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S. No	<b>Volume-1 Issue-6, April 2013, ISSN: 2319-6378 (Online)</b> <b>Published By: Blue Eyes Intelligence Engineering &amp; Sciences Publication Pvt. Ltd.</b>		Page No.	
1.	<b>Authors:</b>	<b>D. Kotaiah Swamy, G. Rajesh, M. Jaya Krishna Pooja, A. Rama Krishna</b>		
	<b>Paper Title:</b>	<b>Microcontroller Based Drip Irrigation System</b>		
	<p><b>Abstract:</b> In the field of agriculture, use of proper method of irrigation is important and it is well known that irrigation by drip is very economical and efficient. In the conventional drip irrigation system, the farmer has to keep watch on irrigation timetable, which is different for different crops. The project makes the irrigation automated. With the use of low cost sensors and the simple circuitry makes this project a low cost product, which can be bought even by a poor farmer. This project is best suited for places where water is scarce and has to be used in limited quantity. Also, third world countries can afford this simple and low cost solution for irrigation and obtain good yield on Crops. UART controller that will be used in this project. A 16×2 LCD is connected to the microcontroller, which displays the humidity level and ambient temperature. Three pushbuttons are provided to set the limits of humidity for switching the individual solenoid valves controlling the water flow to the field. The humidity and temperature levels are transmitted at regular time interval to the PC through the RS232 serial port for data logging and analysis. The humidity sensors are constructed using aluminium sheets and housed in easily available materials. The aim is to use the readily available material to construct low cost sensors. Five relays are controlled by the microcontroller through the high current driver IC, ULN2003. Four relays are provided for controlling four solenoid valves, which controls the flow of water to four different parts of the field. One relay is used to shut-off the main motor which is used to pump the water to the field.</p> <p><b>Keywords:</b> UART, IC, ULN2003, 16×2 LCD.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Clemmens, A.J. 1990. Feedback Control for Surface Irrigation Management in: Visions of the Future. ASAE Publication 04-90. American Society of Agricultural Engineers, St. Joseph, Michigan, pp. 255-260.</li> <li>2. Fangmeier, D.D., Garrot, D.J., Mancino, F. and S.H. Husman. 1990. Automated Irrigation Systems Using Plant and Soil Sensors. In: Visions of the Future. ASAE Publication 04-90. American Society of Agricultural Engineers, St. Joseph, Michigan, pp. 533-537.</li> <li>3. Gonzalez, R.A., Struve, D.K. and L.C. Brown. 1992. A computer-controlled drip Irrigation system for container plant production. HortTechnology. 2(3):402-407.</li> </ol>		1-4	
<b>Authors:</b>	<b>T. L. N. Tiruvadi, S. Venkatesh, K. V. Suneel, A. Rama Krishna</b>			
<b>Paper Title:</b>	<b>(PV) Rural Home Power Inverter Using FPGA Technology</b>			
2.	<p><b>Abstract:</b> With the increasing concern about global environmental protection and energy demand due to rapid growth of population in developing countries and the diminishing trend of resources of conventional grid supply, the need to produce freely available pollution free natural energy such as solar/wind energy has been drawing increasing interest in every corner of the world. In an effort to utilize these energies effectively through Power converter, a great deal of research is being carried out by different researchers / scientist and engineers at different places in the world to meet the increasing demand of load . The study presents methodology to integrate solar (PV) energy (which is freely available in every corner of the world) with grid source and supplement the existing grid power in rural houses during its cut off or restricted supply