing on the basis of the response times. The algorithms being compared with the work includes: Random, Random Two Choices (R2C) and On-demand algorithms. The evaluations demonstrate that Credit-based scheduling algorithm significantly reduces the response time.	
<b>26.</b>	<b>Keywords:</b>	Load Balancing, Virtual Machine, Task Scheduling, Dependency.	
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27.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Sharafunisa S, Smitha E S</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Reversible Watermarking Technique for Relational Data using Ant Colony Optimization and Encryption</b></td> </tr> </table>	<b>Authors:</b>	<b>Sharafunisa S, Smitha E S</b>	<b>Paper Title:</b>	<b>Reversible Watermarking Technique for Relational Data using Ant Colony Optimization and Encryption</b>	147-150
	<b>Authors:</b>	<b>Sharafunisa S, Smitha E S</b>				
<b>Paper Title:</b>	<b>Reversible Watermarking Technique for Relational Data using Ant Colony Optimization and Encryption</b>					
<p><b>Abstract:</b> Data is stored in different digital formats such as images, audio, video, natural language texts and relational data. Relational data in particular is shared extensively by the owners with communities for research purpose and in virtual storage locations in the cloud. The purpose is to work in a collaborative environment where data is openly available for decision making and knowledge extraction process. So there is a need to protect these data from various threats like ownership claiming, piracy, theft, etc. Watermarking is a solution to overcome these issues. Watermark is considered to be some kind of information that is embedded into the underlying data. While embedding the watermark, the data may modify, to overcome this we use reversible watermarking in which owner can recover the data after watermarking. In this paper, a reversible watermarking for relational data has been proposed that uses ant colony optimization and encryption for more accuracy and security.</p> <p><b>Keywords:</b> Ant colony optimization (ACO), Mutual information (MI), Reversible watermarking, Data recovery, Genetic Algorithm (GA).</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Raju Halder, Shanthanu Pal and Agostino Cortesi , "Watermarking Techniques for Relational Databases: Survey, Classification and Comparison," Journal of Universal Computer Science, Vol 16 ,2010, Number 21, pp.3164-3190</li> <li>J. Cox, J. Kilian, F. T. Leighton, and T. Shamoon, "Secure spread spectrum watermarking for multimedia", IEEE Trans. Image Process., vol. 6, no. 12, pp. 16731687, Dec. 1997</li> <li>Iftikhar, M. Kamran and Z. Anwar, "A Survey on Reversible Watermarking Techniques for Relational Databases," Security and communication networks, 2015.</li> <li>Marco Dorigo and Thoms Stultze, "Ant Colony Optimization", 2004.</li> <li>T. M. Cover, J. A. Thomas, and J. Kieffer, "Elements of information theory," SIAM Rev., vol. 36, no. 3, pp. 509510, 1994.</li> <li>R. Agarwal and J. Kiernan, "Watermarking relational databases", in Proc. 28th Int. Conf. Very Large Data Bases, 2002, pp. 155166.</li> <li>G. Gupta and J. Pieprzyk, "Reversible and blind database watermarking using difference expansion," in Proc. 1st Int. Conf. Forensic Appl. Tech. Telecommun., Inf., Multimedia Workshop, 2008, p. 24.</li> <li>G. Gupta and J. Pieprzyk, "Database relation watermarking resilient against secondary watermarking attacks," in Information Systems and Security. New York, NY, USA: Springer, 2009, pp. 222-236.</li> <li>K. Jawad and A. Khan, "Genetic algorithm and difference expansion based reversible watermarking for relational databases," J. Syst. Softw., vol. 86, no. 11, pp. 2742-2753, 2013.</li> <li>M. E. Farfoura and S.-J. Horng, "A novel blind reversible method for watermarking relational databases," in Proc. IEEE Int. Symp. Parallel Distrib. Process. Appl., 2010, pp. 563-569</li> <li>Iftikhar S, Kamran M, Anwar Z., "RRW-a robust and reversible watermarking technique for relational data, IEEE transactions on Knowledge and Data Engineering , 2015, Volume: 27, Issue: 4, pp: 1132 - 1145</li> <li>K. Huang, H. Yang, I. King, M. R. Lyu, and L. Chan, "Biased minimax probability machine for medical diagnosis", AMAI, 2004.</li> </ol>						
28.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Jasher Nisa A J, Sumithra M D</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Adaptive Minimum Classification Error based KISS Metric Learning for Person Re-identification</b></td> </tr> </table>	<b>Authors:</b>	<b>Jasher Nisa A J, Sumithra M D</b>	<b>Paper Title:</b>	<b>Adaptive Minimum Classification Error based KISS Metric Learning for Person Re-identification</b>	151-155
	<b>Authors:</b>	<b>Jasher Nisa A J, Sumithra M D</b>				
<b>Paper Title:</b>	<b>Adaptive Minimum Classification Error based KISS Metric Learning for Person Re-identification</b>					
<p><b>Abstract:</b> Person re-identification becoming an interesting research area in the field of video surveillance and is taken as the area of intense research in the past few years. It is the task of identifying a person from a camera image, who is already been tracked by another camera image at different time at different location. Manual re-identification in large camera network is costly and mostly of inaccurate due to large number of camera that he had to simultaneously operate. In a crowded and unclear environment, when cameras are at a lengthy distance, face recognition is not possible due to insufficient image quality. So, visual features based on appearance of people, using their clothing, objects carried etc. can be exploited more reliably for re-identification. A person's appearance can change between different camera views, if there is large changes in view angle, lighting, background and occlusion, so visual feature extraction is not possible accurately. For solving a person re-identification problem, have to focus on "developing feature representations which are discriminative for identity, but invariant to view angle and lighting". Recently, Minimum Classification Error (MCE) based KISS metric learning is considered as one of the top level algorithm for person re-identification. It uses VIPeR feature set as input, which contains the extracted features. MCE-KISS is more reliable with increasing the number of training samples. It uses the smoothing technique and MCE criteria to improve the accuracy of estimate of eigen values of covariance metrics. The smoothing technique can compensate for the decrease in performance which arose from the estimate errors of small eigenvalues. Here, the value of average number of small eigen values of the covariance metrics is set as a constant. So it does not work well for a large number of samples. In such situation, introduce a new method to find the value of average of such small eigen values by maximizing the likelihood function. The new scheme is termed as Adaptive MCE-KISS and conduct validation experiments on VIPeR feature dataset.</p> <p><b>Keywords:</b> reidentification, matric learning, covariance matrices, likelihood method.</p>						

