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S. No	<b>Volume-4 Issue-2, December 2014, 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>Arifuzzaman Mohammad, Keping Yu, Sato Takuro</b>		
	<b>Paper Title:</b>	<b>An Optimum Relay Sensor Placement Technique to Enhance the Connectivity of Wireless Sensor Network</b>		
	<p><b>Abstract:</b> In this paper, we have presented a novel algorithm of sensor deployment for re-establishing the connectivity of a disconnected sensor network. We also address the way of achieving k-connectivity which can provide the sensor network with some level of fault tolerance. We combine the concept of Voronoi diagram, Delaunay triangulation, Spanning tree and Steiner heuristic in order to achieve optimum solution. Our proposed algorithm can find optimum number of required relay sensors with reasonable running time complexity. The algorithm also finds the position where the relay nodes are to be place for repairing or enhancing the connectivity. The performance and complexity of our proposed algorithm are also analysed which is incorporate our simulation result.</p> <p><b>Keywords:</b> Wireless sensor network; Relay sensor; Network connectivity; Steiner heuristic; Voronoi diagram; Delaunay triangulation;</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. I. Akyildiz, W. Su, Y. Sankarasubramaniam, and E. Cayirci, "A survey on sensor networks," IEEE Commun. Mag.pp.102-114, August,2002.</li> <li>2. Arifuzzaman, Mohammad, Mitsuji Matsumoto, and Takuro Sato. "An Intelligent Hybrid MAC With Traffic-Differentiation-Based QoS for Wireless Sensor Networks." Sensors Journal, IEEE 13, no. 6 (2013): 2391-2399.</li> <li>3. Arifuzzaman, Mohammad, Mohammad Shah Alam, and Mitsuji Matsumoto. "A hybrid MAC with intelligent sleep scheduling for wireless sensor networks." In Kaleidoscope 2011: The Fully Networked Human?-Innovations for Future Networks and Services (K-2011), Proceedings of ITU, pp. 1-7. IEEE, 2011.</li> <li>4. Arifuzzaman, Mohammad, and Mitsuji Matsumoto. "An Efficient Medium Access Control Protocol with Parallel Transmission for Wireless Sensor Networks." Journal of Sensor and Actuator Networks 1, no. 2 (2012): 111-122.</li> <li>5. Arifuzzaman, Mohammad, and Mitsuji Matsumoto. "A Hybrid MAC with Dynamic Sleep Scheduling for Wireless Sensor Networks", The Journal of the Institute of Image Electronics Engineers of Japan, Vol. 42 (2013) No. 2 p. 197-205</li> <li>6. B. Rengarajan, J.K. Chen, S. Shakkottai, T. S. Rappaport, "Connectivity of Sensor Networks with Power Control," in proceeding of Conference on Signals, Systems and Computers, vol.2, pp:1691-1693, 2003.</li> <li>7. H. Koskinen, "A Simulation based Method for Predicting Connectivity in Wireless Multihop Networks," in proceeding of Telecommunication Systems, vol.26, pp: 321-338,2004.</li> <li>8. B. Hao, J. Tang and G. Xue, "Fault-tolerant relay node placement in wireless sensor networks," In proceeding of 2004 IEE Workshop on High performance Switching and Routing, 2004, pp. 246-250.</li> <li>9. H.A. Almasaeid, A.E.Kamal, "On the Minimum k-Connectivity Repair in Wireless Sensor Networks", in the proceeding of ICC, 2009.</li> <li>10. H. Koskinen, J. Karvo, O. Apilo, On improving connectivity of static ad-hoc networks by adding nodes, in: Proceedings of the 4th annual Mediterranean Workshop on Ad Hoc Networks, Med-Hoc-Net, 2005, pp. 169-178.</li> <li>11. Lee, Sookyoung, and Mohamed Younis. "Optimized relay node placement for connecting disjoint wireless sensor networks." Computer Networks 56.12 (2012): 2788-2804.</li> <li>12. Senel, Fatih, and Mohamed Younis. "Relay node placement in structurally damaged wireless sensor networks via triangular steiner tree approximation." Computer Communications 34.16 (2011): 1932-1941.</li> <li>13. Lin, Guo-Hui, and Guoliang Xue. "Steiner tree problem with minimum number of Steiner points and bounded edge-length." Information Processing Letters 69.2 (1999): 53-57.</li> <li>14. Chen, Donghui, Ding-Zhu Du, Xiao-Dong Hu, Guo-Hui Lin, Lusheng Wang, and Guoliang Xue. "Approximations for Steiner trees with minimum number of Steiner points." Journal of Global Optimization 18, no. 1 (2000): 17-33.</li> <li>15. Lloyd, Errol L., and Guoliang Xue. "Relay node placement in wireless sensor networks. " Computers, IEEE Transactions on 56.1 (2007): 134-138.</li> <li>16. Younis, Mohamed, Izzet F. Senturk, Kemal Akkaya, Sookyoung Lee, and Fatih Senel. "Topology management techniques for tolerating node failures in wireless sensor networks: A survey." Computer Networks (2013).</li> <li>17. J. Bredin, E. D. Demaine et al., "Deploying sensor networks with guaranteed capacity and fault tolerance", MobiHoc, May, 2005.</li> <li>18. X. Cheng, D.Z. Du, L. Wang, and B.Xu, "Relay Sensor Placement in Wireless Sensor Networks", IEEE Transaction on Computers, 2001.</li> <li>19. Arifuzzaman, Mohammad, Alam Mohammad Shah, Jiehuit Chen and Mitsuji Matsumoto. "Algorithm for Connecting a Disconnected Sensor Network with Deploying Additional Sensor Nodes", Proceedings of the IEICE General Conference 2011, Tokyo, Japan</li> </ol>			1-6
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<b>Paper Title:</b>	<b>A Simulated Case Study of Office Building in Pakistan to Improve the Energy Efficiency</b>			
2.	<p><b>Abstract:</b> Office buildings are one of the basic consumers of energy everywhere including Pakistan. As a case study, the present research effort focuses on estimation of energy consumption of a three-storey office building located in Islamabad Pakistan. Essential data was collected and simulated through eQuest Software. Important parameters like window size, double glazing, energy saving lighting, higher thermostat set point and efficient air-conditioning equipment, are then taken as decision variables and are simulated to study their impact on energy consumption. Cost factor in the prevailing market and the payback period including comparison with the baseline model is also presented in this research effort. Results showed that 37.7% of electrical energy used for cooling purposes can be saved by improving the above parameters.</p> <p><b>Keywords:</b> EEM, Energy Efficient, HVAC, Area Lights</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Zeng R, Wang X, Di H, Jiang F, Zhang Y, "New concepts and approach for developing energy efficient buildings: Ideal specific heat for building internal thermal mass", Energy and Buildings, 2011 vol. 4, pp. 1081-1090</li> <li>2. Tsinghua University Buildings Energy Efficiency Research Center, "Annual report on china building energy efficiency", China Architecture &amp; Building Press, Beijing, 2009</li> <li>3. Wang S.W, Xu X.H, "parameter estimation of internal thermal mass of building dynamic models using genetic algorithm", Energy</li> </ol>			7-9

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**Paper Title:** Auxetic Cellular Structures for Custom Made Orthopedic Implants using Additive Manufacturing

**Abstract:** Auxetic structures exhibit negative Poisson's ratios in one or more directions. When stretched, they will become fatter or become thinner when compressed, in contrast to conventional materials. The present work intends to provide an overview of the current state of the art in the area of auxetic cellular structures for customized orthopedic implants, using advanced AM techniques. The present work also highlights the existing limitations in addition to future prospects in fabrication via AM techniques.

**Keywords:** Auxetic cellular structures, Additive manufacturing, Solid free foam fabrication, Orthopedic implants

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4.	<table border="1"> <tr> <td data-bbox="119 414 335 459"><b>Authors:</b></td> <td data-bbox="335 414 1412 459"><b>Siamak Hamzeei, Yser Noori Shirazi, Majid Aghababee, Vahid Riazi</b></td> </tr> <tr> <td data-bbox="119 459 335 504"><b>Paper Title:</b></td> <td data-bbox="335 459 1412 504"><b>New method of Current Measurement in AC Drives to Achieve More Accuracy and Less Dissipation</b></td> </tr> </table>	<b>Authors:</b>	<b>Siamak Hamzeei, Yser Noori Shirazi, Majid Aghababee, Vahid Riazi</b>	<b>Paper Title:</b>	<b>New method of Current Measurement in AC Drives to Achieve More Accuracy and Less Dissipation</b>	
<b>Authors:</b>	<b>Siamak Hamzeei, Yser Noori Shirazi, Majid Aghababee, Vahid Riazi</b>					
<b>Paper Title:</b>	<b>New method of Current Measurement in AC Drives to Achieve More Accuracy and Less Dissipation</b>					
	<p><b>Abstract:</b> Speed and Voltage sensor-less control requires current measurement that Provides accurate control with low cost, noise and Complexity. Engine current measurement is essential to eliminate torque distortion achieving uniform torque.</p> <p>The most common method of current estimating is inserting sensing resistance in the path of unknown current. This method incurs massive power dissipation in high output current. The resistance depends on temperature changes and tolerance. Using self-tune method is preferred for eliminating bad effect of heat temperature, components tolerance and noise.</p> <p>In this paper, we solve this problem with using filter-based self-tune current measurement. But the sensed current of filter based method is low and can be cut by noise and is not accepted for current control. So we can use combined method to improve SNR.</p> <p><b>Keywords:</b> current measurement, combined sensing, filter, compensation, calibration.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J. Sun, J. Zhou, M. Xu, and F. Lee, "A novel input-side current sensing method to achieve AVP for future VRs," IEEE Transactions on Power Electronics, vol. 21, pp. 1235-1242, September 2006.</li> <li>2. B. Mammano, "Current sensing solutions for power supply designers," Unitrode Design Note, Texas Instruments, 1997. (Last visited: 7th November 2007)</li> <li>3. E. Persson and T.Takahashi, "Eliminate ripple current error from motor current measurement," Advance Development Group, International Rectifier Corp. (Last visited: 7th November 2007)</li> <li>4. H. Forghani-zadeh and G. Rincon-Mora, "A lossless, accurate, self-calibrating current-sensing technique for DC-DC converters," in 32nd Annual Conference of IEEE Industrial Electronics Society, 6-10 November 2005.</li> <li>5. H. Lei and L. Shiguo, "Design considerations of time constant mismatch problem for inductor DCR current sensing method," in 21st Annual IEEE Applied Power Electronics Conference and Exposition, 19-23 March 2006.</li> <li>6. LINFINITY Application Note AN-7: A simple-current sense technique eliminating a sense resistor. (Last visited: 7th November 2007)</li> <li>7. H. Forghani-zadeh and G. Rincon-Mora, "An Accurate, Continuous, and Lossless Self-Learning CMOS Current-Sensing Scheme for Inductor-Based DC-DC Converters," IEEE Journal of Solid-State Circuits, March 2007, vol. 42, pp. 665-679.</li> <li>8. An integrated, lossless, and accurate current- sensing system for highperformance dc-dc converters, Microsoft PowerPoint - gtac_s04.ppt (Last visited: 7th November 2007)</li> </ol>	16-20				
5.	<table border="1"> <tr> <td data-bbox="119 1310 335 1355"><b>Authors:</b></td> <td data-bbox="335 1310 1412 1355"><b>Samer F. , Jamal O. Sameer, Abdulbasit Abdullah</b></td> </tr> <tr> <td data-bbox="119 1355 335 1400"><b>Paper Title:</b></td> <td data-bbox="335 1355 1412 1400"><b>Design of Longitudinal Members To Vehicle: Enhances The Energy Absorption of Thin Walled Structure Under Dynamic Load</b></td> </tr> </table> <p><b>Abstract:</b> the present paper describes the behaviour of the thin wall rectangular tube cross- sections, subjected to dynamic compression load. We examine the reaction of the tube of various thicknesses and diameters, subjected to direct and oblique loading.</p> <p>The study investigates the behaviour of the rectangular tube, with ellipse, circular and square shape triggers, and with various weight of hollow foam. The choice of the best design of tube parameter is based on the multi criteria decision making (MCDM) method. The examined parameters are the crush force efficiency, the peak force, and the energy absorption in case of direct and oblique loading. The rectangular tube is made of mild steel A36. Under direct load, with the usage of hollow aluminium foam, we can obtain 50% improvement f energy absorption and 84.6% of CFE. The enhancement under oblique load is 15.7% and 40.4% respectively. The aim of using thinner tube and hollow aluminium foam is to keep the final design the lowest possible weight, to improve the CFE and the energy absorber capacities in order to attain higher passenger safety.</p> <p><b>Keywords:</b> dynamic compression, thin wall, energy absorption, direct and oblique loading, aluminum foam</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Abramowicz, W., &amp; Wierzbicki, T. (1988). Axial crushing of foam-filled columns. International Journal of Mechanical Sciences, 30(3), 263-271.</li> <li>2. Abramowicz, W., &amp; Wierzbicki, T. (1989). Axial crushing of multicorner sheet metal columns. Journal of Applied Mechanics, 56(1), 113-120.</li> <li>3. Aktay, L., Toksoy, A. K., &amp; Güden, M. (2006). Quasi-static axial crushing of extruded polystyrene foam-filled thin-walled aluminum tubes: experimental and numerical analysis. Materials &amp; design, 27(7), 556-565.</li> <li>4. Chen, W., &amp; Wierzbicki, T. (2001). Relative merits of single-cell, multi-cell and foam-filled thin-walled structures in energy absorption. Thin-Walled Structures,39(4), 287-306.</li> <li>5. Hanssen, A. G., Hopperstad, O. S., Langseth, M., &amp; Ilstad, H. (2002). Validation of constitutive models applicable to aluminium foams. International journal of mechanical sciences, 44(2), 359-406.</li> <li>6. Kavi, H., Toksoy, A. K., &amp; Guden, M. (2006). Predicting energy absorption in a foam-filled thin-walled aluminum tube based on experimentally determined strengthening coefficient. Materials &amp; design, 27(4), 263-269.</li> </ol>	<b>Authors:</b>	<b>Samer F. , Jamal O. Sameer, Abdulbasit Abdullah</b>	<b>Paper Title:</b>	<b>Design of Longitudinal Members To Vehicle: Enhances The Energy Absorption of Thin Walled Structure Under Dynamic Load</b>	21-33
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<b>Paper Title:</b>	<b>Design of Longitudinal Members To Vehicle: Enhances The Energy Absorption of Thin Walled Structure Under Dynamic Load</b>					