period. In order to get consistency in supply a DG is also added as a standby source in the proposed integration of network. The software using novel Direct PWM modulation strategy and its soft control features extend the flexibility to control converter (inverter) parameters like voltage, frequency, number of samples of PWM pulses constituting sine-wave without changing any hardware configuration in the circuit. The system simulation of PWM Pulse generation has been done on a XILINX based FPGA Spartan 3E board using VHDL code. The test on simulation of PWM generation program after synthesis and compilation were recorded and verified on a prototype sample.</p> <p><b>Keywords:</b> (PV), DG, PWM, XILINX, FPGA, VHDL.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. G.J. Vander Metwe et al, „150W Inverter – an optimal design for use in solar home system”, International Symposium on Industrial Electronics Proceedings of ISIE, 1998, Vol. 1, page 57-62.</li> <li>2. C. Alonso, M-F Shraif et al, Design of Optimized Photovoltaic Conversion Chains, 16th Photovoltaic Solar Energy source inverter” First WCPEC, Dec 5-9, 1994, Hawaii.</li> <li>3. B. Lindgrin, „A 110W inverter for photovoltaic application”, Published in International Journal of Renewable Energy Engineering, April 2002.</li> <li>4. <a href="http://solstice.org">http://solstice.org</a> Conference (PVSEC 2000) Glasgow (Scotland) May 2000, page 2422-2425.</li> <li>5. M.N.Md Isa et al “FPGA Based SPWM Bridge Inverter Published in American journal of Applied Sciences, page 584-586,2007</li> <li>6. S.N.Singh et al “Modeling and dynamics of a PWM sinusoidal Inverter for water pumping system for use in agriculture and household application Journal of ieema p114-122, January 2008</li> </ol>		5-9	
	<b>Authors:</b>	<b>P. Swaminathan</b>		
	<b>Paper Title:</b>	<b>Switched Modeling, Simulation and Analysis of DC/AC Ideal Half Bridge Two Level Voltage Source Converter</b>		
<p><b>Abstract:</b> This paper presents switched model and its performance of a single phase DC/AC ideal half-bridge two-level inverter. The principle of operation of this inverter is described and the main theoretical waveforms are presented, as well as the simulation results. The main expressions for the design of the inverter are also presented. This inverter presents the following advantages of lossless inverter; the THD at the load is also preferably very less. The load current is divided amongst the switches, therefore reducing the conduction losses. In light of its</p>				

3.	<p>characteristics, we believe that it is appropriate for industrial applications.</p> <p><b>Keywords:</b> Switched Model, Ideal Half-Bridge, VSC, HVDC.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. K. Satoh and M. Yamamoto, "The Present State of the Art in High Power Semiconductor Devices," Proceedings of the IEEE, vol. 89, no. 6, pp. 813–821, July 2001.</li> <li>2. B. J. Baliga, "The Future of Power Semiconductor Device Technology," Proceedings of the IEEE, vol. 89, no. 6, pp. 822–832, July 2001.</li> <li>3. N. Mohan, T. M. Undeland, and W. P. Robbins, Power Electronics, Converters, Applications, and Design, 3rd edition, Wiley, 2003.</li> <li>4. B. Wu, High-Power Converters and AC Drives, Wiley/IEEE, 2006.</li> <li>5. A. Alesina and M. G. B. Venturini, "Analysis and Design of Optimum-Amplitude Nine-Switch Direct AC–AC Converters," IEEE Transactions on Power Electronics, vol. 4, no. 1, pp. 101–112, January 1989.</li> <li>6. S. B. Dewan and A. Straughn, Power Semiconductor Circuits, Wiley, 1974.</li> <li>7. D. G. Holmes and T. A. Lipo, Pulse Width Modulation for Power Converters: Principles and Practice, Wiley/IEEE, 2003.</li> <li>8. M. Saeedifard, H. Nikkhajoei, R. Irvani, and A. Bakhshai, "A Space Vector Modulation Approach for a Multimodule HVDC Converter System," IEEE Transactions on Power Delivery, vol. 22, no. 3, pp. 1643–1654, July 2007.