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29.	<p><b>Authors:</b> Rita Anitasari, Rizki Fitriani, Erna Triastutik, Alief Makmuri Hartono, Totok R. Biyanto</p> <p><b>Paper Title:</b> Converting Fuel Oil to Gas in Combustion System for CO<sub>2</sub> Emission Mitigation at PT. PJB UP Gresik</p> <p><b>Abstract:</b> In environmental point of view, natural gas is the cleanest of the fossil fuels. The combustion of natural gas releases virtually no sulphur dioxide and ash or particulate matter, and very small amounts of nitrogen oxides. Natural gas emits 22% less carbon dioxide than oil and 40% less than coal. NO<sub>x</sub> is reduced by more than 90% and SO<sub>x</sub> by more than 95%. This paper will describes the effort of PT. PJB UP Gresik as the owner of the biggest steam power plant in Indonesia to reduce the CO<sub>2</sub> emission by converting fuel oil to gas at existing steam power plant fuel system. In order to achive operating conditions that assure mass, energy and momentum balances, some plant modifications and new installation were performed in combustion system area. The effort was performed succesfully. The evidents were compare with the same powerplant in the world. In term of CO<sub>2</sub> emission, PT. PJB UP Gressik lay at the best ten compared to others power plant performance in America. It is shown PT. PJB UP Gresik have been performing best green practice especially in reducing CO<sub>2</sub> emmision in the steam power plant by utilize fuel gas.</p> <p><b>Keywords:</b> CO<sub>2</sub> Emission, Mitigation, Combustion System, Converting Fuel Oil to Gas</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Totok R. Biyanto, Green Concept in Engineering Practice, invited speaker at1St International Seminar on Science and Technology 2015, 5 August 2015, ITS Surabaya, ISSN 2460-6170</li> <li>2. EPA. Methodology for Estimating Emissions of CO<sub>2</sub> from Fossil Fuel Combustion, US Environmental Protection Agency: 2014</li> <li>3. E. Dendy Sloan, Fundamental principles and applications of natural gas hydrates, Nature 426, 353-363 (20 November 2003)</li> <li>4. SA Iqbal, Y Mido, Chemistry of Air &amp; Air Pollution, Discovery Publishing, 2010</li> <li>5. Roberts, R. Brooks, P. Shipway, "Internal combustion engine cold-start efficiency: A review of the problem, causes and potential solutions", Energy Conversion and Management, Volume 82, June 2014, Pages 327-350</li> <li>6. D. Sarkar, Thermal power plant, 2015.</li> <li>7. Christopher E. Van Atten, Benchmarking Air Emissions, M. J. Bradley &amp; Associates LLC, 2013</li> </ol>	156-158
30.	<p><b>Authors:</b> Nikhila A, Janisha A</p> <p><b>Paper Title:</b> Lossless Visual Cryptography in Digital Image Sharing</p> <p><b>Abstract:</b> Security has gained a lot of importance as information technology is widely used. Cryptography refers to the study of mathematical techniques and related aspects of Information security. Visual cryptography is a secret sharing scheme which uses images distributed as shares such that, when the shares are superimposed, a hidden secret image is revealed. Visual cryptography schemes (VCSs) generate random and meaningless shares to share and protect secret images. The main issue in visual cryptography is quality of reconstructed image. The secret image is converted into shares; that mean black and white pixel images. There occurs an issue of transmission loss and also the possibility of the invader attack when the shares are passed within the same network. In this paper, a lossless TVC (LTVC) scheme that hides multiple secret images without affecting the quality of the original secret image is considered. An optimization model that is based on the visual quality requirement is proposed. The loss of image quality is less compared to other visual cryptographic schemes. The experimental results indicate that the display quality of the recovered image is superior to that of previous papers. In addition, it has many specific advantages against the well-known VCSs. Experimental results show that the proposed approach is an excellent solution for solving the transmission risk problem for the Visual Secret Sharing (VSS) schemes.</p> <p><b>Keywords:</b> visual cryptography, visual secret sharing.</p>	159-162