	<ol style="list-style-type: none"> <li>7. Kim, H. S. (2002). New extruded multi-cell aluminum profile for maximum crash energy absorption and weight efficiency. <i>Thin-Walled Structures</i>, 40(4), 311-327.</li> <li>8. Santosa, S., &amp; Wierzbicki, T. (1999). Effect of an ultralight metal filler on the bending collapse behavior of thin-walled prismatic columns. <i>International Journal of Mechanical Sciences</i>, 41(8), 995-1019.</li> <li>9. Seitzberger, M., Rammerstorfer, F. G., Gradinger, R., Degischer, H. P., Blaimschein, M., &amp; Walch, C. (2000). Experimental studies on the quasi-static axial crushing of steel columns filled with aluminium foam. <i>International Journal of Solids and Structures</i>, 37(30), 4125-4147.</li> <li>10. Hanssen, A. G., Langseth, M., &amp; Hopperstad, O. S. (1999). Static crushing of square aluminium extrusions with aluminium foam filler. <i>International Journal of Mechanical Sciences</i>, 41(8), 967-993.</li> <li>11. Hanssen, A. G., Hopperstad, O. 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	<table border="1"> <tr> <td data-bbox="119 1758 335 1803"><b>Authors:</b></td> <td data-bbox="335 1758 1412 1803"><b>Sagar P R, N.Muthuswamy, C.Senthil Kumar</b></td> </tr> <tr> <td data-bbox="119 1803 335 1848"><b>Paper Title:</b></td> <td data-bbox="335 1803 1412 1848"><b>Testing of ONERA Model</b></td> </tr> </table>	<b>Authors:</b>	<b>Sagar P R, N.Muthuswamy, C.Senthil Kumar</b>	<b>Paper Title:</b>	<b>Testing of ONERA Model</b>	
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<b>Paper Title:</b>	<b>Testing of ONERA Model</b>					
6.	<p><b>Abstract:</b> The aim of the project is to estimate of the aerodynamic coefficients of the ONERA M4 using section positioning mounting mechanism, six component balance and integrated data acquisition system. A wing-body-tail with and without winglets model of ONERA M4 model of suitable scale to fit in the test section of our subsonic wind tunnel is designed and fabricated with pressure ports at suitable points. The model is to be tested at various pitch angles from -10° to 30°, in steps of 10 degrees and yaw angle is varied from -30 degree to +30 degree in steps of 10 degrees. For each pitch and yaw angle the rpm is varied from 300 to 600 in steps of 60 and the variation of coefficient of pressure on the surface of the model is determined using a suitable data acquisition system. The experiment is done for all yaw angle and readings are taken for the model. The aerodynamic coefficients are calculated for the model. Aerodynamic coefficient plots are made for different rpm and pitch angle. Comparison charts are made by keeping rpm as constant in one case and pitch angle as constant in the other. Variations are</p>	34-36				