</li> <li>9. M. Hagiwara, H. Fujita, and H. Akagi, "Performance of a Self-Commutated BTB HVDC Link System Under a Single-Line-to-Ground Fault Condition," IEEE Transactions on Power Electronics, vol. 18, no. 1, pp. 278–285, January 2003.</li> <li>10. C. Schauder, M. Gernhardt, E. Stacey, T. Lemak, L. Gyugyi, T.W. Cease, and A. Edris, "Development of ±100 MVAR Static Condenser for Voltage Control of Transmission Systems," IEEE Transactions on Power Delivery, vol. 10, no. 3, pp. 1486–1493, July 1995.</li> <li>11. H. W. Van Der Broeck, H. Skudelny, and G. V. Stanke, "Analysis and Realization of a Pulsewidth Modulator Based on Voltage Space Vectors," IEEE Transactions on Industry Applications, vol. 24, no. 1, pp. 142–150, January/February 1988.</li> <li>12. R. Wu, S. B. Dewan, and G. R. Slemon, "Analysis of an AC-to-DC Voltage Source Converter Using PWM with Phase and Amplitude Control," IEEE Transactions on Industry Applications, vol. 27, pp. 355–364, March/April 1991.</li> <li>13. A. Nabavi Niaki and M. R. Irvani, "Steady-State and Dynamic Models of Unified Power Flow Controller (UPFC) for Power System Studies," IEEE Transactions on Power Systems, vol. 11, pp. 1937–1942, November 1996.</li> <li>14. J. A. Sanders and F. Verhulst, Averaging Methods in Nonlinear Dynamic Systems, Springer-Verlag, 1985.</li> <li>15. H. A. Khalil, Nonlinear Systems, 3rd edition, Prentice-Hall, 2002.</li> <li>16. J. G. Kassakian, M. F. Schlecht, and G. C. Verghese, Principles of Power Electronics, Addison-Wesley, 1991.</li> <li>17. P. T. Krein, J. Bentsman, R. M. Bass, and B. L. Lesieutre, "On the Use of Averaging for the Analysis of Power Electronic Systems," IEEE Transactions on Power Electronics, vol. 5, pp. 182–190, April 1990.</li> <li>18. R. W. Erickson and D. Maksimovic, Fundamentals of Power Electronics, 2nd edition, Kluwer Academic Publishers, 2001.</li> <li>19. K. Thorborg, Power Electronics, Prentice-Hall, 1988.</li> <li>20. J. S. Lai and F. Z. Peng, "Multilevel Converters: A New Breed of Power Converters," IEEE Transactions on Industry Applications, vol. 32, pp. 509–517, May/June 1996.</li> </ol>	10-13				
4.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>A. Sivasoundari, S. Kalaimani, M. Balamurugan</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Wireless Surveillance Robot with Motion Detection and Live Video Transmission</b></td> </tr> </table> <p><b>Abstract:</b> Automatic motion detection features are able to enhance surveillance efficiency and quality. The aim of this paper is to recognize and detect motion automatically around a robot's environment in order to equip a mobile robot for a surveillance task. The robot design has been partitioned into sensor, control, and planning subsystems. A robotic system has a drive chassis having a drive motor and a drive element to control both the robot movements and the rotation of wireless camera. Microcontroller PIC16F877 is designed to ensure that robot is always oriented towards desired position. The required information is based on the input obtained from a Charge Coupled Device (CCD) with battery of 12v. As the first step toward achieving the goal, it is necessary to have a mobile robot for the detection of motion of any-thing, any gas leakages and the presence of heat in that particular unstructured environment. REMOTEC is now commercializing the SURBOT technology on wheeled mobile robot for used in places such as nuclear power plants, atomic power plants and other hazardous environments.</p> <p><b>Keywords:</b> Sensors, PIC Microcontroller, stepper motor, CCTV.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. ROBOTICS, Control, Sensing, Vision and Intelligence - K.S Fu, R.C Gonazalez, C.S.G Lee</li> <li>2. PRINCIPLES OF ROBOT MOTION, Theory, Algorithm, Implementation -Choset, Lynch, Hutchinson, Kantor, Burgard, Kavraki and Thrun</li> <li>3. FUNDAMENTALS OF ROBOTICS Analysis and Control – Robert J Schilling</li> </ol>	<b>Authors:</b>	<b>A. Sivasoundari, S. Kalaimani, M. Balamurugan</b>	<b>Paper Title:</b>	<b>Wireless Surveillance Robot with Motion Detection and Live Video Transmission</b>	14-22