	<p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Kai-Hui Lee and Pei-Ling Chiu “Sharing Visual Secrets in Single Image Random Dot Stereograms” IEEE Transactions on Image Processing, Vol.23, No. 10, October 2014</li> <li>2. Ross and A. A. Othman, “Visual Cryptography for Biometric Privacy”, IEEE Transactions on Information Forensics and Security, vol. 6, no. 1, pp. 70-81, 2011.</li> <li>3. M. Naor and A. Shamir, “Visual cryptography,” in Advances in Cryptology-EUROCRYPT 1994, ser. Lecture Notes in Computer Science, A. De Santis, Ed.</li> <li>4. R.-Z Wang and S.-F. Hsu, “Tagged visual cryptography,” IEEE Signal Process. Lett. vol. 18, no. 11, pp. 627-630, 2011.</li> <li>5. J.-B. Feng, H.-C. Wu, C.-S. Tsai, Y.-F. Chang and Y.-P. Chu, “Visual secret sharing for multiple secrets,” Patt. Recognition. vol. 41, no. 12, pp.35723581, 2008.</li> </ol>					
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<b>Authors:</b>	<b>Neenu R S, Greeshma G Vijayan</b>					
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32.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Sibiyakhan M, Sumithra M D</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Fingerprint Classification based on Simplified Rule set and Singular Points with an Image Enhancement Scheme</b></td> </tr> </table> <p><b>Abstract:</b> A rule-based technique using simplified rules is proposed to overcome the challenges faced by previous fingerprint classification techniques. Two features, namely directional patterns and singular points (SPs), are combined to categorize four fingerprint classes: namely Whorl (W); Loop (L); Arch (A); and Unclassifiable (U). The use of directional patterns has recently received more attention in fingerprint classification. It provides a global representation of a fingerprint, by dividing it into homogeneous orientation partitions. With this technique, We can improve the accuracy of the classification by integrating an image enhancement scheme. In addition, incomplete fingerprints are often not accounted for. The proposed technique achieves an accuracy of 93.33% on the FVC 2002 DB1.</p> <p><b>Keywords:</b> Singular point (SP), Core point, Delta point, Segmentation, Preprocessing.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. A, Hong L, Pankanti S (2000) Biometrics: promising frontiers for emerging identification market. Comm ACM Feb:91–98</li> <li>2. D. Maltoni, D. Maio, A. K. Jain, and S. Prabhakar, Hand- book of fingerprint recognition. London: Springer, seconded.,2009.</li> <li>3. N. Yager and A. Amin, “Fingerprint classification: A review,” Pattern Analysis &amp; Applications, vol. 7, pp. 77–93, Apr.2004.</li> <li>4. S. Msiza, B. Leke-Betechuoh, F. V. Nelwamondo, and N.Msimang, “A Fingerprint Pattern Classification Approach Based on the Coordinate Geometry of Singularities,” in Proceedings of the 2009 IEEE International Conference on Systems, Man and Cybernetics, (San Antonio, TX, USA), pp.510–517,IEEEComputerSociety,2009.</li> <li>5. Z. Hou, H. Lam, J. Li, H. Wang, L. Chen, and W. Yau, “A Topological Model for Fingerprint Image Analysis,” in 3rd IEEE Conference on Industrial Electronics and Applications,(Singapore),pp.2106–2111,IEEE,2008.</li> <li>6. G. Candela, P. Grother, C. Watson, R. Wilkinson, and C. Wilson, “PCASYS-A pattern-level classification automation system for fingerprints,”</li> </ol>	<b>Authors:</b>	<b>Sibiyakhan M, Sumithra M D</b>	<b>Paper Title:</b>	<b>Fingerprint Classification based on Simplified Rule set and Singular Points with an Image Enhancement Scheme</b>	168-171
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	<p><b>Authors:</b> A. Nachev</p>	
	<p><b>Paper Title:</b> Analysis of Irish Labour Market using Predictive Modelling</p>	
<p>33.</p>	<p><b>Abstract:</b> This study explores empirically Irish labour market and factors affecting employability rate of Irish nationals, using data from the Quarterly National Household Survey and data mining techniques. The research is conducted according to the CRISP-DM methodology and addresses its stages. We perform data cleansing and reduction of dimensionality, analyse data, and build predictive models to measure employability rate. The study uses two statistical techniques to train the models and also provides performance analysis of the models, measures variable significance using sensitivity analysis (SA) and variable effect characteristic (VEC) curves. The paper discusses results and draws conclusions.</p> <p><b>Keywords:</b> data mining, classification, logistic regression, linear discriminant analysis, labour market.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. CSO: QNHS [Online], <a href="http://www.cso.ie/en/qnhs/">http://www.cso.ie/en/qnhs/</a></li> <li>2. P. Chapman, J. Clinton, R. Kerber, T. Khabaza, T. Reinartz, C. Shearer, and R. Wirth, "CRISP-DM 1.0 - Step-by-step data mining guide," CRISP-DM Consortium, 2000</li> <li>3. Menard, S. (2002). Applied Logistic Regression (2nd ed.). SAGE</li> <li>4. Fisher, R., The Use Of Multiple Measurements In Taxonomic Problems. Annals of Eugenics, 1936, pp.179–188</li> <li>5. McLachlan, G. J. (2004). Discriminant Analysis and Statistical Pattern Recognition., 2004, Wiley Interscience</li> <li>6. Martinez, A., Kak, A., PCA versus LDA, IEEE Transactions on Pattern Analysis and Machine Intelligence 23 (2), 2001, pp.228–233</li> <li>7. Tao Li, Shenghuo Zhu, and Mitsunori Ogihara. Using Discriminant Analysis for Multi-Class Classification: An Experimental Investigation. Knowledge and Information Systems, vol. 10 no.4, 2006, pp.453–72</li> <li>8. R Development Core Team. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria, 2009, <a href="http://www.R-project.org">http://www.R-project.org</a>.</li> <li>9. Cortez, P. "Data Mining with Neural Networks and Support Vector Machines using the R/rminer Tool". In Proceedings of the 10th Industrial Conference on Data Mining (Berlin, Germany, Jul.). Springer, 2010, LNAI 6171, 572– 583.</li> <li>10. P. Cortez, A. Cerdeira, F. Almeida, T. Matos, and J. Reis, "Modeling wine preferences by data mining from physicochemical properties," Decision Support Systems, vol. 47, no. 4, 2009, pp. 547–553.</li> <li>11. P. Cortez, M. Embrechts. Using sensitivity analysis and visualization techniques to open black box data mining models. Information Sciences vol. 225, 2013, pp.1-17.</li> <li>12. R. Kewley, M. Embrechts, C. Breneman "Data strip mining for the virtual design of pharmaceuticals with neural networks," IEEE Transactions on Neural Networks, vol. 11 (3), 2000, pp. 668–679</li> <li>13. T. Fawcett, "An introduction to ROC analysis," Pattern Recognition Letters, vol. 27, no.8, 2005, pp. 861–874.</li> <li>14. B. Jantavan, C. Tsai, "The Application of Data Mining to Build Classification Model for Predicting Graduate Employment", International Journal of Computer Science and Information Security, vol. 11 No 10, 2013.</li> <li>15. T. Mishra, D. Kumar, "Students' Employability Prediction Model through Data Mining", International Journal of Applied Engineering Research, vol. 11. No. 4, 2016, pp. 2275-2282.</li> <li>16. M. Sapaat, A. Mustapha, J. Ahmad, K. Chamili, R. Muhamad, "A Classification-based Graduates Employability Model for Tracer Study by MOHE", Digital Information Processing and Communications, Springer Berlin Heidelberg, 2011, pp. 277-287.</li> <li>17. J. Kirimi, C. Moturi, "Application of Data Mining Classification in Employee Performance Prediction", International Journal of Computer Applications, vol. 146, No 7, 2016, pp. 28-35.</li> <li>18. Y. Alsultanny, "Labor Market Forecasting by Using Data Mining", International Conference on Computational Science, Procedia Computer Science 18, Elsevier, 2013, pp.1700-1709.</li> </ol>	<p>172-180</p>
	<p><b>Authors:</b> Bouchra Gourja, Malika Tridane, Said Belaouad</p>	
	<p><b>Paper Title:</b> Survey on the use of ICT in Physics in Moroccan Schools Survey on the use of ICT in Physics in Moroccan Schools</p>	
<p>34.</p>	<p><b>Abstract:</b> Morocco, like all developing countries, has understood the importance using and integrating ICT in the education system. The ICT are tools and resources required by the National Education programs to support teachers in their courses while increasing student understanding. The Ministry of Education (MEN) has made significant efforts to equip schools with computers. The objective of this work is to show the level of employment of ICT to Moroccan schools and what can still impede its use. For this reason, we conducted a survey on high school teachers, to measure the degree of use of digital resources.</p>	<p>181-184</p>