	<p>observed and are validated using theoretical results. Similar experimental procedure should be followed for all the yaw angles in case model with winglets and finally a comparative study is made on the experimental studies. The experimental observations should be compared with computational results for validation.</p> <p><b>Keywords:</b> Aerodynamic testing, subsonic flow, wind tunnel, force measurements, ONERA M4 model</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Anderson, J.D., (1985), "Introduction To Flight", 2nd Edition, Mc-Graw Hill co., New York</li> <li>Pope, A, Barlow, J.B., (1999), "Low Speed Wind Tunnel Testing", Wiley India pvt Ltd.</li> <li>Rathakrishnan E, (2007), "Instrumentation, Measurements, Experiments and Fluids", CRC Press.</li> <li>Binion, T.W., (1976), "Tests of the ONERA Calibration Models in Three Transonic Wind Tunnels", AIAA, 14th. Aerospace Science meeting.</li> <li>Galway, R.D. And Mokry, M, (1977), "Wind Tunnel Tests of ONERA Aircraft Models", National Aeronautical Establishment, Laboratory Technical Report, LTR-HA-5x5/0115 September 1977, Ottawa, Canada</li> <li>Kuhlman, J. M and Liaw, P, (1987), "Winglets on Low -Aspect-Ratio Wings", AIAA, 5th Applied Aerodynamic conference.</li> <li>Maughmer, M. D., (2001), "The Design of Winglets for Low-Speed Aircraft", AIAA, 19th Applied Aerodynamic conference.</li> <li>Ocokoljic, G., (2004), "Testing of the Calibration Model ONERA M4 in Subsonic Wind Tunnel T-35", Scientific Technical Review, Vol. No.3-4.</li> <li>Reeder M.F, Allen, W., Philips J.M, and Dimmick, R., (2007), "Wind-Tunnel Measurements of the E-8c Modelled With and Without Winglets", AIAA Paper 2007-1633.</li> </ol>					
7.	<table border="1"> <tr> <td data-bbox="335 638 526 683"><b>Authors:</b></td> <td data-bbox="526 638 1412 683"><b>B.K.Narendra, T.M.Mahadeviah</b></td> </tr> <tr> <td data-bbox="335 683 526 739"><b>Paper Title:</b></td> <td data-bbox="526 683 1412 739"><b>Flexural behavior of Reinforced Fly Ash Concrete in Comparison to Reinforced Normal Concrete beams in Terms of Cracking Load and Ultimate Load Carrying Capacity</b></td> </tr> </table> <p><b>Abstract:</b> Fly ash or pulverized fuel ash is the residue of the combustion of finely ground coal used in thermal power plants. It is removed by the dust collection system as fine particle residue from the flue gases before they are discharged into the atmosphere. Use of Fly ash in concrete will not only solve the problem of disposal, but will also reduce the consumption of cement, which is a material whose production is energy intensive. Fly ash concrete has found extensive application in mass concrete, pre-cast concrete, concrete used for pavements, structural concrete and roller compacted concrete with the added advantages of increased workability, impermeability, resistance to chemical attack and increased durability in comparison to ordinary Portland cement concrete. Hence, this paper present the investigation of comparison between the flexural behavior of reinforced Fly ash concrete beams with that of reinforced normal concrete beams and increase the confidence levels of designers and other beneficiaries in using reinforced Fly ash concrete as a structural material. The flexural behavior of reinforced Fly ash concrete beams with different cement replacement levels (20%, 35% and 50%) are compared with reinforced normal concrete beams (without containing Fly ash) under similar conditions. All the beams are reinforced as balanced sections, cured and tested at 28 days. These investigations were conducted with three grades of concrete i.e. M30, M40 and M50. The flexural behaviour of these beams is discussed in terms of its cracking load and ultimate load carrying capacity.</p> <p><b>Keywords:</b> Fly ash, cement replacement material, concrete beams, flexural behavior of reinforced Fly ash concrete, cracking load capacity and ultimate load capacity.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Bhararthkumar B. H. , Balasubramanian K. and Krishnamurthy T. S., "Flexural behaviour of RC beams containing Fly ash and slag", Structural Engineering Research Centre, Taramani, Chennai (2006).</li> <li>Indian Standards Institution, New Delhi, "Standard Specification for Fly ash" (IS 3812).</li> <li>Jain. L. K., Viswanath. C. S., Reddi. S. A., Mahesh Tandon., Lakshman. N., SudhirMisra., Nori. V. V., Raina. S. J., and Momin., "Fly ash in Cement and Concrete: What Experts Say", The Indian Concrete Journal, Vol. 77, April 2003, pp. 989-995.</li> <li>Japanese Standards Association, Tokyo, "Fly ash", JIS-A-6201, 1991.</li> <li>Joshi. R. C., "Effect of Coarse fraction of Fly ash on Concrete properties", Proceedings of the Sixth International Symposium on Fly ash Utilization, Reno. NV. USDE, Washington, DOE/METC/E2-52/, 1993, pp.77-85.</li> <li>KodeVenkata Ramesh., and SreeRamchandra Murthy D., "Flexural Response of R.C Beams made of High Volume Fly Ash Concrete", The Indian Concrete Journal, May 2005, pp. 47-52.</li> <li>Seshasayi. L. V. A., and Subbarao. K., "Behaviour of Concrete Beams with Cement Replacement by Large Volume of Fly ash", Proceedings of the Second International Symposium as Concrete Technology for Sustainable Development, February - March 2005.</li> <li>Seshasayi. L. V. A., Ramaseshu. D., and Shankaraiah. R., "Effect of Cement replacements by Fly ash and Silica fume on Compressive Strength of Concrete", Proceedings of the Seventh International Conference on Fly ash, Silica fume, Slag and Natural Pozzolan in Concrete, ACI SP-1999, July 22-27, 2001, Chennai, India, pp.581-594.</li> <li>SharadaBai H. and Jagadish R., "Fly ash -A wonder material for high performance concrete", National seminar on high performance concrete, Feb-1996, pp338-349.</li> </ol>	<b>Authors:</b>	<b>B.K.Narendra, T.M.Mahadeviah</b>	<b>Paper Title:</b>	<b>Flexural behavior of Reinforced Fly Ash Concrete in Comparison to Reinforced Normal Concrete beams in Terms of Cracking Load and Ultimate Load Carrying Capacity</b>	37-40
<b>Authors:</b>	<b>B.K.Narendra, T.M.Mahadeviah</b>					
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8.	<table border="1"> <tr> <td data-bbox="335 1736 526 1780"><b>Authors:</b></td> <td data-bbox="526 1736 1412 1780"><b>B.K.Narendra, T.M.Mahadeviah</b></td> </tr> <tr> <td data-bbox="335 1780 526 1836"><b>Paper Title:</b></td> <td data-bbox="526 1780 1412 1836"><b>Flexural behavior of Reinforced Fly Ash Concrete in Comparison to Reinforced Normal Concrete Beams in Terms of Ductility Index</b></td> </tr> </table> <p><b>Abstract:</b> Ductility is a measure of the ability of a material section, structural element or structural system to sustain inelastic deformation prior to collapse, without significant loss in resistance. The ductility index describes the inelastic deformation capacity of the structural member. The ductility index in case of flexural members like beam is generally defined in terms of deflection ductility, since it can be measured in test more easily. The ductility indices of RFAC beams with 20%, 35% and 50% CRLs are 0.86, 0.75 and 0.63 times the ductility index of RNC beam respectively. There is considerable difference in the ductility indices between the different CRLs considered and the values range between 1.68 to 2.30. The cracking behaviour observed for RFAC beams clearly shows that performance of RFAC beams is satisfactory when compared to RNC beams with respect to crack widths. In design, the theory applied for strength prediction of RNC beams is equally valid for RFAC beams. The experimental investigation clearly demonstrates that the there was no major difference in the strength, deformations and structural performances</p>	<b>Authors:</b>	<b>B.K.Narendra, T.M.Mahadeviah</b>	<b>Paper Title:</b>	<b>Flexural behavior of Reinforced Fly Ash Concrete in Comparison to Reinforced Normal Concrete Beams in Terms of Ductility Index</b>	41-44
<b>Authors:</b>	<b>B.K.Narendra, T.M.Mahadeviah</b>					
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	<p>between the RFAC beams with different CRLs and RNC beams.</p> <p><b>Keywords:</b> Fly ash, cement replacement material, concrete beams, flexural behaviour of reinforced Fly ash concrete, ductility index.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Bhararthkumar B. H. , Balasubramanian K. and Krishnamurthy T. S., “Flexural behaviour of RC beams containing Fly ash and slag”, Structural Engineering Research Centre, Taramani, Chennai (2006).</li> <li>2. Indian Standards Institution, New Delhi, “Standard Specification for Fly ash” (IS 3812).</li> <li>3. Jain. L. K., Viswanath. C. S., Reddi. S. A., Mahesh Tandon., Lakshman. N., SudhirMisra., Nori. V. V., Raina. S. J., and Momin., “Fly ash in Cement and Concrete: What Experts Say”, The Indian Concrete Journal, Vol. 77, April 2003, pp. 989-995.</li> <li>4. Japanese Standards Association, Tokyo, “Fly ash”, JIS-A-6201, 1991.</li> <li>5. Joshi. R. C., “Effect of Coarse fraction of Fly ash on Concrete properties”, Proceedings of the Sixth International Symposium on Fly ash Utilization, Reno. NV. USDE, Washington, DOE/METC/E2-52/, 1993, pp.77-85.</li> <li>6. KodeVenkata Ramesh., and SreeRamchandra Murthy D., “Flexural Response of R.C Beams made of High Volume Fly Ash Concrete”, The Indian Concrete Journal, May 2005, pp. 47-52.</li> <li>7. Seshasayi. L. V. A., and Subbarao. K., “Behaviour of Concrete Beams with Cement Replacement by Large Volume of Fly ash”, Proceedings of the Second International Symposium as Concrete Technology for Sustainable Development, February - March 2005.</li> <li>8. SharadaBai H. and Jagadish R., “Fly ash –A wonder material for high performance concrete”, National seminar on high performance concrete, Feb-1996, pp338-349.</li> </ol>					
9.	<table border="1"> <tr> <td data-bbox="124 600 335 638"><b>Authors:</b></td> <td data-bbox="335 600 1412 638"><b>B.K.Narendra, T.M.Mahadeviah</b></td> </tr> <tr> <td data-bbox="124 638 335 705"><b>Paper Title:</b></td> <td data-bbox="335 638 1412 705"><b>Flexural behavior of Reinforced Fly Ash Concrete in Comparison to Reinforced Normal Concrete Beams in Terms of Load Deflection</b></td> </tr> </table> <p><b>Abstract:</b> Fly ash is an excellent cement replacement material, either for blending during manufacturing of cement or as a separate addition at the batching plant during the manufacture of concrete at site or at ready mixed concrete facility. The 85 thermal power stations in India generate a huge quantity of Fly ash every year (140 million tonnes per year) as a by-product almost matching the annual production of cement. The dumping of Fly ash in open fields results in ecological and environmental problems. In such a situation, three factors – environmental protection, energy savings and the inherent advantages arising from the use of Fly ash demand that the construction industry examine closely the implication of the incorporation of Fly ash in concrete construction. Thus, there is worldwide interest in Fly ash utilization in concrete and this is reflected in the development currently taking place in the concrete industry. Hence, this paper present the investigation of comparison between the flexural behaviour of reinforced Fly ash concrete beams with that of reinforced normal concrete beams and increase the confidence levels of designers and other beneficiaries in using reinforced Fly ash concrete as a structural material. The flexural behaviour of reinforced Fly ash concrete beams with different cement replacement levels (20%, 35% and 50%) are compared with reinforced normal concrete beams (with out containing Fly ash) under similar conditions. These investigations were conducted with three grades of concrete i.e. M30, M40 and M50. Deflection is one of the important serviceability limit states to be satisfied in the design of concrete structures. So the flexural behaviour of these beams is discussed in terms of load deflection behavior.</p> <p><b>Keywords:</b> Fly ash, cement replacement material, concrete beams, flexural behaviour of reinforced Fly ash concrete, load deflection</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Bhararthkumar B. H. , Balasubramanian K. and Krishnamurthy T. S., “Flexural behaviour of RC beams containing Fly ash and slag”, Structural Engineering Research Centre, Taramani, Chennai (2006).</li> <li>2. Jain. L. K., Viswanath. C. S., Reddi. S. A., Mahesh Tandon., Lakshman. N., Sudhir Misra., Nori. V. V., Raina. S. J., and Momin., “Fly ash in Cement and Concrete: What Experts Say”, The Indian Concrete Journal, Vol. 77, April 2003, pp. 989-995.</li> <li>3. Joshi. R. C., “Effect of Coarse fraction of Fly ash on Concrete properties”, Proceedings of the Sixth International Symposium on Fly ash Utilization, Reno. NV. USDE, Washington, DOE/METC/E2-52/, 1993, pp.77-85.</li> <li>4. Kode Venkata Ramesh., and Sree Ramchandra Murthy D., “Flexural Response of R.C Beams made of High Volume Fly Ash Concrete”, The Indian Concrete Journal, May 2005, pp. 47-52.</li> <li>5. Seshasayi. L. V. A., and Subbarao. K., “Behaviour of Concrete Beams with Cement Replacement by Large Volume of Fly ash”, Proceedings of the Second International Symposium as Concrete Technology for Sustainable Development, February - March 2005.</li> <li>6. Seshasayi. L. V. A., Ramaseshu. D., and Shankaraiah. R., “Effect of Cement replacements by Fly ash and Silica fume on Compressive Strength of Concrete”, Proceedings of the Seventh International Conference on Fly ash, Silica fume, Slag and Natural Pozzolan in Concrete, ACI SP-1999, July 22-27, 2001, Chennai, India, pp.581-594.</li> <li>7. Sharada Bai H. and Jagadish R., “Fly ash –A wonder material for high performance concrete”, National seminar on high performance concrete, Feb-1996, pp338-349.</li> </ol>	<b>Authors:</b>	<b>B.K.Narendra, T.M.Mahadeviah</b>	<b>Paper Title:</b>	<b>Flexural behavior of Reinforced Fly Ash Concrete in Comparison to Reinforced Normal Concrete Beams in Terms of Load Deflection</b>	45-51
<b>Authors:</b>	<b>B.K.Narendra, T.M.Mahadeviah</b>					
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D., ed., <i>The ARRL Antenna Book</i>, American Radio Relay League,Newington, Connecticut, 20th edition, 2003, chapter 19.</li> </ol> </td> </tr> </table>	<b>Authors:</b>	<b>Zohair Mohammed Elhassan Hussein, Abdelrasoul jabar kizar alzubaidi</b>	<b>Paper Title:</b>	<b>Helical Feed Manipulation for Parabolic Reflector Antenna Gain Control</b>	<b>Abstract:</b> Helical antennas have long been popular in applications from VHF to microwaves requiring circular polarization, since they have the unique property of naturally providing circularly polarized radiation. One area that takes advantage of this property is satellite communications. Where more gain is required than can be provided by a helical antenna alone, a helical antenna can also be used as a feed for a parabolic dish for higher gains. The helical antenna can be an excellent feed for a dish, with the advantage of circular polarization. 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	<p>system performance has been conducted. Since the front end module has a direct impact on vehicle drag and vehicle cooling performance, it plays an important role in vehicle design. The current study investigates the effects of grill area, horn blockage, condenser, and fan capacity on engine cooling performance. A 1-dimensional CFD modeling methodology is used with different sub-systems such as coolant, engine oil circuit, intercooler, condenser and other components such as thermostats, radiators, fans and pump etc. using GT-SUITE. A pre-processing tool called COOL3D which is part of GT-SUITE is used to build the 3D underhood of vehicles using a component-by-component build approach, and therefore allowing inclusion of much more details than a usual 1D simulation model. GT-SUITE object-based code helps us to build reliable cooling systems and optimize the front end module for various operating conditions and reduces our effort on real time testing. With above considerations and methodologies we significantly improved the engine cooling performance.</p> <p><b>Keywords:</b> Automotive cooling system, Front end module, Underhood, 1D CFD simulation, GT Suite</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Biswadip; Kumar, Vinod; Kumar, S. V. Ranganath; and Arora, Gyan, "CFD Prediction to Optimize Front End Cooling Module of a Passenger Vehicle" (2006). International Refrigeration and Air Conditioning Conference. Paper 845</li> <li>2. Neelakandan K, Goutham Sagar M, Ajay Virmalwar "Investigation of Radiators Size, Orientation of Sub cooled Section and Fan Position on Twin Fan Cooling Pack by 1D Simulation" International Journal of Science and Research (IJSR) (2014).</li> <li>3. GT User manual V7.4 "Flow modelling manual" Gamma Technologies. (2013)</li> <li>4. Thomas Binner, Heinrich Reister, Ernst Peter Weidmann, Jochen Wiedemann "Aspects of Underhood Thermal Analyses"</li> <li>5. S.C. Pang, M.A. Kalam, H.H.Masjuki, I.A. Badruddin, R. Ramli and M.A. Hazrat. Underhood Geometry Modification And Transient Coolant Temperature Modeling For Robust Cooling Networks</li> <li>6. F. G. Tenkel, "Computer Simulation of Automotive Cooling Systems," SAE Paper 740087, 1974 in page no. 19.</li> <li>7. J.C. Corbel, "An Original Simulation Method for Car Engine Cooling Systems: A Modular System," SAE Paper 870713, 1987 in page no. 27</li> <li>8. J. A. Sidders and D. G. Tilley, "Optimizing Cooling System Performance Using Computer Simulation," SAE Paper 971802, 1997 in page no. 16</li> <li>9. D. Ganga Charyulu a, *, Gajendra Singh b, J.K. Sharma "Performance evaluation of a radiator in a diesel engine- case study Applied Thermal Engineering 19 (1999)</li> </ol>					
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	<p><b>Abstract:</b> In this world of constantly increasing population and depleting resources there is urge to adopt cost effective and ecofriendly structures. These papers discuss the potential of bamboo and project the possibilities of usage of bamboo in the construction field. Bamboo is an ancient solution for the present day problem. Bamboo is an appropriate substitute for the present convention building material such as steel and wood. The main characteristic of the bamboo which makes it a suitable building material is it's high tensile strength which is equivalent to mild steel at the yield point and very good weight strength ratio making it high resilient against the forces created by the earth quakes and hurricanes. Bamboo can replace 70% of steel and wood used in the construction and reduce the cost by 40%. Bamboo can be used from scaffolding to every stage of construction like in footings, beams, columns, slabs, stair cases, doors, windows etc. Bamboo is the renewable resource with amazing growth rate, rejuvenates the soil and grows in varied climatic conditions. Bamboo absorbs carbon dioxide and releases 35% more oxygen into the atmosphere than other hardwood trees. There are few building codes also available for the usage of bamboo in the construction such as ISO 22156: 2004 Bamboo structural design, ISO 22157: 2004 Bamboo physical and mechanical properties, IS 9096: 1979 Code of practice for preservation of bamboo for structural purposes. Thus bamboo is environmental friendly, energy efficient and cost effective material.</p> <p><b>Keywords:</b> Bamboo, ISO 22156:2004, ISO 22157: 2004, IS 9096: 1979</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Farrelly, David (1984). The Book of Bamboo. Sierra Club Books. ISBN 087156825X</li> <li>2. "Alteration On Physical And Mechanical Properties of Bambusa vulgaris From Sabah Forest Through Heat Treatment Process," University Malaysia Sabah &amp; Forest Research Institute Malaysia</li> <li>3. Gratani, Loretta; Maria Fiore Crescente, Laura Varone, Giuseppe Fabrini, and Eleonora Digiulio (2008). "Growth pattern and photosynthetic activity of different bamboo species growing in the Botanical Garden of Rome". Flora 203: 77–84.</li> <li>4. Michelle Nijhuis (June 2009). "Bamboo Boom: Is This Material for You?". Scientific American Earth 3.0 special. Scientific American. Retrieved 11 August 2009.</li> <li>5. "Bamboo Construction". CD3WD. Retrieved 11 August 2009</li> <li>6. CASSANDRA ADAMS. "Bamboo Architecture and Construction with Oscar Hidalgo". Natural Building Colloquium. Retrieved 11 August 2009.</li> </ol>	78-82				
17.	<table border="1"> <tr> <td data-bbox="119 1758 335 1803"><b>Authors:</b></td> <td data-bbox="335 1758 1412 1803"><b>B.M.S. Rani, A. Jhansi Rani, T. Ravi, M. Divya Sree</b></td> </tr> <tr> <td data-bbox="119 1803 335 1848"><b>Paper Title:</b></td> <td data-bbox="335 1803 1412 1848"><b>Basic Fundamental Recognition of Voiced Unvoiced and Silence Region of A Speech</b></td> </tr> </table> <p><b>Abstract:</b> Speech which is a natural and very easy way of exchanging the information if used as a medium to interact with the computer and can solve all these problems. Speech recognition technology has made it possible for computers to follow human voice commands and understand human languages. The main goal of speech recognition area is to develop techniques and systems for speech as input to machine.Objective is (a) Load, display and manipulation of speech signals.(b) Study and understand the time and frequency domain characteristics of voiced speech.(c) Classification of the voiced/unvoiced/silence features of speech signals in both time domain and frequency domain.(d)auto-correlation sequence of voiced,unvoiced,silence features of thespeech signals.</p> <p><b>Keywords:</b> voiced,un voiced,silence,time domain,frequency domain,auto correlation.</p>	<b>Authors:</b>	<b>B.M.S. Rani, A. Jhansi Rani, T. Ravi, M. Divya Sree</b>	<b>Paper Title:</b>	<b>Basic Fundamental Recognition of Voiced Unvoiced and Silence Region of A Speech</b>	83-86
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18.	<b>Authors:</b> <b>Deshmukh P. S, More A. B, Chavan S. A</b> <b>Paper Title:</b> <b>Supply Chain Management in Residential Construction Sector</b>	<b>Abstract:</b> Supply chain management (SCM) is a concept which originated from manufacturing industry to control logistics. SCM is a management process by which organization control the worldwide network of stockholder such as supplier retailer and distributor through which raw material are procure, manufacture final product and delivered to customers. In construction process, procurement activities occur during all stage of a project. Construction process is fragmented so supplier of resources like man, material, money and machine are not available at right time and right quantity. It is difficult to control all the activity, so SCM process is more essential to control over all the activity on the construction process. In this paper introduce the concept of supply chain management in construction sector. Also explain the problem to adopt the supply chain management process in the residential construction projects and describe the benefits in effective implementation of SCM. Finally explain simple model of SC in residential project.  <b>Keywords:</b> Residential construction firm, Supply chain management, social housing  <b>References:</b> <ol style="list-style-type: none"> <li>1. Albaloushi, H and Skitmore M (2008), "Supply Chain Management in the UAE Construction Industry", Intl J of Construction Mangement, Vol. 8, No. 1, pp. 53-71.</li> <li>2. Ganeshan, R, and Harrison Terry P., "An Introduction to Supply Chain Management," Department of Management Sciences and Information Systems, 1995.</li> <li>3. Handfield R. B. and Nichols E. L., "Introduction to Supply Chain Management", Prentice-Hall, New Jersey, 1999, pp. 1-183.</li> <li>4. Lee Hau L., and Corey Billington, "The Evolution of Supply- Chain-Management Models and Practice at Hewlett- Packard. Interfaces", 25 pp. 42-63: 5 September- October, 1995.</li> <li>5. McCaffer, R. and Root, D. (2000) "Supply Chain Management in Construction". A Special Presentation at the Hong Kong Institute of Engineers Meeting, Hong Kong, October 2000.</li> <li>6. O' Brien W J (1995), "Coordination, Costing and Control in Construction", Construction Supply Chain Management, pp. 1-7, Berkeley, University of California.</li> <li>7. Walker, T. William and Alber, Karen L. (1999) Understanding Supply Chain Management, APICS online Edition, Vol. 99 No <a href="http://www.apics.org/magazines/jan99/walker.htm">http://www.apics.org/magazines/jan99/walker.htm</a>, May 5, 2000.</li> </ol>	87-90
19.	<b>Authors:</b> <b>Islam M. Ezz El-Arab</b> <b>Paper Title:</b> <b>Seismic Analysis of RC Silos Dynamic Discharge Phenomena</b>	<b>Abstract:</b> This paper presents the characteristics of the flow pattern and wall pressures observed during filling and emptying of cylindrical silo during gravity discharge. The paper presents recent and current researches on these phenomena. The dynamic discharge phenomenon is influenced by various factors related to the type of flow pattern developed in the silos and the flow properties of the bulk material of particular, and the velocity at critical sections in the silo during discharge. Moreover, In order to ensure the accuracy for modified finite element model that is presented in paper; it is verified with other's experimental results. Under different three types of earthquake ground excitations; Al-Aqba, 1995, Northridge, 1994, and El-Centro, 1940; the paper is dissected the silo discharge phenomenon; which has a stress peak during the dynamic discharge of the silo. Caused by that fact, the modeling of silo should be taken this phenomena effect in the simulation. Especially, this phenomenon has great effect on the silo mass distribution which reflects on the flow of granular material during filling and discharge. In order to ensure the presented finite element results; it is investigated for a real case study, Silo of Royal El-Menia Factory in Upper Egypt to be checked a model results with ACI 313-97 provision results to evaluate and comment on results.  <b>Keywords:</b> Silo, Seismic analysis, Dynamic discharge phenomena  <b>References:</b> <ol style="list-style-type: none"> <li>1. Janssen HA (1895). Versuche über den Getreidedruck in Silozellen, VDI Zeitschrift 35, pp. 1045-1049.</li> <li>2. Guenter A, Rombach, Frank N (2004). "3-D Finite Element Modeling of Granular Flow in Silos 17 th ASCE Engineering Mechanics Conference. June 13-16,2004, University of Delaaware, Newark,DE.</li> <li>3. E-DIN 1055-6: 2000-09 (2000), Einwirkungen auf Tragwerke: Einwirkungen aus Silos und Flüssigkeitsbehälter, NormenausschussBauwesen im DIN Deutsches Institut für Normung e.V., Berlin, Germany.</li> <li>4. Euro Code 1 Part 4 (ENV 1991-4:1996) (1996). Basis of design and actions on structures, Part 4.Action on silos and tanks.</li> <li>5. Thorsten WR, Keiter, Guenter A, Rombach (2002). Accurate handling of pressure peaks in FE-simulations of granular media, EM 2002, New York, 2-5, June, 2002.</li> <li>6. ACI 313-97 (1997). Standard Practice for Design and Construction of Concrete Silos and Stacking Tubes for Storing Granular Materials, Reported by ACI Committee 313, America.</li> <li>7. ANSYS 10.0. (2007). ANSYS User's Manual. Ver. 10.0. Houston: Swanson Analysis Systems, Inc. Houston (USA).</li> <li>8. Gallego E, Goodey RJ, Ayuga F, Brown CJ (2004). Some practical features in modelling silos with finite elements. ASAE Paper No.</li> </ol>	91-99