<b>Authors:</b>	<b>A. Sivasoundari, S. Kalaimani, M. Balamurugan</b>					
<b>Paper Title:</b>	<b>Wireless Surveillance Robot with Motion Detection and Live Video Transmission</b>					
	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>L. MEGALA, B. Devanathan</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>High Performance SiGe Power HBTs for Portable Microwave Applications</b></td> </tr> </table> <p><b>Abstract:</b> SiGe bipolar technology has matured to provide a less expensive alternative to III-V, while at the same time ensuring superior performance compared to silicon. SiGe bipolar transistors, due to the lower band gap of SiGe (compared to Silicon), combine high-drift velocities with lower recombination in the base to provide higher forward current gain. This material system is very much perfect for high-power RF applications. SiGe HBTs offer important potential advantages over HFETs in terms of high transconductance, controlled linearity, freedom from surface trapping effects and controllable tradeoff of between unity current gain cut-off frequency (ft) and breakdown voltage. For high power applications, higher breakdown voltage and ft is necessary. Thus SiGe material system will have superior performance over other material systems. In this paper, we analyze the performance of SiGe HBTs for analog/RF applications. Improvements in terms of early voltage, intrinsic gain and junction breakdown voltage are noticed. Moreover ft and fmax for these devices show significant improvement making these devices an able candidate for future RF applications. SiGe HBT has been developed and verified by means of TCAD simulation.</p>	<b>Authors:</b>	<b>L. MEGALA, B. Devanathan</b>	<b>Paper Title:</b>	<b>High Performance SiGe Power HBTs for Portable Microwave Applications</b>	
<b>Authors:</b>	<b>L. MEGALA, B. Devanathan</b>					
<b>Paper Title:</b>	<b>High Performance SiGe Power HBTs for Portable Microwave Applications</b>					

5.	<p><b>Keywords:</b> SiGe HBTs, HFETs, cut-off frequency, breakdown voltage, transconductance.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>N. Zerounian, F. Aniel, B. Barbalat, P.Chevalier, and A. Chantre, "500 GHz cutoff frequency SiGe HBTs," Electronics Letters, vol.43, pp. 774-775, July 2007.</li> <li>Z. Xu, G. Niu, L. Luo, P. S. Chakraborty, P.Cheng, D. Thomas, and J. D. Cressler, "Cryogenic RF Small-Signal Modeling and Parameter Extraction of SiGe HBTs," IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF'09, pp.1-4, Jan 2009.</li> <li>S. C. Jain, Germanium-Silicon Strained Layers and Heterostructures: Academic Press, Inc. USA, 1994. International Journal of Emerging Science and Engineering (IJESE) ISSN: 2319-6378, Volume-1, Issue-6, April 2013 27</li> <li>S. K. Mandal, G. K. Marskole, K. S. Chari, and C. K. Maiti, "Transit time components of a SiGeHBT at low temperature," Proc. 24th International Conference on Microelectronics, vol. 1, pp. 315-318, May 2004.</li> <li>Z. R. Tang, T. Kamins, and C. A. T. Salama, "Analytical and experimental characteristics of SiGe HBT with thin u-Si : H emitters," Solid State Electron., vol. 38, pp. 1829-1834, 1995.</li> <li>V. S. Patri and M. J. Kumar, "Profile Design Considerations for minimizing base transit time in SiGe HBT's," IEEE Tran. on Electron Devices, vol. 45, pp. 1725-1731, Aug 1998.</li> <li>K. H. Kwok and C. R. Selvakumar, "Profile design considerations for minimizing base transit time in SiGe HBTs for all levels of Injection before onset of Kirk effect," IEEE Tran. On Electron Devices, vol. 48, pp. 1540-1549,2001.