		<p>The analysis of our survey showed that more than half of high school teachers use digital resources as a teaching aid for the lessons of physical sciences. However, some teachers who have not benefited from ICT training by the department do not use digital resources in their course or not enough. Despite the MEN having made some digital resources available, these teachers do not know how to exploit them. Some teachers who have many years of experience in teaching think wasting time using ICT.</p> <p><b>Keywords:</b> ICT, digital resources, secondary education, Moroccan schools.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Charte nationale d'éducation et de formation 1999. Levier 10</li> <li>2. M.Mazaudier, &amp; M. Lambey, (2009)"L'usage des TICE en Sciences Physiques "–IA-IPR De Sciences Physiques. Académie de Besançon,2009, Page1/7.</li> <li>3. C. Cleary, A. Akkari, &amp; D;Corti,D. ,"L'intégration des TIC dans l'enseignement secondaire. Formation et pratiques d'enseignement en questions", 2008.</li> <li>4. A.Biaz, A.Benamar, A. Khyati, M. Talbi, " Intégration des technologies de l'information et de la communication dans le travail enseignant, état des lieux et perspectives ", Epinet : la revue électronique de l'EPI, n° ,2009. Available: <a href="https://www.epi.asso.fr/revue/articles/a0912d.htm">https://www.epi.asso.fr/revue/articles/a0912d.htm</a></li> <li>5. M. Mastafi, "Intégrer les TIC dans l'enseignement : quelles compétences pour les enseignants ?" Formation et profession, 23(2), 2014,29-47. Available: <a href="http://dx.doi.org/10.18162/fp.2015.294">http://dx.doi.org/10.18162/fp.2015.294</a>.</li> </ol>	
35.	<p><b>Authors:</b></p>	<p><b>S. S. Sutar, A.V. Sutar, M. R. Rawal</b></p>	185-188
<p><b>Paper Title:</b></p>	<p><b>Torque Measurement in Epicyclic Gear Train</b></p>		
<p><b>Abstract:</b></p>	<p>Gears are used to transmit power and rotary motion from the source to its application with or without change of speed or direction. Gears trains are mostly used to transmit torque and angular velocity from one shaft to another shaft, whenever there is large speed reduction requirement within confined space. In epicyclic gear trains there is relative motion between axes which useful to transmit very high velocity ratio with gears of smaller sizes in lesser space. In this research paper torque calculations are done for epicyclic gear train. Input torque, output torque and holding or braking torque are calculated experimentally using experimental set up and analytically using tabular formulas for rpm range starting from 1000 rpm to 2800 rpm. Finally the experimental and analytical torque values are compared which shows error ranging from 6 % to 8% which is due to some frictional losses and mechanical losses.</p> <p><b>Keywords:</b> Epicyclic gear train, output torque, holding torque.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Balbayev G. and Ceccarelli M., "Design and Characterization of a New Planetary Gear Box", Mechanisms, Transmissions and Applications, Mechanisms and Machine Science Volume 17, Springer, 2013, pp. 91-98.</li> <li>2. Syed Ibrahim Dilawer, Md. Abdul Raheem Junaidi, Dr.S.Nawazish Mehdi —Design, Load Analysis and Optimization of Compound Epicyclic Gear Trains! American Journal of Engineering Research ISSN 2320-0936 Vol.-02, Issue-10, 2013, PP: 146-153.</li> <li>3. Ulrich Kissling, Inho Bae, —Optimization Procedure for Complete Planetary Gearboxes with Torque, Weight, Costs and Dimensional Restrictions! Applied Mechanics and Materials Vol. 86 (2011) pp 51-54.</li> <li>4. M. Roland, R. Yves, Kinematic and Dynamic simulation of epicyclic gear trains, Mechanisa and Machine Theory, 44(2), 209, 412-424.</li> <li>5. Nenad Marjanovic, Biserka Isailovic, Vesna Marjanovic, Zoran Mилоjevic, Mirko Blagojevic, Milorad Bojic, —A practical approach to the optimization of gear trains with spur gears! Mechanism and Machine Theory 53 (2012) PP:1–16.</li> <li>6. P. W. Jensen"Kinematic Space Requirement and Efficiency of Coupled Planetary Gear Trains", ASME Paper, 68-MECH-45, (1969).</li> <li>7. E. Pennestri and F. Freudenstein,"The Mechanical Efficiency of Planetary Gear Trains", Journal of Mechanical Design, 115, 645-651, (1993).</li> <li>8. M. Krstich,"Determination of the General Equation of the Gear Efficiency of Planetary Gear Trains", International Journal of Vehicle Design, 8, 365-374, (1987).</li> </ol>		
36.	<p><b>Authors:</b></p>	<p><b>A.V. Sutar, S.S.Sutar, J.J. Shinde, S.S. Lohar</b></p>	189-195
<p><b>Paper Title:</b></p>	<p><b>Combined Operation Boring Bar</b></p>		
<p><b>Abstract:</b></p>	<p>This paper presents a new methodology for the combined operation boring bar. In normal boring operation it requires to replace the tool various operations. We cannot perform multiple operations on one machining tool. So it creates problems: Timeconsumption in changing of tool, cost of different tool, required for various operation. The focus of this research is the operation can be done on the same boring bar. It can able to perform various operation such as rough boring, finish boring, chamfering and spot facing, Which is not possible with conventional machine tool.</p> <p><b>Keywords:</b> Special purpose machine, Combine operations, Boring Bar</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Pradip Kumar, 'Analysis and Optimization of parameters affecting surface roughness in Boring process'. 2014.</li> <li>2. T. Alwarsamy, 'Theoretical cutting force prediction &amp; analysis of boring</li> <li>3. PanyaphirawatPairoj, 'An Optimization of machine parameters for modified horizontal boring tool using Taguchi method', 2014.</li> <li>4. T. Moriwaki, 'Multifunctioning machine tools', 2014.</li> <li>5. Prof. Hansini S. Rahate, 'Methodology of Special Purpose Spot Facing Machine', 2013.</li> <li>6. Sharad Srivastava, 'Multi-Function Operating Machine: A Conceptual Model', 2014.</li> <li>7. ShivaniP.Raygor, M.S.Tak, K.P.Modi, 'Selection of Combination of Tool and Work Piece Material using MADM Methods for Turning Operation on CNC Machine', 2015.</li> <li>8. B. K. Lad,M. S. Kulkarni, 'Reliability and Maintenance Based Design of Machine Tools', 2013.</li> <li>9. S.V. Kadam, M.G. Rathi, 'Review of Different Approaches to Improve Tool Life', 2014.</li> <li>10. R. Maguteeswaran, M. Dineshkumar, 'Fabrication of multi process machine', 2014.</li> </ol>		
37.	<p><b>Authors:</b></p>	<p><b>M. Raju, N. Seetharamaiah, A.M.K. Prasad</b></p>	196-199
<p><b>Paper Title:</b></p>	<p><b>Characterization of Hydro-Carbon Based Magneto-Rheological Fluid (MRF)</b></p>		
<p><b>Abstract:</b></p>	<p>Magneto-rheological fluids (or simply "MR" fluids) belong to the class of controllable fluids. The</p>		