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20.	<table border="1"> <tr> <td data-bbox="119 293 335 338"><b>Authors:</b></td> <td data-bbox="335 293 1412 338"><b>Saad Asghar Moeeni, J. Lordwin Girish Kumar</b></td> </tr> <tr> <td data-bbox="119 338 335 383"><b>Paper Title:</b></td> <td data-bbox="335 338 1412 383"><b>Waste Water Quality Analysis and Design of Waste Stabilization Pond of Shiats</b></td> </tr> </table> <p><b>Abstract:</b> The purpose of this study was to access the waste water quality of SHIATS and to provide suitable treatment option in the form of waste-stabilization ponds. Two sites were selected for waste water quality analysis. Assessment was carried from March to June. The analysis were done at laboratory using standard Method. Parameter selected for the assessment were pH, turbidity, Electrical conductivity, Dissolved oxygen and Biological oxygen demand (BOD) at all the sampling sites all the parameter were at the pollutants exceeding the pollution limits. The value of pH, Turbidity, EC, DO and BOD ranges from 6.05 to 6.85, 6.55 NTU to 13.00 NTU, 0.008 to 2.00, 12mg/l to 22mg/l, 6.00 to 9.00 mg/l and total area required for waste stabilization ponds were 799.4 m2.</p> <p><b>Keywords:</b> Parameter, pH, Turbidity, Electrical Conductivity, Dissolve oxygen, Biological oxygen demand, waste stabilization pond.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Allen and H.E. (1993). The significance of trace metal speciation for water, sediment and soil quality criteria and standards. Proceeding of the Second European Conference on the Ecotoxicology. Ecotoxicology. Sloof, W.; de-Kruijff, H. 1-2, 23-46.</li> <li>Bichi, M.H. and Anyata. (1999). “Industrial Waste Pollution in the Kano River Basin”, Environmental Management and Health , 10(2), pp. 112-116”.</li> <li>Ezeronye O,U., and Ubalua A,O., (2005). Studies on the effect of abattior and industrial effluents on the heavy metals and microbial quality of Aba river in Nigeria. African Journal of Biotechnology Vol. 4 (3), pp. 266-272.</li> <li>Howitt J, A., Baldwin D, S., Rees G, N., and Williams J, L., (2006). Modelling blackwater: Predicting water quality during flooding of lowland river forests.</li> <li>Miyamoto, S., Cruz and I. (1986). Spatial variability and soil sampling for salinity and sodicity appraisal in surfaceirrigated orchards. Soil Sci. Soc. Am. J. 50.</li> <li>Nawaz S, Ali S, M and Yasmin A. (2006). Effect of industrial effluents on seed germination and early growth of Cicer arietum. J. Biosci., 6: 49-54.</li> </ol>	<b>Authors:</b>	<b>Saad Asghar Moeeni, J. Lordwin Girish Kumar</b>	<b>Paper Title:</b>	<b>Waste Water Quality Analysis and Design of Waste Stabilization Pond of Shiats</b>	100-103
<b>Authors:</b>	<b>Saad Asghar Moeeni, J. Lordwin Girish Kumar</b>					
<b>Paper Title:</b>	<b>Waste Water Quality Analysis and Design of Waste Stabilization Pond of Shiats</b>					
21.	<table border="1"> <tr> <td data-bbox="119 1048 335 1093"><b>Authors:</b></td> <td data-bbox="335 1048 1412 1093"><b>Sandip Bobade, Rajeshawari Goudar</b></td> </tr> <tr> <td data-bbox="119 1093 335 1137"><b>Paper Title:</b></td> <td data-bbox="335 1093 1412 1137"><b>Secure Data Communication using Protocol Steganography in IPv6</b></td> </tr> </table> <p><b>Abstract:</b> In secure data communication Network Security is important. Basically in cryptography Encryption is used for data security. Still attacker can attract towards encrypted data due to different form of data.so this limitation could overcome by using steganography. Steganography is the technique of information hiding. In steganography different carriers can be used for information hiding like image, audio, video, network protocols. Network steganography is a new approach for data hiding. In network steganography network layer protocol of TCP/IP suite are used for data hiding. In Network layer covert channels are used for data hiding. Covert channels violate security policies of the system. Covert channels are either used for steal the information or communicate secrete information overt a network. Covert channel in TCP, IPv4 are previously implemented and studied. IPv6 is a new generation protocol which slowly replaces IPv4 in future because IPv4 is rapidly running out. So there is need to examine security issues related IPv6 protocol. Covert channels are present in IPv6 protocol. 20 bit Flow label field of IPv6 protocol can be used as covert channel. RSA algorithm is used for data Encryption.Chaotic method used for data encoding. Secret data communication is possible in IPv6.</p> <p><b>Keywords:</b> Covert channel, Steganography, TCP/IP ,Network Security, Chaos Theory.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>M. Owens, “A Discussion of Covert Channels and Steganography” SANS (SysAdmin, Audit, Network, Security) Institute, 2002.</li> <li>Norka B. Lucena, Grzegorz Lewandowski, and Steve J. Chapin “Covert Channels in IPv6” Syracuse University, Syracuse NY 13244, USA 147–166, 2006. _c Springer-Verlag Berlin Heidelberg 2006.</li> <li>Szczypiorski K., Steganography in TCP/IP Networks.State of the Artand a Proposal of a New System – HICCUPS, In Institute of Telecommunications’ seminar, Warsaw University of Technology,Poland,November,2003 URL:<a href="http://krzysiek.tele.pw.edu.pl/pdf/steg-seminar 2003.pdf">http://krzysiek.tele.pw.edu.pl/pdf/steg-seminar 2003.pdf</a></li> <li>T. Sohn, J. S. , and J. Moon, “A study on covert channel detection of TCP/IP header using support vector machine,” in Proc. 5th Int. Conf. Information and Communication Security (ICICS 2003),Oct. 2003,pp.313–324.</li> <li>Sellke, S.H., Wang, C., Bagchi, S., Shroff, N.B.: TCP/IP Timing Channels: Theory to Implementation, pp. 2204–2212 (2009),</li> <li>W. Mazurczyk, M. Smolarczyk, K. Szczypiorski, Retransmission steganography and its detection, Soft Computing, ISSN: 1432-7643 (print version), ISSN: 1433-7479 (electronic version), Journal no. 500 Springer, November 2009</li> <li>Mazurczyk ,W., Szczypiorski, K., Steganography of VoIP Streams, In: R. Meersman and Z. Tari (Eds.): OTM 2008, Part II – Lecture Notes in Computer Science (LNCS) 5332, Springer-Verlag</li> <li>Kundur, D., Ahsan, K.: Practical internet steganography: Data hiding in IP. In: Proc. TexasWorkshop on Security of Information Systems (College Station, Texas) (April 2003)</li> <li>Gianvecchio, S., Wang, H.: Detecting covert timing channels: an entropy-based approach.In: CCS 2007: Proceedings of the 14th ACM conference on Computer and communicationssecurity, pp. 307–316. ACM, New York (2007)</li> <li>Servetto, S.D., Vetterli, M.: Communication Using Phantoms: Covert Channels in theInternet. In: Proc. IEEE International Symposium on Information Theory, p. 229 (2001)</li> <li>B. W. Lampson, "A Note on the Confinement. Volume 16 Issue 10, Oct. 1973 ACM New York, NY, USA</li> <li>Steven I. Murdoch and Stephen Lewis, "Embedding Cover Channelsinto TCP/IP". Information Hiding Workshop 2005 proceedings on,</li> </ol>	<b>Authors:</b>	<b>Sandip Bobade, Rajeshawari Goudar</b>	<b>Paper Title:</b>	<b>Secure Data Communication using Protocol Steganography in IPv6</b>	104-109
<b>Authors:</b>	<b>Sandip Bobade, Rajeshawari Goudar</b>					
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22.	<b>Authors:</b>	<b>Pushpa B. S, Vasant Vaze, P. T. Nimbalkar</b>		110-114
	<b>Paper Title:</b>	<b>Performance Evaluation of Cooling Tower in Thermal Power Plant - A Case Study of RTPS, Karnataka</b>		
	<p><b>Abstract:</b> An evaporative cooling tower is a heat exchanger where transformation of heat takes place from circulating water to the atmosphere. The warm water from the condenser is taken as an inlet water to the cooling tower and it is allowed to flow through the nozzles. As it falls down across baffles or louvers, the water is broken into small droplets. Simultaneously air is drawn in through the air inlet louvers provided at the base of the tower and then this air travels upward through the tower in the opposite direction of water flow. In this process a small portion of water gets evaporated which removes the heat from the remaining water causing it to cool down. This water is collected in a basin and is reused in the cooling water system process. Because of evaporation, some quantity of water is lost and thus to make up the loss, the fresh water is constantly added to the cooling water basin. In a Natural Draft Cooling Tower, warm water is cooled by evaporation process. Here, water gets cooled when a boundary layer is formed between saturated water and saturated air. If the mass flow rate is ideal, then the performance of cooling tower as well as the power plant will be improved. In this study, it is showed that by minimizing the size of water droplet, the performance of Natural Draft Cooling Tower can be enhanced. Study of Sensitivity Analysis is done which shows the dependency of parameters like air temperature, water temperature, relative humidity and rate of heat loss. Further, efficiency is also checked by using power generation data.</p> <p><b>Keywords:</b> Cooling Tower, Rate of Heat loss, Sensitivity Analysis, Efficiency.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. A Text book of 'Power Plant Engineering' by Domkumb War.</li> <li>2. A Text book of 'State of Art' by Parkar and Crankel.</li> <li>3. A Technical Report by Karnataka Power Corporation Ltd., Raichur Thermal Power Station in KARNATAKA.</li> <li>4. A Technical Report by Costal Power Services, PUNE – "Analysis of Meteorological data to determine daily and annual cycle of Rate of heat loss and predict precise heat loss achieved in the pre-cooling channel at Trombay Thermal Power Station for Tata Power"</li> <li>5. Bureau of Energy Efficiency, Ministry of Power, India. Cooling Towers. In: Energy</li> <li>6. Efficiency in Electrical Utilities. Chapter 7</li> <li>7. Perry's Chemical Engineers Handbook.</li> <li>8. Ramarao, R.A. Paltech Cooling Towers and Equipment Ltd. Design of Fills.</li> <li>9. Research Paper on " Impact of Cooling water temperature on plant performance" – By Magose Abraham Eju (2013), Cooling technology Institute.</li> <li>10. Research paper on " Mathematical and Experimental modeling of a Rain Zone" – By Lukas Dvorak and Pavol Vitkovic Czech Tech University in Pargue (2013), Cooling technology Institute.</li> <li>11. Research paper on " Enhancing tower performance using Non- uniform water distribution" – By Adriaan J. de Villere, Peter B. Bosma, Knight Piesold Energy (1996), Cooling technology Institute.</li> <li>12. Shivaraman, T. Shiriram Towertech Ltd. Selection and Design of Cooling Towers.</li> <li>13. "Technical Specifications of Cooling Tower ", Raichur Thermal Power Station, Karnataka Power Corporation Ltd., Bangalore, Karnataka</li> </ol>			

23.	<b>Authors:</b>	<b>Gurpreet Batra, Alpna Vijay Rajoriya</b>		115-117
	<b>Paper Title:</b>	<b>An Enhancement of Association Rule Mining Algorithm</b>		
	<p><b>Abstract:</b> One of the well-researched and most important techniques of mining data is Association Rule Mining. Association Rules as the name itself indicates includes finding correlations among sets of items in transaction database. Most famous algorithm of association rule mining is Apriori is used for knowledge discovery. The proposed work is based on finding association rules considering the multidimensionality of the attributes and reducing the computation time that will increase the efficiency. Proposed work will improve the existing Apriori algorithm and will reduce some of the drawbacks of the existing algorithm.</p> <p><b>Keywords:</b> Association rules, confidence, support count, Apriori Algorithm</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. AL-Zawaidah, Farah Hanna, Yosef Hasan Jbara, and A. L. Marwan. "An Improved Algorithm for Mining Association Rules in Large Databases." World of Computer Science and Information Technology 1.7 (2011): 311-316.</li> <li>2. Yang, Jun, et al. "An Improved Apriori Algorithm Based on Features." Computational Intelligence and Security (CIS), 2013 9th</li> </ol>			