</li> <li>A. Zareba, L. Lukasiak, and A. Jakubowski, "Modeling of SiGe-base heterojunction bipolar transistor with Gaussian doping distribution," Solid-State Electron., vol. 45, pp. 2029-2032, 2001.</li> <li>H. Kroemer, "Two integral relations pertaining to electron transport through a bipolar transistor with a nonuniform energy gap in the base region," Solid-State Electron., vol. 28, pp. 11011103, 1985.</li> <li>M. Hassan, T. Rahman, and M. Khan, "Analytical Model for Base Transit Time of a Bipolar Transistor with Gaussian-Doped Base," Solid-State Electronics, vol. 50, pp. 327-332, March 2006.</li> <li>R.Lai, et al., Proceedings of the 2007 IEEE International Electron Devices Meeting, 609 (2007).</li> <li>W.Snodgrass, et al., Proceedings of the 2006 IEEE International Electron Devices Meeting, 22.1.1 (2006).</li> <li>W.Snodgrass, et al., Proceedings of the 2007 IEEE International Electron Devices Meeting, 663 (2007).</li> <li>W.Snodgrass, et al., 2008 CS MANTECH Digest of papers, 14.2 (2008).</li> <li>M.Rohner, et al., IEEE Transactions on Electron Devices, 49, 213 (2002).</li> <li>W.R.Eisenstadt, et al., Components, Hybrids, and Manufacturing Technology, IEEE Transactions on 15, 483 (1992).</li> <li>K.Lee, D.H. Cho, K.W.Park, B.Kim, "Improved VBIC Model for SiGe HBTs with a Unified Model of Heterojunction Barrier Effects", IEEE Transactions on Electron Devices, vol. 53, no.4, 743, 2006.</li> <li>S.M.Sze, Semiconductor Devices, Physics and Technology John Wiley and Sons, Inc 2005, pp.151.</li> <li>A.Guitierrez-Aitken, E.Kaneshiro, B.Tang, J. Notthoff, P. Chin, D. Streit, and A. Oki, B69 GHz frequency divider with a cantilevered base InP DHBT, in IEDM Tech. Dig., 1999, pp.779-782</li> <li>N.D.Aurora, J.R.Houser and D.J.Roulston, "Electron and Hole Mobilities in silicon as a function of Concentration and temperature", IEEE Transactions on Electron Devices, vol.ED29, no.2, pp 292, 1982.</li> </ol>	23-27
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6.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><b>Authors:</b></td> <td><b>Dushyant R. Bhimani, Jayeshkumar Pitroda, Jaydev J. Bhavsar</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Innovative Ideas for Manufacturing of the Green Concrete by Utilizing the Used Foundry Sand and Pozzocrete</b></td> </tr> </table> <p><b>Abstract:</b> Eco-efficient and low cost concrete can be produced by blending various ratios of fine aggregate and cement with used foundry sand and Pozzocrete. As a partial replacement of cement in concrete by Pozzocrete P60, which is a processed quality assured fly ash introduces many benefits from economy, technical and environment point of view. Metal casting process generate several kinds of waste, used foundry sand is the main waste. Used foundry sand is major problem for Indian Small and medium scale Foundry. Since used foundry sand make intensive use of sand as primary direct material, the regeneration of this sand can be considered as main factor in environmental performance to achieve sustainable development. This paper presents the results obtained of the concrete having mix proportion 1:1.48:3.21 in which cement is partially replaced by Pozzocrete P60 as 30% by weight of cement; and fine aggregate is partially replaced by used foundry sand obtained from ferrous and non-ferrous metal casting industries as 10%, 30% and 50% by weight of fine aggregate. For this study, five sets of mixture proportions were made. First (A0) were the standard mix containing no Pozzocrete and no used foundry sand, with regional fine aggregate and coarse aggregate. Second mix (C0) contained 30% Pozzocrete P60 as a replacement of cement. Other mixes (C1, C2 and C3) contained Pozzocrete P60 (30%) plus used foundry sand (10%, 30% and 50%) respectively. The compressive strength of each sample is carried out at 7, 14 and 28 days. The water absorption test is also carried out at 28 days. This research was performed to achieve technical, ecological and economic benefits by utilizing the huge amounts of used foundry sand and Pozzocrete, produced every year, in India and elsewhere.