		<p>essential characteristic of MR fluids is their ability to reversibly change from free-flowing, linear viscous liquids to semi-solids having controllable yield strength in milliseconds when exposed to a magnetic field. This feature provides simple, quiet, rapid response interfaces between electronic controls and mechanical systems. MR fluid dampers are relatively new semi-active devices that utilize MR fluids to provide controllable damping forces. The focus of this work is to synthesize and characterize the MR fluids. The first phase of the work (i.e., synthesis) involves the mixture of carrier fluid, iron particles and additives in measured quantities to form an MR fluid. This is then followed by the second phase (i.e., characterization) where the synthesized MR fluids are characterized using a suitable damper to obtain the force-velocity, pressure-velocity and variable input current behavior.</p> <p><b>Keywords:</b> Synthesis, Characterization, MR Fluids, MR Damper</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. P. Phulé (2001), Magnetorheological (MR) fluids: principles and applications, Smart Materials Bulletin 2001/2 pp. 7-10.</li> <li>2. S.T. Lim, M.S. Cho, I.B. Jang, H.J. Choi (2004), Magneto rheological characterization of carbonyl iron based suspension stabilized by fumed silica, Journal of Magnetism and Magnetic Materials, Vol. 282, pp.170-173.</li> <li>3. G. Bossis, E. Lemaire (1991), Yield stresses in magnetic suspensions, Journal of Rheology, Vol.35 pp.1345-1354.</li> <li>4. H. Pu, F. Jiang, Z. Yang, (2006), Preparation and properties of soft magnetic particles based on Fe<sub>3</sub>O<sub>4</sub> and hollow polystyrene microsphere composite, Materials Chemistry and Physics, Vol.100 pp.10-14.</li> <li>5. M. Kciuk, R. Turczyn (2006), Properties and application of magneto rheological fluids, Journal of Achievements in Materials and Manufacturing Engineering, Vol.18, pp.127-130.</li> <li>6. S.P. Rwei, H.Y. Lee, S.D. Yoo, L.Y. Wang, J.G. Lin (2005), Magnetorheological characteristics of aqueous suspensions that contain Fe<sub>3</sub>O<sub>4</sub> nanoparticles, Colloid Polymer Science, Vol.283, pp.1253-258.</li> <li>7. C. Holm, J.J. Weis (2005), The structure of ferrofluids: A status report, Current Opinion in Colloid and Interface Science, Vol.10, pp.133-140.</li> <li>8. <a href="http://www.mecheng.adelaide.edu.au/avc/publications/publi_c/2006/preprint_a06_030.pdf">http://www.mecheng.adelaide.edu.au/avc/publications/publi_c/2006/preprint_a06_030.pdf</a></li> <li>9. L.M. Jansen, S.J. Dyke (2000), Semi-active control strategies for MR dampers: comparative study, Journal of Engineering Mechanics, American Society of Civil Engineers, Vol.126, pp. 795-802.</li> <li>10. S.P. Rwei, H.Y. Lee, S.D. Yoo, L.Y. Wang, J.G. Lin (2005), Magneto rheological characteristics of aqueous suspensions that contain Fe<sub>3</sub>O<sub>4</sub> nanoparticles, Colloid Polymer Science, Vol.283, pp. 1253-1258.</li> <li>11. T. Pranoto, K. Nagaya (2005), Development on 2DOF-type and Rotary-type shock absorber damper using MRF and their efficiencies, Journal of Materials Processing Technology, Vol.161, pp.146-150.</li> <li>12. R. Turczyn, M. Kciuk (2008), Preparation and study of model magnetorheological fluids, Journal of Achievements in Materials and Manufacturing Engineering, Vol.27/2 pp.131-134.</li> <li>13. J. Huang, J.Q. Zhang, Y. Yang, Y.Q. Wei (2002), Analysis and design of a cylindrical magnetorheological fluid break, Journal of Materials Processing Technology Vol.129 pp.559-562.</li> <li>14. K. Dhirendra, V.K. Jain, V. Raghuram (2004), Parametric study of magnetic abrasive finishing process, Journal of Materials Processing Technology, Vol.149, pp. 22-29.</li> <li>15. K. Shimada, Y. Wu, Y. Matsuo, K. Yamamoto (2005), Float polishing technique using new tool consisting of micro magnetic clusters, Journal of Materials Processing Technology Vol.162-163, pp.690-695.</li> <li>16. Bica (2004), Magnetorheological suspension electromagnetic brake, Journal of Magnetism and Magnetic Materials, Vol.270, pp.321-326.</li> </ol>	
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	<b>Authors:</b>	Hazeena A J, Sumimol L	
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	<b>Paper Title:</b>	An Improved Calibration Specific Self Localization Routing Protocol in Wireless Sensor Networks	
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		<p><b>Abstract:</b> Localization problem is inevitable to maintain flawless performance of the Wireless Sensor Networks (WSN) which are typically based on accurate location of the sensor nodes. Sensor nodes are distributed randomly and there is no supporting infrastructure to manage after deployment. Various localization algorithms were implemented to empower the optimized discovery of the node with Maximum Likelihood (ML) and high degree of precision in routing protocols. Typical strategies were employed to improve the sensor location information by discarding the structural errors generated during the position estimation via calibration schemes in localization algorithms. Certain technologies are concentrated on either implementing calibration methods or optional error detection schemes by using Maximum likelihood methods. The proposed scheme uses a calibration method in self Localization algorithm with an augmented routing protocol to obtain the optimized location of the sensor nodes. This method is enhanced from the AODV Routing Protocol provided with an iterative calibration method which accurately estimates the localization information based on the likelihood calculated previously and comparing the relative location with the reference node position. After ascertaining the minimal error in relativity parameter the routing protocol updates the optimal location and then establishing normal routing with other nodes. The efficiency and throughput analysis is estimated using the network simulator version 3.24. The proposed calibration scheme is efficient for sensitive sensor platforms to improve the performance characteristics of sensor networks.</p>	
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		<p><b>Keywords:</b> WSN, Decentralized localization, RSSI, TDoA , AoA , ML, Calibration Scheme ,Node Filtering, AODV</p>	
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<b>Authors:</b>	<b>Kiran Mohan M. S, Jayasudha J. S.</b>
<b>Paper Title:</b>	<b>Prevention of Denial of Service Attacks using Multimatch Packet Classification</b>