	<p>International Conference on. IEEE, 2013.</p> <p>3. Al-Maolegi, Mohammed, and Bassam Arkok. "An Improved Apriori Algorithm for Association Rules." International Journal on Natural Language Computing (IJNLC), 3.1 (2014).</p> <p>4. Yadav Chanchal, Shuliang Wang, and Manoj Kumar. "Amity University Noida, UP, India." Computing, Communications and Networking Technologies (ICCCNT), 2013 Fourth International Conference on. IEEE, 2013.</p> <p>5. Moharana, U. C., and S. P. Sarmah. "Determination of optimal kit for spare parts using association rule mining." International Journal of System Assurance Engineering and Management Springer, Sweden (2014): 1-10.</p> <p>6. Lee, Dong Gyu, et al. "Discovering medical knowledge using association rule mining in young adults with acute myocardial infarction." Journal of medical systems 37.2 (2013): 1-10.</p>					
24.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Mutahir Ahmed, Rafi Ullah Khan, Saeed Badshah, Sakhi Jan</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Finite Element Investigation of Geometry Effect on Pressure Vessel under Combined Structural and Thermal Loads</b></td> </tr> </table> <p><b>Abstract:</b> Pressure vessels are commonly used for large industrial and commercial applications such as storage, filtration and softening purposes. Pressure vessels usually bear pressure and thermal loadings namely thermo-mechanical loadings and experiences expansion loads due to change in temperature. In this study, design and analysis are performed using commercial code to compare the stresses between different geometries. Structural design of pressure vessel is also optimized to accommodate thermal as well structural loads. Von-mises stress, hoop stress and deformation are plotted for all case studies.</p> <p><b>Keywords:</b> Stress distribution, stress concentration, Geometric non-linearity, pressure vessels.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>ASME boiler and pressure vessel code section VIII, division 2, 2001</li> <li>Shyam Gupta, " Optimize nozzle location for minimization of stress in pressure vessel", IJRST- International Journal for Innovative Research in Science and Technology, Vol. 1, Issue 1, June 2014, ISSN(online)L:2349-6010</li> <li>Avinash Kharat, V.V.Kulkarni, "Stress concentration at openings in Pressure Vessels-A Review", International Journal of innovative research in science, engineering and technology. vol. 2, issue 3, March 2013.</li> <li>A. Th. Diamantoudis, Th. Keramnidis, Design by analysis versus design by formula of high strength steel pressure vessels: a comparative study, International Journal of Pressure Vessels and Piping 82 (2005) 43-50.</li> <li>You-Hong Liua.*, Bing-Sheng Zhangb, Ming-De Xuec, You-Quan Liu, Limit pressure and design criterion of cylindrical pressure vessels with nozzles, International Journal of Pressure Vessels and Piping 81 (2004) 619-624.</li> <li>T. Aseer Brabin a, T. Christopher b, B. Nageswara Rao, Finite element analysis of cylindrical pressure vessels having a misalignment in a circumferential joint, International Journal of Pressure Vessels and Piping 87 (2010) 197-201</li> <li>V.N. Skopinsky and A.B. Smetankin, "Modeling and Stress analysis of nozzle connections in ellipsoidal heads of pressure vessels under external loading", Int. J. of Applied Mechanics and Engineering, 2006, vol.11, No.4, PP-965-979.</li> <li>J. Btachut, K. Magnucki, "Strength, stability, &amp; Optimization of pressure vessel: Review of selected problem", Applied Mechanical Reviews, November 2008, Vol. 61.</li> <li>NASA SP-8083, "Discontinuity stresses in metallic pressure vessels"</li> <li>DENNIS MOSS, "Pressure vessel design manual"</li> <li>Holman, J.P., Heat Transfer, McGraw-Hill, London.</li> <li>Basavraj R. Birajdar, Srinath E. Gudur, "Computation of thermo-mechanical stresses in pressure vessel using ANSYS", International Journal of advance research in science and engineering, IJARSE, Vol. No. 2, Issue No. 8, August 2013</li> <li>Mohammad Z. Kabir, "Finite element analysis of composite pressure vessels with a load sharing metallic liner", ELSEVIER Composite Structures 49 (2000) 247±255</li> <li>Javad Marzbanrad" Finite element analysis of composite high-pressure hydrogen storage vessels" J. Mater. Environ. Sci. 4 (1) (2013) 63-74 ISSN: 2028-2508 CODEN: JMESC�</li> <li>M. Javed Hyder, M. Asif, "Optimization of location &amp; size of opening in pressure vessel cylinder using ANSYS", Engineering Failure Analysis 15, 2008, pp 1-19.</li> <li>M. Quider, "SCF analysis of a pressurized vessel-nozzle intersection with wall thinning damage", International Journal of Pressure Vessels and Piping, 2009, Vol.86, PP 541-549.</li> </ol>	<b>Authors:</b>	<b>Mutahir Ahmed, Rafi Ullah Khan, Saeed Badshah, Sakhi Jan</b>	<b>Paper Title:</b>	<b>Finite Element Investigation of Geometry Effect on Pressure Vessel under Combined Structural and Thermal Loads</b>	118-124
<b>Authors:</b>	<b>Mutahir Ahmed, Rafi Ullah Khan, Saeed Badshah, Sakhi Jan</b>					
<b>Paper Title:</b>	<b>Finite Element Investigation of Geometry Effect on Pressure Vessel under Combined Structural and Thermal Loads</b>					
25.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Zine-Eddine Meguetta, Blaise Conrard, Mireille Bayart</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Multi-Criteria Design Optimization of Control System Instrumentation using Principal Component Analysis (PCA) and Structural Modeling Approaches</b></td> </tr> </table> <p><b>Abstract:</b> this article presents general approach of multi-criteria design of the control system instrumentation. The work reported here aims at defining that principal component analysis PCA can be used as method of design phase for non-linear system based on data measurements from the sensors and the available actuators for dynamical control system. The PCA consists to select inputs variables for quantifying the speed <math>vt+\delta t</math> using structural modeling, despite the environmental disturbance is the slope of the road and uncertainties in measurements from the sensors and actuators implemented in the control system instrumentation in design phase.</p> <p><b>Keywords:</b> Multi criteria design, principal component analysis, structural modeling, optimization.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Z-E.Megatta and B.Conrard, M.Bayart. Instrumentation for electrical vehicle model on road slope using structural analysis, 20th Mediterranean conference on control and automation (MED), Barcelona, Spain, July 3-6, 2012.</li> <li>B. Conrard, V. Cocquempot and S. Mili. Fault Tolerant System Design in Multiple Operating Modes using a Structural Model, Conférence ESREL European Safety and Reliability Conference, Troyes, France, 18-22 September 2011.</li> <li>Zine-eddine Meguetta, Blaise conrard and Mireille bayart. Robust Design of a Control System Instrumentation using Structural Analysis and ANFIS Neuro-Fuzzy Logic Approaches, Journal of Consumer Electronics Times CET: Automobile Electronics World Academic Publishing, vol.3 ISS.4, PP.242-255, 09 august 2014.</li> <li>Zine-eddine Meguetta, Blaise Conrard and Mireille Bayart. Design of control system instrumentation based on structural modeling with criteria of quality of control (QoC) and cost, IJISSET International Journal of Innovative Science Engineering and Technology: www.ijisett.com, Vol.1 Issue9: ISSN2348-7968, November 2014.</li> <li>Z-E Megeutta and B.Conrard, M.Bayart. Design of control architecture based search algorithm for fault-tolerant control system. 2nd International Conference on Control and Fault-Tolerant Systems, Nice, France, October 9-11, 2013.</li> <li>D. Dustegor, E. Frisk, V. Cocquempot, M. Krysander and M. Staroswieki. Structural Analysis of Fault Isolability in the DAMADICS Benchmark, In: Control Engineering Practice, Vol.14, issue 6, pp. 597-608, 2006.</li> </ol>	<b>Authors:</b>	<b>Zine-Eddine Meguetta, Blaise Conrard, Mireille Bayart</b>	<b>Paper Title:</b>	<b>Multi-Criteria Design Optimization of Control System Instrumentation using Principal Component Analysis (PCA) and Structural Modeling Approaches</b>	125-132
<b>Authors:</b>	<b>Zine-Eddine Meguetta, Blaise Conrard, Mireille Bayart</b>					
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	<p>7. J.Gertler and T.McAvoy. Principal component analysis and parity relations a strong duality. In Proc.3 rd IFAC Symposium IFAC Symposium on Fault Detection, Supervision and Safety for Technical Process (SAFEPROCESS), volume 2, page 837, Hull, GB, 1997.</p> <p>8. I.Jolliffe. Principle component analysis. Springer-Verlag, New York, 1998.</p> <p>9. R.Dunia and S.Qin. Joint diagnosis of process and sensor faults using pca. In:Control Engineering Practice -CEP, issue 6, 6:457-469, 1998.</p> <p>10. J.MacGregor and F.Kourtii. Statistical process control of multivariate processes. Control Engineering Practice-CEP,(3):403-414, 1995.</p>							
26.	<table border="1"> <tr> <td data-bbox="119 197 335 241"><b>Authors:</b></td> <td data-bbox="335 197 1412 241"><b>S. R. Navale, Upasni Supriya, V. M. Harpale, K. C. Mohite</b></td> </tr> <tr> <td data-bbox="119 241 335 286"><b>Paper Title:</b></td> <td data-bbox="335 241 1412 286"><b>Effect of Solar Drying on the Nutritive Value of Fenugreek Leaves</b></td> </tr> <tr> <td colspan="2" data-bbox="119 286 1412 1384"> <p><b>Abstract:</b> A cabinet solar dryer with varying width of chimney has been designed and fabricated. In this work an attempt has been made to evaluate the performance of cabinet solar dryer (CSD) and open sun drying (OSD) to dry the fenugreek leaves. Result obtained showed that drying time for cabinet solar drying was found 43% less than that of open sun drying. After drying, samples were powdered and nutritive tests were carried out at national agricultural and Food research institute (NAFARI) .The results showed significant increase in the nutrients studied of the dried samples except for vitamin C. The quantitative retention of nutrients like, energy, carbohydrates, calcium and sodium was found 4%, 2.5%, 66.47%, and 181.66% more in sample dried in cabinet solar dryer as compared to open sun.</p> <p><b>Keywords:</b> Cabinet solar dryer, open sun drying, fenugreek, Nutrients</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Bukola, O. Bolaji, Tajudeen, M.A. Olayanju and Taiwo, O. Falade. (2011) Performance evolution of a solar wind ventilated cabinet dryer. West Indian journal of engineering, Vol. 33, pp.12-18.</li> <li>2. Hussain, M.Y.and Islam ud-din, A.M. (2008) Dehydration of agriculture products by mixed mode solar dehydrator. International journal of agriculture and biology Vol.10, pp.333-336</li> <li>3. Bolaji, B.O. (2005). Performance evaluation of box type absorber solar air collector for crop drying. Journal of food technology. Vol. 3, pp. 595-600.</li> <li>4. James stiling and Pieter stroeve. (2012) Performance evaluation of an enhanced fruit solar dryer using concentrating panels. Energy for sustainable development. Vol.16, pp. 224-230.</li> <li>5. Bolaji, B.O. (2008). Analysis of moisture transport in the solar drying of food items. Pacific journal of science and technology, Vol. 9, pp. 640-646</li> <li>6. Babagana gutti, Silas kiman and Ahmed, M. (2012) Solar dryer an effective tool for agricultural products preservation. Journal of applied technology in environmental sanitation. Vol. 2, pp. 31-38.</li> <li>7. Erteken, C., Yaldiz, O. (2004) Drying of eggplant and selection of suitable thin layer drying model. Journal of food engineering. Vol.63, pp. 349-359.</li> <li>8. Umesh Toshniwal and karale, S. R. (2013) A review paper on solar dryer. 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In this work an attempt has been made to evaluate the performance of cabinet solar dryer (CSD) and open sun drying (OSD) to dry the fenugreek leaves. Result obtained showed that drying time for cabinet solar drying was found 43% less than that of open sun drying. After drying, samples were powdered and nutritive tests were carried out at national agricultural and Food research institute (NAFARI) .The results showed significant increase in the nutrients studied of the dried samples except for vitamin C. The quantitative retention of nutrients like, energy, carbohydrates, calcium and sodium was found 4%, 2.5%, 66.47%, and 181.66% more in sample dried in cabinet solar dryer as compared to open sun.</p> <p><b>Keywords:</b> Cabinet solar dryer, open sun drying, fenugreek, Nutrients</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Bukola, O. Bolaji, Tajudeen, M.A. Olayanju and Taiwo, O. Falade. (2011) Performance evolution of a solar wind ventilated cabinet dryer. 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<b>Authors:</b>	<b>S. R. Navale, Upasni Supriya, V. M. Harpale, K. C. Mohite</b>							
<b>Paper Title:</b>	<b>Effect of Solar Drying on the Nutritive Value of Fenugreek Leaves</b>							
<p><b>Abstract:</b> A cabinet solar dryer with varying width of chimney has been designed and fabricated. In this work an attempt has been made to evaluate the performance of cabinet solar dryer (CSD) and open sun drying (OSD) to dry the fenugreek leaves. Result obtained showed that drying time for cabinet solar drying was found 43% less than that of open sun drying. After drying, samples were powdered and nutritive tests were carried out at national agricultural and Food research institute (NAFARI) .The results showed significant increase in the nutrients studied of the dried samples except for vitamin C. The quantitative retention of nutrients like, energy, carbohydrates, calcium and sodium was found 4%, 2.5%, 66.47%, and 181.66% more in sample dried in cabinet solar dryer as compared to open sun.</p> <p><b>Keywords:</b> Cabinet solar dryer, open sun drying, fenugreek, Nutrients</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Bukola, O. Bolaji, Tajudeen, M.A. Olayanju and Taiwo, O. Falade. (2011) Performance evolution of a solar wind ventilated cabinet dryer. West Indian journal of engineering, Vol. 33, pp.12-18.</li> <li>2. Hussain, M.Y.and Islam ud-din, A.M. (2008) Dehydration of agriculture products by mixed mode solar dehydrator. International journal of agriculture and biology Vol.10, pp.333-336</li> <li>3. Bolaji, B.O. (2005). Performance evaluation of box type absorber solar air collector for crop drying. Journal of food technology. Vol. 3, pp. 595-600.</li> <li>4. James stiling and Pieter stroeve. (2012) Performance evaluation of an enhanced fruit solar dryer using concentrating panels. Energy for sustainable development. Vol.16, pp. 224-230.</li> <li>5. Bolaji, B.O. (2008). Analysis of moisture transport in the solar drying of food items. Pacific journal of science and technology, Vol. 9, pp. 640-646</li> <li>6. Babagana gutti, Silas kiman and Ahmed, M. (2012) Solar dryer an effective tool for agricultural products preservation. Journal of applied technology in environmental sanitation. Vol. 2, pp. 31-38.</li> <li>7. Erteken, C., Yaldiz, O. (2004) Drying of eggplant and selection of suitable thin layer drying model. Journal of food engineering. Vol.63, pp. 349-359.</li> <li>8. Umesh Toshniwal and karale, S. R. (2013) A review paper on solar dryer. International journal of engineering research and application. Vol. 3, pp. 896-902</li> <li>9. Navale, S.R.; Thorat, S.K.; Harpale, V. M.; and Mohite, K.C. (2013) Dehydration of leafy vegetables using cabinet solar dryer. Indian stream research journal. Vol.3, pp. 1-6.</li> <li>10. Kiremire, B.T. Musunguzi E, Kikafunda, J.K, and F. B. Lukwago (2010) Effect of vegetable drying techniques on nutrient content: A case study of south western Uganda. Vol. 10, pp. 2587- 2597.</li> <li>11. Ojike, O., Nwoke O.O and Okonkwo W. I. (2011) The influence of different solar drying systems on the vitamin content of Pawpaw. Australian journal of agricultural engineering, Vol.2, pp. 8-11</li> <li>12. Satwase, A.N. Pandhre, G. R., Sirsat, P.G. and Wade, Y.R. (2013) Studies on drying characteristic and nutritional composition of drumstick leaves by using sun, shadow cabinet and oven drying method. Open access scientific reports. Vol. 2, pp. 2-4</li> <li>13. Nambiar, V.S. and Seshadri, S. (1998) Beta carotene content of green leafy vegetables of western India by HPLC. Journal of food science and technology. Vol. 35, pp. 365-367</li> <li>14. Lakshmi, B. and Vimala, V. (2000) Nutritive value of dehydrated green leafy vegetable powders. Journal of food science and technology. Vol.37, pp. 465-471.</li> <li>15. Esper, A., Muhlbauer, W. (1998) Solar drying an effective means of food preservation. Journal of renewable energy. Vol.15, pp. 95-100.</li> <li>16. Pallavi joshi and Dipika mehta (2010) Effect of dehydration on the nutritive value of drumstick leaves. Journal of Metabolomics and system biology. Vol. 1, pp. 5-9</li> </ol>								
27.	<table border="1"> <tr> <td data-bbox="119 1384 335 1429"><b>Authors:</b></td> <td data-bbox="335 1384 1412 1429"><b>Seyed Hossein Khalkhali, Seyed Jafar Fazeli Abelouei</b></td> </tr> <tr> <td data-bbox="119 1429 335 1473"><b>Paper Title:</b></td> <td data-bbox="335 1429 1412 1473"><b>Nonlinear Modeling and Analysis of DC-DC Buck Converter and Comparing with Other Converters</b></td> </tr> <tr> <td colspan="2" data-bbox="119 1473 1412 2139"> <p><b>Abstract:</b> the design of power electronic converter circuit with the use of closed loop scheme needs modeling and then simulating the converter using the modeled equations. This can easily be done with the help of state equations and MATLAB/SIMULINK as a tool for simulation of those state equations. An attempt has been made in this paper to simulate all basic non-isolated power converters. So that these models can be readily used for any close loop design (say using PI, fuzzy, or sliding mode control etc.).</p> <p><b>Keywords:</b> Switching converters, MATLAB/SIMULINK, system modeling, cascade control, subsystems</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J.Mahdavi, A.Emadi, H.A.Toliat, Application of State Space Averaging Method to Sliding Mode Control of PWM DC/DC Converters, IEEE Industry Applications Society October 1997.</li> <li>2. Vitor Femao Pires, Jose Fernando A. Silva, Teaching Nonlinear Modeling, Simulation, and Control of Electronic Power Converters Using MATLAB/SIMULINK, IEEE Transactions on Education, vol. 45, no. 3, August 2012.</li> <li>3. Juing-Huei Su, Jiann-Jong Chen, Dong-Shiuh Wu, Learning Feedback Controller Design of Switching Converters Via MATLAB/SIMULINK, IEEE Transactions on Education, vol. 45, November 2013.</li> <li>4. Daniel Logue, Philip. T. 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Oruganti, "A Universal Fuzzy Controller for a Non-linear Power Electronic Converter", IEEE International Conference on Fuzzy Systems, Vol. 1, pp. 46-51, 2002.</li> </ol> </td> </tr> </table>	<b>Authors:</b>	<b>Seyed Hossein Khalkhali, Seyed Jafar Fazeli Abelouei</b>	<b>Paper Title:</b>	<b>Nonlinear Modeling and Analysis of DC-DC Buck Converter and Comparing with Other Converters</b>	<p><b>Abstract:</b> the design of power electronic converter circuit with the use of closed loop scheme needs modeling and then simulating the converter using the modeled equations. This can easily be done with the help of state equations and MATLAB/SIMULINK as a tool for simulation of those state equations. An attempt has been made in this paper to simulate all basic non-isolated power converters. 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28.	<p><b>Authors:</b></p>	<p><b>Abdulbasit Abdullah, Khairul Salleh Mohamed Sahari, Samer F, Jamal O. Sameer</b></p>	
	<p><b>Paper Title:</b></p>	<p><b>Design of Octagonal Energy Absorbing Members Subjected to Dynamic Load: Enhancement of Crashworthiness</b></p>	
	<p><b>Abstract:</b> This study examines the crashworthiness performance of the octagonal thin wall tube, based on numerical simulation. The purpose is to find the optimal design with the lowest weight and best crashworthiness parameters in order to protect the passengers' life. Octagonal members with various trigger mechanisms (circular, square and elliptical triggers) with different distributions from the free end of tube were compared with aluminium alloy (AA6060) tube of 5 mm wall thickness, filled with hollow aluminium foam. The filled aluminium tube has given better results by enhancing the energy absorption by 7.1%, CFE by 29.4% and peak force 16% in case axial loading.</p> <p><b>Keywords:</b> dynamic compression, thin wall, energy absorption, direct and oblique loading, aluminum foam</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Ahmad, Z. (2009). Impact and energy absorption of empty and foam-filled conical tubes. 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144-152			
29.	<p><b>Authors:</b></p>	<p><b>Yachana Gaikwad, Yogesh Rathore</b></p>	
	<p><b>Paper Title:</b></p>	<p><b>Emotion Recognition from Chhattisgarhi Speech using Neural Network</b></p>	
	<p><b>Abstract:</b> Speech Emotion Recognition (SER) is emerging as a crucial research area. Many works have been done in field of SER for example speaker dependent / independent SER system, language dependent/independent SER system, extracting different emotions like happiness, anger, sadness, disgust, boredom, neutral. All these works have been achieved by working on speech sample, for which we need speech emotion database. In this work we have developed speech emotion database in Chhattisgarhi language. Speech emotions can be recognized by using different features of speech, which may be prosodic feature (pitch, energy) or phonetic features (MFCC, Format Frequency) etc. Thus for selecting feature of speech for emotion identification, a review of works on speech emotion recognition</p>		
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is given in this paper. The aim of this paper is to present the works which are important to design and develop SER system for Chhattisgarhi language using neural network and analyze it.

**Keywords:** Energy, Format Frequency, MFCC, Pitch, Neural Network.

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**Authors:** Prachi Patil, S. V. Patil, D. D. Chaudhari

**Paper Title:** Conversion of DICOM Multi-Frame Medical Image into Multimedia Format using MATLAB

**Abstract:** Conversion of DICOM Multi-frame medical image to multimedia format is implemented. Parse DICOM file using Matlab programming and pixel data in DICOM multi-frame images are written in to Multimedia format. Numbers of images are tested from different imaging equipment such as Computed Tomography (CT), Magnetic Resonance (MR), X-ray Angiography (XA), Ultrasound Multi-frame Image (US) etc and all of them can be converted to multimedia format. It is necessary to parse DICOM files and convert DICOM multi-frame medical images into multimedia format in order to reflect the dynamic process of the multi-frame of the images and facilitate physician to observe dynamic information for diagnosing patients. 1) Convert multi-frame DICOM images in AVI multimedia format. 2) Convert multi-frame DICOM images in WMV multimedia format. 3) Convert multi-frame DICOM images in MP4 multimedia format.

**Keywords:** DICOM, Medical Imaging; Image conversion; Multi-frame Imaging.

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31.	<b>Authors:</b>	<b>Okoli C. P, Aiyedun J. O</b>
	<b>Paper Title:</b>	<b>The Effect of Diseases on Food Consumption and Weight Gain in Captive Common Buzzards (Buteo buteo)</b>
32.	<p><b>Abstract:</b> Disease conditions invariably affect the activities and physiology of common buzzards irrespective of whether they are non-infectious or infectious. The impact of these diseases is further compounded by the stress of captivity in rehab facilities. Fifty common buzzards were studied in five batches of 10 birds at a time. The conditions the buzzards were diagnosed of at entry were divided into infectious and non-infectious diseases. The main thrust of this investigation was to arithmetically compute the average daily food consumption and weight gain by common buzzards with non-infectious, infectious diseases and those with both non-infectious and infectious diseases over the study period, analyse and interpret the results statistically. The buzzards were kept singly in perforated paper boxes with their food weighed daily with an electronic scale. A control was set up daily in a box without any buzzard to determine and correct for weight loss through moisture by evaporation. The left-over was weighed the next day and subtracted from the quantity of meat served to get the relative quantity of meat consumed. The absolute quantity of meat was gotten after taking cognizance of moisture lost by the control. Birds with non-infectious, infectious and those with both non-infectious and infectious diseases on the average consumed 116.6g, 111.9g and 110.3g of food daily respectively. In the same order their weight gain was 12.2%, 18.8% and 17.6%. While there are obvious differences mathematically in the amount of food consumed and percentage weight gained by the 3 categories of birds as shown, Anova shows no significant difference in the values obtained since the P-value (0.38741) is greater than the level of significance of 0.05. This result could be attributed to the unbiased, equal and good care given to all the studied buzzards as the study lasted in tandem with world best standard practice and ethics. It also underscores the necessity and effectiveness of wildlife rehabilitation programmes.</p> <p><b>Keywords:</b> Diseases Food Consumption, Weight Gain, Captive, Common Buzzards.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Brown, L.H and Amadon D. (1968), Eagles, Hawks and Falcons of the world. Country life books, Middlesex.n</li> <li>2. Cerna Z. and Louckova, M. (1977), Microtus arvalis, the intermediate host of a coccidian from the Kestrel (Falcotinnunculus), Vestnik Coskoslovenske Spolecnosti Zoologicke 41, 1-4.</li> <li>3. Cooper, J.E. (1985a), Diagnostic techniques in birds. The veterinary manual 25, 236-244.</li> <li>4. Cooper, J.E. (1985b). Veterinary aspects of captive birds of prey. 2nd edition steadfast press.</li> <li>5. Freeman, B.M. (1976). Stress and the domestic fowl. A physiological re-appraisal. World's Poultry Science Journal 32, 3, 249-256.</li> <li>6. W.B and Zuk M (1982). Heritable true fitness and bright birds. A role for parasites. Science 218, 384-386.</li> <li>7. Houde, A.E and Torio, A.J (1992). Effects of parasitic infection on male colour pattern and female choice in guppies. Behav. Ecol. 3, 346-351.</li> <li>8. Mumcuoglu, Y and Muller R. (1974). Parasitische Milben and Wiimer als Todesursache eines Uhus Bubobubo. Der Ornithologische Beobachter 7, 289-292.</li> <li>9. Oxford Advanced Learners Dictionary 7th Edition Published by Oxford University Press.</li> <li>10. Tranier, D.O, Folz, S.D. and Samue I, W.M. (1968). Capillariasis in Gyrafalcon condor, 70, 276-277.</li> <li>11. Von Faber, H (1964). Stress and general adaptation syndrome in poultry. World's Poultry Science Journal 20(3) : 175-182.</li> </ol>	
	<b>Authors:</b>	<b>G. Bhala Bharath, R. Ramana Reddy</b>
<b>Paper Title:</b>	<b>A Reduced Clock Power Flip-Flop for Sequential Circuits</b>	
32.	<p><b>Abstract:</b> In most Very Large Scale Integration digital circuits, clock system is one of the major power consuming component. It consumes around 40% of the total system power. There is need to reduce the power consumption because power budget is severely limited on portable digital circuits. In this paper, a new Low Power Clocked Pass Transistor Flip-Flop is proposed, which will considerably reduce the number of transistors in the discharging path and also reduces the capacity of the clock load by minimizing number of clocked transistors leading to reduction in clocking power which will improve the overall power consumption. Proposed reduced clock power flip flop is compared with conventional flip flops and Parallel In Parallel Out shift register is designed using this proposed flip-flop. Simulations are done using Microwind &amp; Tanner software tools.</p> <p><b>Keywords:</b> Flip-flop, Low Power Clocking System, Microwind, Pass transistors, Shift register, Tanner.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Peiyi Zhao, Jason McNeely, Weidong Kuang, Nan Wang, and Zhongfeng Wang "Design of Sequential Elements for Low Power Clocking System" IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 19, no. 5, May 2011</li> <li>2. Seyed E. Esmaceli, Asim J. Al-Kahlili, and Glenn E. R. Cowan "Low Swing Differential Conditional Capturing Flip-Flop for LC Resonant Clock Distribution Networks" IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 20, no. 8, Aug 2012.</li> <li>3. C. K. Teh, M. Hamada, T. Fujita, H. Hara, N. Ikumi, and Y. Oowaki, "Conditional data mapping flip-flops for low-power and high-performance systems," IEEE Trans. Very Large Scale Integr. (VLSI), vol.14, no.12, Dec. 2006.</li> <li>4. B. Kong, S. Kim, and Y. Jun, "Conditional-capture flip-flop for statistical power reduction," IEEE J. Solid-State Circuits, vol. 36, no. 8, pp.1263-1271, Aug. 2001.</li> <li>5. H. Kawaguchi and T. Sakurai, "A Reduced Clock-Wing Flip-Flop (RCSFF) for 63% power reduction," IEEE Solid-State Circuits, vol.33, no. 5, pp. 807-811, May 1998.</li> <li>6. A. Chandrakasan, W. Bowhill, and F. Fox, "Design of High-Performance Microprocessor Circuits," 1st ed. Piscataway, NJ: IEEE Press, 2001.</li> <li>7. J.Tschanz, S.Narendra, Z.P.Chen, S.Borkar, M.Sachdev, and V. De, "Comparative delay and energy of single edge-triggered &amp; dual edge triggered pulsed flip-flops for high-performance microprocessors," in Proc. ISPLED, Huntington Beach, CA, Aug. 2001, pp.207-212.</li> <li>8. P. Zhao, J. McNeely, P. Golconda, M. A. Bayoumi, W. D. Kuang, and B. Barcnas, "Low power clock branch sharing double-edge triggered flip-flop," IEEE Trans. Very Large Scale Integr. (VLSI) Syst., vol. 15, no. 3, pp. 338-345, Mar. 2007.</li> <li>9. Nayeem, N.M.; Dept. of Comput. Sci. &amp; Eng., Univ. of Dhaka, Dhaka, Bangladesh; Hossain, M.A.; Jamal, L.; Babu, H.M.H., "Efficient Design of Shift Registers Using Reversible Logic," IEEE International Conference on Signal Processing Systems, Pg nos 474 - 478, 15-17 May 2009</li> </ol>	
	<b>Authors:</b>	<b>G. Bhala Bharath, R. Ramana Reddy</b>
<b>Paper Title:</b>	<b>A Reduced Clock Power Flip-Flop for Sequential Circuits</b>	