**Abstract:** The growth of enterprise networks demands better security and quality of service. The denial of service attacks mainly focuses on the network resources or a service of a host, thereby prevent the service is being available to the normal users. This paper contains a method that effectively prevents the denial of service attack with the help of multimatch packet classification. The method uses multimatch packet classification for identifying the multiple matches and thereby determines the different flow of traffic. The packet migration is enforced to limit the flow of suspected packets and thus the attacking packet flow can be limited while the normal users unaffected. The method effectively prevents denial of service attack. The multimatch classification works at high speed by identifying and isolating the attacking flows.

**Keywords:** Routers, packet classification, multiple match, denial of service

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<b>Authors:</b>	<b>Ramitha A T, Jayasudha J S</b>
<b>Paper Title:</b>	<b>Enhanced Personalized Web Search using Pattern-based Topic Modelling</b>

**Abstract:** Personalized Web Search is a method of searching to improve the quality and accuracy of web search. It has gained much attention recently. The main goal of personalized web search is to customize search results that are more relevant and tailored to the user interests. Effective personalization needs collecting and aggregating user information that can be private or general. Personalized search results can be improved by information filtering. Information Filtering is a system to remove irrelevant or unwanted information from an information stream based on document representations which represent users’ interest. Traditional information filtering models assume that one user is only interested in a single topic. In statistical topic modelling documents and collections can be represented by word distributions. But directly applying topic models for information filtering is insufficient to distinctively represent documents with different semantic content. In order to alleviate these problems, patterns are used to represent topics for information filtering. Pattern-based representations are considered more meaningful and more accurate to represent topics than word-based representations. Pattern-based Topic Model (PBTM) combines pattern mining with statistical