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33.	<b>Authors:</b>	<b>J. Chaitanya Varma, R. Ramana Reddy, D. Rama Devi</b>
	<b>Paper Title:</b>	<b>Sub Threshold Level Shifters and Level Shifter with LEC for LSI's</b>
	<p><b>Abstract:</b> Wide-range level shifters play critical roles in ultralow-voltage circuits and systems. In this paper level shifter circuits that are capable of converting subthreshold to above threshold signal levels are presented. Level shifters are designed using current mirrors. The circuit has a distinctive current generation scheme using a logic error correction circuit that works by detecting the input and output logic levels. The proposed level shifter circuit can convert low-voltage digital input signals to high-voltage digital output signals. The circuit achieves low-power operation because it dissipates operating current only when the input signal changes. Simulations are carried out using Mentor Graphics 130-nm technology. Performances of the proposed level shifters are compared in terms of delay, power consumption and duty cycle.</p> <p><b>Keywords:</b> Level Shifters, Current mirrors, Logic Error Correction Circuit, Mentor Graphics.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. "A Subthreshold to Above-Threshold Level Shifter Comprising a Wilson Current Mirror" Sven Lütkeemeier and Ulrich Rückert, Member, IEEE IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—II: EXPRESS BRIEFS, VOL. 57, NO. 9, SEPTEMBER 2010.</li> <li>2. "A Low-Power Level Shifter with Logic Error Correction for Extremely Low Voltage Digital CMOS LSIs" IEEE JOURNAL OF SOLID-STATE CIRCUITS, VOL. 47, NO. 7, JULY 2012.</li> <li>3. "Low-Power Level Shifter for Multi-Supply Voltage Designs", IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—II: EXPRESS BRIEFS, VOL. 59, NO. 12, DECEMBER 2012.</li> <li>4. "Low energy multi-stage level converter for sub-threshold logic", www.ietdl.org, IET Comput. Digit. Tech., 2011, Vol. 5, Iss. 5.</li> <li>5. "Level-Shifter Free Design of Low Power Dual Supply Voltage CMOS Circuits Using Dual Threshold Voltages" Abdulkadir Utku Diril, Yuvraj Singh Dhillon, Abhijit Chatterjee, and Adit D. Singh, IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, VOL. 13, NO. 9, SEPTEMBER 2005.</li> <li>6. "The Advantages of Latch-Based Design Under Process Variation" Aaron P. Hurst, Robert K. Brayton University of California, Berkeley Berkeley.</li> <li>7. "A Robust, Input Voltage Adaptive and Low Energy Consumption Level Converter for Sub-threshold Logic", Hui Shao and Chi-Ying Tsui.</li> <li>8. "Level shifter design for low power Applications", International journal of computer science &amp; information technology (ijcsit) vol.2, no.5, october 2010.</li> <li>9. "A Low-Power Subthreshold to Above-Threshold Voltage Level Shifter", S.Rasool Hosseini, Mehdi Saberi, Member, IEEE, and Reza Lotfi, Senior Member, IEEE, 1549-7747 (c) 2013 IEEE.</li> <li>10. "CMOS current mirrors with reduced input and output voltage requirements", V.I. Prodanov and M.M. Green.</li> </ol>	
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34.	<b>Authors:</b>	<b>Muna Moussa Abbas, Huda Deia Dehi</b>
	<b>Paper Title:</b>	<b>Influences of K Substitution on Bi (Pb)-2223 Superconductors</b>
	<p><b>Abstract:</b> Solid state thermodynamically reaction method were used to prepare a high temperature superconductor (HTSC) with a nominal composition <math>\text{Bi}_{2-x}\text{K}_x\text{Pb}_{0.3}\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10+\delta}</math> with <math>x = 0.0, 0.1, 0.2, 0.3, 0.4</math> and <math>0.5</math>. The phase identification /gross structural characteristics of synthesized HTSC compounds explored through X-ray diffractions. The results reveal that all samples are polycrystalline and both (Bi, Pb)-2223 and -2212 phases coexist in the samples having orthorhombic crystal structure. The volume fraction was estimated from the intensities of Bi-(2223) and Bi-(2212) phases. The lattice constants of samples were determined from the XRD analysis by indexing the peaks observed for (Bi, Pb)-2223 phase. The electrical resistivity results showed a significant influence of the K substitution on Bi (Pb)-2223 superconductors and the highest TC at 128K with <math>x=0.5</math>.</p> <p><b>Keywords:</b> Bi-based superconductors, K substitution, Phase formation, solid state reaction</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. N. G. Margiani, I. R. Metskhvarishvili, T. D. Medoidze, N. A. Papunashvili, D. I. Dzanashvili, G. A. Shurgaia. IOP Publishing J.al of Physics: Conference Series 400 (2012) 022067 doi:10.1088/1742-6596/400/2/022067.</li> <li>2. Y. Iiyushechkin, T. Yamashita, J. A. Alarco, I. D. R. Markinnon, Supercon. Sci. Technol. 10 (1997) 330-336.</li> <li>3. A.R. Muhammad, A. Maqsood Superconductor, Doctor Adir Moyses Luiz (Ed.), ISBN: 978-953-307-107-7, InTech, (2010).</li> <li>4. M.M. Abbas, L.K. Abass, U. Salman. Energy Procedia 18 (2012) 215 – 224.</li> <li>5. S. A. Sunshine, T. Siegrist, L. F. Schneemeyer, D. W. Murphy, R. J. Cava, B. Batlogg, R. B. Van Dover, R. M. Fleming, S. H.Glarum. Phys. Rev. B38 (1988) 893–896.</li> <li>6. M. Takano, J. Takada, K. Oda, H. Kitaguchi, Y. Miura, Y. Ikeda, Y. Tomii, H. Mazaki. Jpn. J. Appl. Phys. 27 (1988) 1041-1043.</li> <li>7. G.Y.Hermiz, M.M.Abass, E.Gilioli. Atti Della Fondazione Giorgio Ronchi, Anno LXIV,2, (2009).</li> <li>8. Sh. Meretliev, K. B. Sadykov, A. Berkeliev. Turk J Phy 24 (2000) 39 – 48.</li> <li>9. S. F. Oboudi, M. M. Abbas, Nadein Q. Raouf. International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, 3, Issue-5, (2014) 94-97.</li> <li>10. V. Petrashko, N. D. Zhigadlo, B. V. Novysh, Yu. A. Semenenko, N. A. Prytkova, V. P. Yarusnichev. Tech. Phy. Letters 24, 5 (1998) 374-376.</li> <li>11. S.Koyama, U.Endo and T. Kawai. Jap.J. Appl. Phys, V.27, N.10, (1988)1861-1863. doi:10.1143.</li> <li>12. R. Gundakaram, S.C. Chang, R.S. Liu, L. Woodall and M. Gerards. IEEE Transactions on applied superconductivity, 1 I, 1, (2001) 3182 - 3185.</li> <li>13. K. Kocabas. Turkish Jou of Phys, V.22, ,(1998). P.437-440.</li> <li>14. O. Bilgili .Y. Selamet . K. Kocabas, J Supercond Nov Magn, 12 1,(2008) 439-449.</li> <li>15. M. Yilmazlar, O Ozturk, OGorur, I Belenli, C Terzioglu. Supercond. Sci. Technol. 20 (2007) 365–371.</li> <li>16. S. Bolat, E. Yanmaz, H. Comert. Turk J Tubitak Phys. 24 (2000) 129 – 135.</li> <li>17. T.S. Heh, J.R. Chen and T.Y. Tseng. Jap. J. Appl. Phys.29, 4(1990) 652-655.</li> <li>18. H. A. Thabit, G. Y. Hermiz, B. A. Aljurani. Baghdad Sci. J. 8, 2 (2011) 607-612.</li> </ol>	
		<b>177-179</b>
35.	<b>Authors:</b>	<b>Ravi Hosamani, Ashwini S. Karne</b>
	<b>Paper Title:</b>	<b>Design and Implementation of Hamming Code on FPGA using Verilog</b>

	<p><b>Abstract:</b> In mathematics, digital communication and information theory, error detection and correction has great practical importance in maintaining information integrity across noisy channels. Error coding is considered as a method of detecting and correcting these errors to ensure that the information is transferred intact from its source to its destination. There are various error correcting techniques to detect and correct the error. One of the popular technique based on forward error correction is Hamming Code. This paper focuses on design and its hardware implementation on Field programmable Gate Array(FPGA). The design includes both of the encoder and decoder systems to be used for the serial data transmission and reception of the wireless transceiver systems. The design has been simulated and verified using ISim simulator and Verilog HDL. Spartan-3 FPGA trainer kit for Xilinx 14.3 has been used for the implementation.</p> <p><b>Keywords:</b> Error coding, Hamming code, encoder, decoder, Verilog HDL, FPGA, Xilinx, Spartan 3.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Nuh Aydin: An Introduction to Coding Theory via Hamming Codes. Department of Mathematics Kenyon College.</li> <li>2. Ranpara, S.; Dong Sam Ha, 1999. A low-power Viterbi decoder design for wireless communications applications. IEEE Proceedings of the Twelfth Annual IEEE International Int. ASIC Conference 1999, Washington, DC, 15-18 Sept. 1999, pp. 377-381.</li> <li>3. Leena, Mr. Subham Gandhi and Mr. Jitender Khurana, "Implementing (7,4) Hamming Code using CPLD on VHDL" International Journal of New Trends in Electronics , Vol. 1, Issue 1, Aug. 2013.</li> <li>4. Xilinx "Spartan-3 FPGA Family, complete datasheet", Xilinx Corp., Aug 2005.</li> <li>5. Xilinx "Synthesis and Simulation Design Guide", Xilinx Tech UG626 2012.</li> <li>6. Ming- Bo Lin " Digital System Design and Practices using Verilog HDL and FPGA", Wiley-India , ISBN:978-81-265-3694-8 .</li> <li>7. Shu Lin, Daniel J. Costello. J "Error Control coding: Fundaments &amp; applications", Prentice Hall , ISBN 0-13-283796-X.1983</li> </ol>	<b>180-184</b>				
<b>36.</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Suman Anil Kumar, Saxena Anil Kumar, Arora T.R.</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Effect of Fly Ash as A Cement Replacement on The Strength of Concrete</b></td> </tr> </table> <p><b>Abstract:</b> This study is an attempt to find a suitable utilization for a particular fly ash depending upon its properties and thus reduce the need for vast areas for disposal of fly ash which in turn causes considerable damage to the environment .In India.around 110 million tones of fly ash get accumulated every year at the thermal power stations.. Internationally fly ash is considered as a byproduct which can be used for many applications. Fly Ash mission was initiated in 1994 to promote gainful and environment friendly utilization of the material. One of the areas identified for its bulk utilization was in construction of roads and embankments. Concrete is being widely used for the construction of most of the buildings , bridges, etc throughout the world. Hence it is the backbone to the infra structure development of a nation. India is taking major initiatives to improve and develop its infrastructure by constructing express highways, power projects and industrial structures. A huge quantity of concrete is required to meet out infrastructure development. Fly ash is a by-product of burned coal from power station. Considerable efforts are being taken worldwide to utilize natural waste.</p> <p><b>Keywords:</b> Fly Ash mission was initiated in 1994 to promote gainful and environment friendly utilization of the material.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Dire, R.K. (2005): International Conference on fly ash utilization, pp: O 1.1-1.10.</li> <li>2. The investigation on the compressive strength of silica fumes concrete; Sen Gupta, s bhanja (2003)</li> <li>3. Proc. of the international Coal Congress &amp; Expo, 191-199.</li> <li>4. Association, Research and Development Laboratories, Skokie, IL. Indian Standard code -10262-2009. IS 456 -2000,</li> <li>5. Journal of Indian Institute of Science, Vol. (84), 189-216.</li> <li>6. Testing and Evaluation, JTEVA, Vol.23, No.3, pp: 222-227.</li> <li>7. Chemical Properties of Fly and Geo-environmental Engineering © ASCE, pp: 914-924.</li> <li>8. Fly ash in concrete- Report of technical committee 67-FAB (RILEM)</li> <li>9. V.M. Malhotra and A.A. Ramezaniapour- march 1994, Fly ash in concrete.</li> </ol>	<b>Authors:</b>	<b>Suman Anil Kumar, Saxena Anil Kumar, Arora T.R.</b>	<b>Paper Title:</b>	<b>Effect of Fly Ash as A Cement Replacement on The Strength of Concrete</b>	<b>185-187</b>
<b>Authors:</b>	<b>Suman Anil Kumar, Saxena Anil Kumar, Arora T.R.</b>					
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<b>37.</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Rakhi R. Naidu, Sweety S. Nawale, Neha P. Pawar, Preeti R. Sharma, Rajashree R.S</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>A Study on Online Contract Signing Protocols</b></td> </tr> </table> <p><b>Abstract:</b> Security services becomes crucial to many applications such as e-commerce payment protocols. Online contract signing protocol is fair as it allows two users to exchange their digital signatures in a secure manner such that both the users remain loyal to the transaction. The trusted third party is involved only in the situations where one party is cheating other or the communication channel is interrupted. Also, if the protocol is executed unsuccessfully, none of the parties can show the validity of intermediate results to others. As more business is conducted over the internet, the fair-exchange problem is gaining greater importance. In this paper, we make a comparative study of different online contract signing protocols and give the best efficiency results</p> <p><b>Keywords:</b> Fair-exchange protocols, TTP, digital signatures, security.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Abdullah M. Alaraj "Optimizing One Fair Document Exchange Protocol "International Journal of Network Security &amp; Its Applications (IJNSA), Vol.4, No.1, January 2012 DOI: 10.5121/ijnsa.41011, 2012.</li> <li>2. Alptekin Kupcu and Anna Lysyanskaya, "Optimistic Fair Exchange with Multiple Arbiters", Brown University, Providence, RI, USA,2008.</li> <li>3. H.Jayasree1 and Dr. A.Damodaram "A Novel Fair Anonymous Contract Signing Protocol for E-Commerce Applications" 2012 International Journal of Network Security &amp; Its Applications (IJNSA), Vol.4, No.5, September 2012.</li> <li>4. Alfin Abraham, "An Abuse-Free Optimistic Contract Signing Protocol with Multiple TTPs", IJCA Special Issue on "Computational Science – New Dimensions &amp; Perspectives" NCCSE, 2011.</li> <li>5. Guilin Wang "An Abuse-Free Fair Contract-Signing Protocol Based on the RSA Signature", IEEE Transactions On Information Forensics And Security, Vol. 5, No. 1, March 2010.</li> </ol>	<b>Authors:</b>	<b>Rakhi R. Naidu, Sweety S. Nawale, Neha P. Pawar, Preeti R. Sharma, Rajashree R.S</b>	<b>Paper Title:</b>	<b>A Study on Online Contract Signing Protocols</b>	<b>188-190</b>
<b>Authors:</b>	<b>Rakhi R. Naidu, Sweety S. Nawale, Neha P. Pawar, Preeti R. Sharma, Rajashree R.S</b>					
<b>Paper Title:</b>	<b>A Study on Online Contract Signing Protocols</b>					

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<b>Authors:</b>	<b>P. Kalpana Devi, J. Rajalakshmi</b>
<b>Paper Title:</b>	<b>Improved Wavelet-Cusum Spectrum Sensing Algorithm in Cognitive Radio Network</b>

	<p><b>Abstract:</b> In the recent days, the development in the field of communication devices leads to the wide usage of spectrum. Since the availability of spectrum was limited, cognitive radio technique was adopted for spectrum sensing. In spectrum sensing number of uncertain conditions were present which may degrade the sensing performance and require much time to achieve target sensing algorithm. In the existing system the energy based spectrum sensing technique and sequential detection algorithm were used. In this proposed system, Sequential Detection CUSUM algorithm is used to improve the probability of false alarm by applying the cumulative distribution function, trapezoidal rule for the distribution function of the secondary user. In this wavelet based spectrum sensing technique is used, the wavelet decomposition can found the vacant frequency bands effectively. When comparing with the existing and wavelet based cusum spectrum sensing, it provide better observation values more than 75 % for the probability of miss detection and the probability of false alarm.</p> <p><b>Keywords:</b> Cognitive radio, Spectrum sensing, wavelet based sensing, CUSUM algorithm.</p>	
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<b>Authors:</b>	<b>T. Abirami, M. Meenalochini, S. Anandamurugan</b>
<b>Paper Title:</b>	<b>Secure Data Aggregation with False Temporal Pattern Identification for Wireless Sensor Networks</b>