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	<p>topic modelling to generate more discriminative and semantic rich topic representations. In the proposed system, user information preferences are acquired as a collection of documents from user browsing history. Latent Dirichlet Allocation is used to perform topic modelling on the collected documents. Word-topic assignments from LDA are used for constructing transactional dataset. Frequent patterns are discovered from topic models. Maximum matched Pattern-based Topic Model is used to build user interest model representing the user preference information from the collection of documents and filter the incoming documents based on the user preferences by document relevance ranking.</p> <p><b>Keywords:</b> Topic model, Information filtering, Pattern based mining, User interest model</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. H. Cheng, X. Yan, J. Han, and C.-W. Hsu, "Discriminative frequent pattern analysis for effective classification," in IEEE 23rd International Conference on Data Engineering, ICDE'2007. IEEE, 2007, pp.716–725</li> <li>2. X. Wei and W. B. Croft, "LDA-based document models for ad-hoc retrieval," in Proceedings of the 29th annual International ACM SIGIR conference on Research and Development in Information Retrieval. ACM, 2006, pp. 178–185.</li> <li>3. T. Hofmann, "Probabilistic latent semantic indexing," in Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval. ACM, 1999, pp.50–57</li> <li>4. D. M. Blei, A. Y. Ng, and M. I. Jordan, "Latent dirichlet allocation," the Journal of Machine Learning Research, vol. 3, pp. 993–1022, 2003.</li> <li>5. Y. Gao, Y. Xu, Y. Li, and B. Liu, "A two-stage approach for generating topic models," in Advances in Knowledge Discovery and Data Mining, PADKDD'13. Springer, 2013, pp. 221–232.</li> <li>6. S. Robertson, H. Zaragoza, and M. Taylor, "Simple BM25 extension to multiple weighted fields," in Proceedings of the thirteenth ACM International Conference on Information and Knowledge Management. ACM, 2004, pp. 42–49</li> <li>7. Y. Cao, J. Xu, T.-Y. Liu, H. Li, Y. Huang, and H.-W. Hon, "Adapting ranking svm to document retrieval," in Proceedings of the 29th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval. ACM, 2006, pp. 186–193</li> <li>8. X. Li and B. Liu, "Learning to classify texts using positive and unlabeled data," in IJCAI, vol. 3, 2003, pp. 587–592.</li> <li>9. J. Furnkranz, "A study using n-gram features for text categorization," Austrian Research Institute for Artificial Intelligence, vol. 3, no.1998, pp. 1–10, 1998.</li> <li>10. W. B. Cavnar, J. M. Trenkle et al., "N-gram-based text categorization," Ann Arbor MI, vol.48113, no. 2, pp. 161–175, 1994.</li> <li>11. Y. Xu, Y. Li, and G. Shaw, "Reliable representations for association rules," Data &amp; Knowledge Engineering, vol. 70, no. 6, pp. 555–575, 2011.</li> <li>12. T. Hofmann, "Probabilistic latent semantic indexing," in Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval. ACM, 1999, pp. 50–57.</li> <li>13. Y. Gao, Y. Xu, Y. Li, and B. Liu, "A two-stage approach for generating topic models," in Advances in Knowledge Discovery and Data Mining, PADKDD'13. Springer, 2013, pp. 221–232.</li> <li>14. C. Wang and D. M. Blei, "Collaborative topic modeling for recommending scientific articles," in Proceedings of the 17th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2011, pp. 448–456.</li> <li>15. L. Shou, H. Bai, K. Chen and G. Chen, "Supporting Privacy Protection in Personalized Web Search," IEEE Transaction on Knowledge and Data Engineering, Vol:26, No:2, 2014.</li> </ol>	
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41.	<p><b>Paper Title:</b> Identification of Critical Factors Affecting Construction Labor Productivity in India Using AHP</p> <p><b>Abstract:</b> Construction sector plays a leading role in economic growth for countries all around the world. Since construction is a labor intensive industry, productivity is considered a primary driving force for economic development. In India, the economy is severely challenged by the combined effects of rapid population growth and the closure policy imposed on the area since 2007. Owing to this situation, construction projects are characterized by low profit margin, time and cost overrun making labor productivity a key component of company's success and competitiveness. The main aim of this study is to identify key factors affecting labor productivity in India and to give the ranking to those factors by Analytical hierarchy process. By reviewing the literature and conducting depth interviews with experienced engineers, twenty five critical factors related to labor productivity were identified and categorized into six groups: Psychological, Human/labor, Design, Technological, Managerial and External factors. Based on the Analytical Hierarchy Process approach, a questionnaire was designed and delivered to 72 construction professionals to elicit the view on how labor productivity might be affected. A total of 35 feedbacks were analyzed and the results indicated that Shortage of material, Clarity of technical specifications, payment delay, site layout &amp; construction methods have a significant impact on construction labor productivity in India.</p> <p>DOI:</p> <p><b>Keywords:</b> keywords: Productivity; CLP; labor productivity; Identification of Critical factor; Critical factors; Construction project; Ranking of factors affecting productivity; Factor affecting productivity; Analytical Hierarchy process.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J. (1987). "Construction Productivity Improvement". Elsevier Science Publishing, Amsterdam, Netherlands</li> <li>2. Adrian, J. (1990). "Improving Construction Productivity Seminar", Minneapolis, MN. The Association of General Contractors of America.</li> <li>3. A Enshassi, S. Mohamed, Z. Abu Mustafa, P. E. Mayer, "Factors affecting labour productivity in building projects in the Gaza Strip." Journal of Constuction. Engineering and Management, vol. 13(4), pp. 245-254, 2007.</li> <li>4. M. Jarkas, "Critical investigation into the applicability of the learning curve theory to rebar fixing labor productivity," Journal of Construction Engineering and Management, vol. 136 (12), pp. 1279-1288, 2010.</li> <li>5. Abdul Kadir, M. R., Lee, W. P., Jaafar, M. S., Sapuan, S. M., and Ali, A. A. (2005). "Factors affecting construction labor productivity for Malaysian residential projects." Structure Survey, 23(1), 42-54.</li> <li>6. Alarcon, L. F Borcherdig, J. D., and. (1991). "Quantitative effects on construction productivity." The Construction Lawyer, American Bar Association, 11(1), 35-48.</li> <li>7. Al-Shahri, M., Assaf S., A., Atiyah S., and AbdulAziz, A. (2001). "The management of construction company overhead costs." International Journal of Project Management, 19, 295303.</li> <li>8. Alum, J., and Lim, E. C. (1995). "Construction productivity: Issues encountered by contractors in Singapore." International Journal of Project Management, 13(1), 51-58.</li> <li>9. Anu V. Thomas and J. Sudhakumar "Factors Influencing Construction Labour Productivity: An Indian Case Study" Journal of Construction in Developing Countries, 19(1), 53–68, 2014</li> </ol>	212-220

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**Authors:** Md Aleemuddin Ghori, Syed Abdul Sattar

**Paper Title:** Secured Packet Level Authentication Scheme for Code Update in Multihop WSN

**Abstract:** Wireless sensor network is an imminent technology and is getting Popularity quickly and a lot of attention because of their low cost solutions and capable to implement in military as well as for civilians. This technology has many applications as well as several environmental monitoring target tracking scientific exploration patient monitoring and data acquisition in hazardous environments. In Wireless Sensor Networks These tiny sensor nodes are deployed randomly in a hostile environment to collect sensor data and hence they are susceptible to outsider attacks therefore security is an important issue. Several security schemes have been proposed to provide the authenticity and integrity for network programming applications but they are either lacks the data confidentiality or they are not energy inefficient as they are based on digital signature. So still there is a need to design a security Scheme to Enhanced the existing security mechanism for providing the authenticity and integrity of program updates in existing network programming protocols.

**Keywords:** Wireless, Networks, imminent technology, program updates in existing

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	<p><b>Paper Title:</b> An Implementation of FACE Recognition System (FARS) Using PCA and PSO Based Techniques</p>	
	<p><b>Abstract:</b> Feature selection (FS) is a universal optimization problem in machine learning, which reduces the number of features, removes irrelevant, noisy and redundant data, and results in acceptable recognition accuracy. It is the most important step that affects the performance of a pattern recognition system. Feature selection aims to choose a small number of relevant features to achieve similar or even better classification performance than using all features. It has two main conflicting objectives of maximizing the classification performance and minimizing the number of features. However, most existing feature selection algorithms treat the task as a single objective problem. In this paper we present a novel feature selection system, FARS, based on combination of particle swarm optimization (PSO) and Principle Component Analysis (PCA). The proposed PSO and PCA based feature selection system is utilized to search the feature space for the optimal feature subset where features are carefully selected according to a well defined discrimination criterion. The classifier performance and the length of selected feature vector are considered for performance evaluation using MATLAB in ORL face database.</p> <p><b>Keywords:</b> Face Recognition, Feature selection, PSO, PCA, ORL Dataset</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Nagi, Syed Khaleel Ahmed and Farrukh Nagi, "A MATLAB based Face Recognition System using Image Processing and Neural Networks", 4th International Colloquium on Signal Processing and its Applications, PP. 83 – 88, March 7-9, 2008, Kuala Lumpur, Malaysia.</li> <li>Hemalatha Gayatri L, Govindan V.K, "Feature Selection Using Modified Particle Swarm Optimisation For Face Recognition", International Journal of Research in Engineering and Technology (IJRET), Volume: 04 Issue: 02, PP. 679 – 683, Feb-2015.</li> <li>R. Brunelli and T. Poggio, "Face Recognition: Features versus Templates," IEEE Trans. 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<p><b>Authors:</b> Aswathy V.S, Sandeep Chandran</p>		
<p><b>Paper Title:</b> An Execution, Scrutiny and Collation on VANETs Routing Protocols</p>		
44.	<p><b>Abstract:</b> VANETs are termed as Vehicular Ad-hoc Networks, which are considered as one of the recent advances coming under the minor group of Mobile Ad-hoc Networks (MANETS). VANETs form an extemporaneous formation of wireless networks for data exchange in the sphere of vehicles. Due to self-formulating and adaptive nature of VANETs, that causes a numerous challenges like mobility issues, connectivity problems, security and privacy, which emerge to degrade its performance. One of the main threats is the routing protocol. There are several VANETs routing protocols, this proposed paper stipulate an implementation, analysis and comparison based on AODV and OLSR routing protocols under a city environment. To simulate the VANET scenario, requires two types of simulators: mobility simulator and network simulator. Here VANET MobiSim for generating the mobility files and Ns3 for</p>	

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	<p>checking the performance of routing protocols on the mobility files created by VANET MobiSim. The performance of both protocols can be analyzed and finally compared with the help of three criterions: packet-delivery-ratio, end-to-end delay and throughput. This paper arrives at a conclusion as AODV protocol is more effective than OLSR in inter-urban city scenarios.</p> <p><b>Keywords:</b> VANETs, V2V, MANETs, AODV, OLSR, VANET MobiSim, Ns3 Simulator.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Ravneet Kaur and Haramandar Kaur, "Performance Evaluation of Routing Protocols in VANET", International Journal of Future Generation Communication and Networking, Vol. 8, No. 6 (2015), pp. 239-246.</li> <li>2. Aleksandr Huhtonen, "Comparing AODV and OLSR Routing Protocols", Seminar on Internetworking, Sjöckulla, 2004-04-26/27.</li> <li>3. Ali Khosrozadeh, Abolfazle Akbari, Maryam Bagheri and Neda Beikmahdavi, "A New Algorithm AODV Routing Protocol in Mobile ADHOC Networks", International Journal of Latest Trends in Computing, IJLTC, E-ISSN: 2045-5364.</li> <li>4. Jamal Toutouh, Jose Garcia-Nieto, and Enrique Alba, "Intelligent OLSR Routing Protocol Optimization for VANETs", IEEE Transactions On Vehicular Technology.</li> <li>5. Kunal V. Patil, M. R. Dhage, "The Enhanced Optimized Routing Protocol for Vehicular Ad hoc Network", International Journal of Advanced Research in Computer and Communication Engineering, Vol. 2, Issue 10, October 2013.</li> <li>6. Man-deep Singh, Maninder Singh, "Performance of AODV, GRP and OLSR Routing Protocols in Ad-hoc Network with Directional Antennas", International Journal of Computer Applications (0975 – 8887) Volume 83 – No2, December 2013.</li> <li>7. Jerome Haerri, Fethi Filali, Christian Bonnet, "Performance Comparison of AODV and OLSR in VANETs Urban Environments under Realistic Mobility Patterns", BMW Group Research &amp; Technology.</li> <li>8. Thakore Mitesh C, "Performance Analysis of AODV and OLSR Routing Protocol with Different Topologies", International Journal of Science and Research (IJSR), India Online ISSN: 2319-7064.</li> <li>9. Chitraxi Raj, Urvik Upadhayaya, Twinkle Makwana, Payal Mahida, "Simulation of VANET Using NS-3 and SUMO", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 4, Issue 4, April 2014, ISSN: 2277 128X.</li> <li>10. Imran Khan, Amir Qayyum, "Performance Evaluation of AODV and OLSR in Highly Fading Vehicular Ad hoc Network Environments", IEEE, 2009.</li> <li>11. Mohammed Erritali, Bouabid El Ouahidi, "Performance evaluation of ad hoc routing protocols in VANETs", IJACSA Special Issue on Selected Papers from Third International Symposium On Automatic Amazigh Processing.</li> <li>12. Shubhrant Jibhate, Smith Khare, Ashwin Kamble, Amutha Jeyakumar, "AODV and OLSR Based Routing Algorithm for Highway and City Scenarios", International Journal of Advanced Research in Computer and Communication Engineering, Vol. 4, Issue 6, June 2015.</li> <li>13. Tamilarasan Santhamurthy, "A Quantitative Study and Comparison of AODV, OLSR and TORA Routing Protocols in MANET", IJCSI International Journal of Computer Science Issues, Vol. 9, Issue 1, No 1, January 2012.</li> </ol>	
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<b>Authors:</b>	<b>Rajkumar Jain, Narendra S. Chaudhari</b>
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<b>Paper Title:</b>	<b>On Constraint Clustering to Minimize the Sum of Radii</b>
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**Abstract:** We consider the min-cost k-cover problem: For a given a set P of n points in the plane, objective is to cover the n points by k disks, such that sum of the radii of the disks is minimized. In this paper we introduce the concept of constraints for min-cost k-cover problem. In any instance I of k-cover, the optimal solution value is at most the maximum radius r of ball B(v, r) centered at v ∈ V in I. It implies that, in optimal solutions there always exists a constraint that separates the optimal solution. Investigation formulate that a can-not link constraint always separate the optimal solution very clearly and reduces cardinality of distinct maximal discs. Introduction of constraints improves the performance of min-cost k-cover algorithm over the existing algorithms.

**Keywords:** k-clustering, min-cost k-cover, minimum sum of radii cover, constraint clustering.

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