<b>39.</b>	<p><b>Abstract:</b> Continuous aggregation is required in sensor applications to obtain the temporal variation information of aggregates. It helps the users to understand how the environment changes over time and track real time measurements for trend analysis. In the continuous aggregation, the attacker could manipulate a series of aggregation results through compromised nodes to fabricate false temporal variation patterns of the aggregates. Existing secure aggregation schemes conduct one individual verification for each aggregation result. Due to the high frequency and the long period of a continuous aggregation in every epoch, the false temporal variation pattern would incur a great communication cost. In this paper, we detect and verify a false temporal variations pattern by checking only a small part of aggregation results to reduce a verification cost. A sampling based approach is used to check the aggregation results and we also proposed a security mechanism to protect the sampling process.</p> <p><b>Keywords:</b> Data aggregation, Sampling, Wireless Sensor Networks</p>	
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	<b>Authors:</b>	<b>Asawari Dudwadkar, Praveen Ahuja</b>	
	<b>Paper Title:</b>	<b>3 Phase Multilevel Inverter using Bidirectional Chopper Cell</b>	
40.	<p><b>Abstract:</b> The paper presents the simulation of the operation of 3 phase multilevel inverter using bidirectional chopper cells. The input provided is a DC supply of 12V which is further distributed into two 6V supplies. To convert DC into AC, configuration of Bidirectional Chopper cell are used two in each phase. Thus 3 phases are working simultaneously to give a 3 phase AC supply using the concept of Multilevel Inverters. . The hardware is broken down into Main and Driver circuits where the main circuit includes the switching circuitry and the driver board comprises of the triggering circuitry.</p> <p><b>Keywords:</b> Multilevel Inverter, Bidirectional Chopper, Main circuit, Driver circuit.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Paper on 3 Phase Multilevel inverter published by k manju sri and group</li> <li>2. Paper on Multilevel Power Converters by Surin Khomfoi and Leon M. Tolbert</li> <li>3. Muhammad H.Rashid "Power Electronics circuits, Devices and Applications" third Edition 2006.</li> <li>4. Dr. P S Bhimra "Power Electronics" GD Rai Khanna Publications pvt. Ltd.</li> <li>5. Power Electronics by Khanchandani</li> <li>6. Microcontrollers by Masjidi</li> <li>7. www.wikipedia.com/8051</li> <li>8. www.isis.com/proteus</li> <li>9. www.irf.com/technical-info/appnotes/an-978.pdf</li> <li>10. www.irf.com/product-info/datasheets/data/ir2110.pdf www.alldatasheet.com/datasheet-pdf/pdf/15580/PHILIPS/7 HCT245D.html</li> <li>11. www.wikipedia.com</li> <li>12. www.electro2.webs.com</li> </ol>		198-203

	<b>Authors:</b>	<b>R. MadhuSudhan, N. Ramanaiah, K. Praveen Kumar</b>	
	<b>Paper Title:</b>	<b>Evaluating Optimal Process Parameters in Dissimilar Friction Stir Welding of Al Alloys</b>	
41.	<p><b>Abstract:</b> This study is made to determine the near optimal process parameters ( speed, feed, axial force) of Friction Stir Welding (FSW) of dissimilar aluminum alloys AA 6262 and AA7075 using gray relational analysis by simultaneously considering multiple output parameters tensile strength (UTS ) and hardness (VHN). Experiments were performed with three process parameters such as tool rotational speed, weld speed and axial force considering three levels of each. All the possible combinations are used for the experimentation. Optimum process parameter combination of the FSW of dissimilar aluminum alloys was obtained via gray relational grade obtained from the gray relational analysis. Confirmation experiment has been conducted to validate the optimized parameters. The predicted and initial parameters have the better aspect ratio. The optimal process parameters were identified in order to find the quality of the welded specimens.</p> <p><b>Keywords:</b> FSW, Gray Relational Analysis, Dissimilar Aluminium alloys.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Mishra RS, Ma ZY (2005) friction stir weldng and processing.Mater Sci Eng R Rep 50:1-78</li> <li>2. W.M.Thomas, E.D.Nicholas, J.C.Needham, M.G.Murch, P.Temple-Smith, and C.J.Dawes, International Patent Application No. PCT/GB92/02203; GB Patent Application No. 9125978.8; U.S Patent No. 5,460,317 (1991).</li> <li>3. C.Dawes,W.Thomas,TWI Bulletin 6, November/December 1995,p.124.</li> <li>4. Murr, L. E., Liu, G., and McClure, J. C. 1997. J. Mater. Sci.16: 1801.</li> <li>5. C. J. Dawes, Weld. Met. Fab. 63, 13 (1995).</li> <li>6. S. Babu*, K. Elangovan, V. Balasubramanian, and M. Balasubramanian "Optimizing Friction Stir Welding Parameters to Maximize Tensile Strength of AA2219 Aluminum Alloy Joints " Met. Mater.Int.,Vol.15, No. 2(2009), pp. 321~330.</li> <li>7. P.Bahemmat, A. Rahbari, M. Haghpanahi, M. K. Besharati,2008 " Experimental study on the effect of rotational speed and tool pin profile on AA 2024 aluminum Friction Stir Welded butt joints"Proceedings of ECTC 2008,October 3-4,2008,Miami, Florida, USA..p 1.1-1.7.</li> <li>8. Yingchun Chen, Huijie Liu,Feng Jicai,Matr. Sci.Eng. A 420 (2006) 21-25</li> <li>9. A. Oostercamp, L.Djapic Oostercamp,A.Nordeide, Weld.J. 92004) 225s-231s.</li> <li>10. K.Elangovan, V. Balasubramanian," Influences of pin profile and rotational speed of the tool on the formation of friction stir processing zone in AA 2219 aluminum alloy",J. of Mater.Sci.Engg. A 459(2007) pp 7 - 18.</li> <li>11. Wakabayashi T, Suda S, Inasaki I, Terasaka K, Musha Y, Toda Y (2007) Tribological action and cutting performance of MQL media in machining of aluminum. Ann CIRP 56(1):97-100.doi:10.1016/j.cirp.2007.05.025</li> <li>12. Taylor FW (1907) On the art of cutting metals. Trans ASME 28:31-58</li> <li>13. Bhattacharyya A, Faria-Gonzalez R, Ham I (1970) Regression analysis for predicting surface finish and its application in the determination of optimum machining conditions. J Eng Ind 92(3):711-714</li> <li>14. Ermer DS (1971) Optimization of the constrained machining economics problem by geometric programming. J Eng Ind 93:1067-1072</li> <li>15. Davim JP, Antonio CAC (2001) Optimal drilling of particulate metal matrix composites based on experimental and numerical procedures.</li> </ol>		204-208

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<b>Paper Title:</b>	<b>BER Analysis of MIMO-OFDM System using Different Equalization Techniques under Multipath Fading Channels for Different Modulations</b>							
42.	<p><b>Abstract:</b> With the rapid growth of digital communication in recent years, the need for high speed data transmission is increased. OFDM is a promising solution for achieving high data rates in mobile environment, due to its resistance to ISI, which is a common problem found in high speed data communication. A multiple-input multiple-output (MIMO) communication System combined with the orthogonal frequency division multiplexing (OFDM) modulation technique can achieve reliable high data rate transmission over broadband wireless channels. MIMO-OFDM system has been currently recognized as one of the most competitive technology for 4G mobile wireless systems.. In this paper we discuss the BER performance of the MIMO-OFDM system with two different equalizers (ZF and MMSE) for various modulation techniques i.e. BPSK, QPSK, 16-QAM and 64-QAM using multipath fading channels i.e. AWGN (Additive White Gaussian Noise), Rayleigh and Rician channel. The simulation results show that, with MMSE and ZF equalizers, the BER performances is better in MMSE equalizer. Further we analyzed in different fading channels for various modulation techniques in both the equalizers.</p> <p><b>Keywords:</b> MIMO, OFDM, ZF and MMSE Equalizer, Multipath fading channels, M-QAM</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Bhasker Gupta, Gagan Gupta, and Davinder S. Saini, “BER Performance Improvement in OFDM System with ZFE and MMSE Equalizers”, <i>IEEE Communications Letters</i>, vol.-6, no.,pp. 193-197, April 2011.</li> <li>2. D. Gesbert, M. Shafi, Da-shan Shiu, P. J. Smith, A. Naguib, “From theory to practice: an overview of MIMO space-time coded wireless systems”, <i>Selected Areas in Communications</i>, <i>IEEE Journal</i>, vol.-21, pp.281 -302, April 2003.</li> <li>3. M. Jiang and L. 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43.	<table border="1"> <tr> <td data-bbox="119 2033 335 2074"><b>Authors:</b></td> <td data-bbox="335 2033 1412 2074"><b>Farooq Saeed</b></td> </tr> <tr> <td data-bbox="119 2074 335 2114"><b>Paper Title:</b></td> <td data-bbox="335 2074 1412 2114"><b>Experimental and Numerical Study of Side-Slipping 65-deg Delta and Double-Delta Wings</b></td> </tr> <tr> <td data-bbox="119 2114 335 2152"><b>Abstract:</b></td> <td data-bbox="335 2114 1412 2152">The paper presents the results of an experimental and numerical investigation to determine aerodynamic</td> </tr> </table>	<b>Authors:</b>	<b>Farooq Saeed</b>	<b>Paper Title:</b>	<b>Experimental and Numerical Study of Side-Slipping 65-deg Delta and Double-Delta Wings</b>	<b>Abstract:</b>	The paper presents the results of an experimental and numerical investigation to determine aerodynamic	214-221
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<b>Paper Title:</b>	<b>Experimental and Numerical Study of Side-Slipping 65-deg Delta and Double-Delta Wings</b>							
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characteristics in terms of lift, drag, side force, pitching moment, yawing moment and rolling moment coefficients for 65-deg delta and 65/40-deg double-delta wings at various pitch and sideslip angles. The study was carried out due to scarcity of such data in literature. The experimental tests were conducted at the KFUPM low-speed wind tunnel facility whereas the numerical tests were performed using the commercial CFD software FLUENT. Results for zero sideslip angles from both experiments and numerical predictions were compared with experimental data found in literature as well as to the theory of Polhamus. The comparison of force and moment data, surface pressure coefficient distribution and vortex breakdown location show good agreement with experiments and CFD predictions found in literature as well as theoretical calculations at zero sideslip angles. Experimental and computational results for non-zero sideslip angles at various pitch angles were then determined and have been reported in this study.

**Keywords:** Delta wing, double delta wing, sideslip, vortex lift, vortex breakdown

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44.	<b>Paper Title:</b> Revising The Protocols to Ensure Reliability, Cost Effectiveness and High Sample Throughput for Water Stable Isotope Analyses In Continuous Flow Mode using the Gasbench II.
	<p><b>Abstract:</b> The continuous flow isotope ratio mass spectrometer (CF-IRMS) coupled with automated sample preparation device Gasbench II and equilibration system measures oxygen and hydrogen isotope ratios with typical external precision of around <math>\pm 0.1</math> ‰ for <math>\delta^{18}\text{O}</math> and <math>\pm 1</math> ‰ for <math>\delta^2\text{H}</math>, although internal analytical precision is better than 0.06 ‰ for oxygen and 0.5 ‰ for hydrogen. In CF-IRMS method, an aliquot of the gas (<math>\text{CO}_2/\text{H}_2 + \text{Helium}</math>), equilibrated with water sample, is transferred from the head-space of the exetainer into the mass-spectrometer for isotope ratio measurement. The observed difference between external and internal precision is governed by the operating procedures that influence the online chemistry for equilibration and transfer of the gas in to IRMS. These procedures also govern the sample throughput and long term stability of the machine. With a view to minimize the difference between external and internal precision and to maximize the throughput with high reliability at minimum cost experiments were undertaken. The experiments investigated: (i) optimum duration of equilibration for oxygen analyses, (ii) modes for manual introduction of water sample in the exetainer i.e. before or after flush-filling with equilibrating gas, (iii) effects of the difference between room temperature and sample tray temperature, (iv) effects of septum reuse, and (v) reuse of platinum rod on long term basis. In addition, important maintenance related issue pertaining to analytical needle for the injection and flushing is addressed. The experiments achieved external precision better than 0.07 ‰ for <math>\delta^{18}\text{O}</math> and 0.8 ‰ for <math>\delta^2\text{H}</math> with large sample throughput and long term stability using 300 <math>\mu\text{l}</math> of water sample. Other optimized parameters for oxygen are; equilibration duration of 16 hrs at 32°C, 540 seconds of flushing duration and introduction of water sample after flush-filling. The parameters for hydrogen are 45 minutes and 320 seconds after flush-filling.</p> <p><b>Keywords:</b> Water Stable Isotope, Protocols, Flush filling, Maintenance.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J.T. Brenna, T. N. Corso, H. J. Tobias. And R. J. Caimi. High-precision continuous-flow isotope ratio mass spectrometry, <i>Mass Spectrometry Reviews</i>. 1997; 16(5) pp. 227-258.</li> <li>2. K. Habfast. Advanced isotope ratio mass spectrometry I: Magnetic isotope mass spectrometers, in <i>Modern Isotope Ratio Mass Spectrometry 1997</i>: edited by P. IT, John Wiley, New York. pp. 11-82.,</li> <li>3. R. D. Deshpande, S. K. Gupta. National Programme on Isotope fingerprinting of waters of India (IWIN), , Indian National Science Academy 2008; New Delhi. pp 10-16</li> <li>4. D. Paul, G. Skrzypek. Flushing time and storage effects on the accuracy and precision of carbon and oxygen isotope ratios of sample using the Gasbench II technique, <i>Rapid Commun. in Mass Spectrometry</i> 2006; 20 pp. 2033-2040.</li> <li>5. T. K. Dalai, S. K. Bhattacharya and S. Krishnaswami. Stable Isotopes in the Source</li> <li>6. S. Sengupta and A. Sarkar. Stable isotope evidence of dual (Arabian Sea and Bay of Bengal) vapour sources in monsoonal precipitation over north India, <i>Earth and Planet. Sci. Let.</i> 2006; 250 pp.511–521.</li> <li>7. H. Craig. Isotopic standards for carbon and oxygen and correction factors for mass-spectrometric analysis of carbon dioxide, <i>Geochem. Cosmochim. Acta</i>, 1957;</li> <li>8. J. R. Gat, R. Gonfiantini. Stable Isotope Hydrology. Deuterium and Oxygen-18 in the Water Cycle. A Monograph prepared under the aegis of the IAEA/UNESCO working group on nuclear techniques in hydrology of the international hydrological programme. Technical Reports Series No. 1981; 210 pp.337</li> <li>9. S. T. Nelson. A simple, practical methodology for routine VSMOW/SLAP normalization of water samples analysed by continuous flow method, <i>Rapid Commun. in Mass Spectrometry</i>, 2000; 14: pp. 1044-1046.</li> <li>10. Z. D. Sharp, V. Atudorei and T. Durakiewicz. A rapid method for determination of hydrogen and oxygen isotope ratios from water and hydrous minerals, <i>Chem. Geol.</i> 2001;178pp. 197-210.</li> </ol>
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