</p> <p><b>Keywords:</b> Pozzocrete P60, used Foundry Sand, Partial replacement, Concrete, Compressive strength, Fine aggregate, Cost.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>Abichou T. Benson, C. Edil T., 1998a.Database on beneficial reuse of foundry by- products. Recycled materials in geotechnical applications, Geotech. Spec. Publ.No.79, C. Vipulanandan and D.Elton, eds., ASCE, Reston, Va., 210-223</li> <li>Bemben,S.M.,Shulze,D.A.,1993.The influence of selected testing procedures on soil/geomembrane shear strength measurements.Proc.,Geosynthetics '93,Industrial Fabrics Association International,St.Paul,Minn.,619-631.</li> <li>Bemben, S.M., Shulze, D.A., 1995.The influence of testing procedures on clay/geomembrane shear strength measurements. Proc. Geosynthetics '95, IFAI, St.Paul, Minn., 1043-1056.</li> <li>Fredlund, D.G., Morgenstern, N.R., Widger, R.A., 1978.Shear strength of unsaturated soils.Can.Geotech.J.,Ottawa,15(3),313-321.</li> <li>IS: 8112-1989, Specifications for 43-Grade Portland cement, Bureau of Indian Standards, New Delhi, India.</li> <li>IS: 383-1970, Specifications for coarse and fine aggregates from natural sources for concrete, Bureau of Indian Standards, New Delhi, India.</li> <li>IS: 10262-1982, Recommended guidelines for concrete mix design, Bureau of Indian Standards, New Delhi, India.</li> <li>IS: 1199-1959, Indian standard methods of sampling and analysis of concrete, Bureau of Indian Standards, New Delhi, India.</li> <li>IS: 516-1959, Indian standard code of practice- methods of test for strength of concrete, Bureau of Indian Standards, New Delhi, India.</li> <li>Javed, S., Lovell, C., 1994.Use of Waste foundry sand in Highway construction.Rep. JHRP/INDOT/FHWA-94/2J, Final REP., Purdue School of Engg., West Lafayette, Ind.</li> </ol>	<b>Authors:</b>	<b>Dushyant R. Bhimani, Jayeshkumar Pitroda, Jaydev J. Bhavsar</b>	<b>Paper Title:</b>	<b>Innovative Ideas for Manufacturing of the Green Concrete by Utilizing the Used Foundry Sand and Pozzocrete</b>	28-32
<b>Authors:</b>	<b>Dushyant R. Bhimani, Jayeshkumar Pitroda, Jaydev J. Bhavsar</b>					
<b>Paper Title:</b>	<b>Innovative Ideas for Manufacturing of the Green Concrete by Utilizing the Used Foundry Sand and Pozzocrete</b>					

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<b>7.</b>	<b>Authors:</b>	<b>Bhagia Nidhi, Manmohan Sharma</b>	<b>33-35</b>
	<b>Paper Title:</b>	<b>Enhancing the Security in Ad-hoc On-Demand Distance Vector</b>	
	<p><b>Abstract:</b> MANET is a collection of wireless nodes connected by wireless links without any fixed infrastructure. For communication, a temporary path is established between the nodes. As nodes are mobile, the structure of network changes dynamically. Due to dynamic topology and no centralized monitoring makes it difficult to provide a secure network. So it is vulnerable to attack and one of attack is called black hole attack. In this paper, we will enhance the security. The proposed mechanism will identify the behavior of malicious node in a MANET.</p> <p><b>Keywords:</b> AODV, Black Hole Attack, Malicious Node, MANET.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Kamarularifin Abd. Jalil, Zaid Ahmed, Jamalul-Lail Ab Manan Mitigation of Black Hole Attacks for AODV Routing protocol.</li> <li>2. Gurpreet Singh, Atinderpal Singh, Anantdeep Kaur “Performance Evaluation of Aodv and Dsr Routing Protocols for VBR Traffic in Mobil Adhoc Networks”, International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622 Vol. 2, Issue 5, pp.1607-1610, October 2012.</li> <li>3. Govind Sharma, Manish Gupta “Black Hole Detection in MANET Using AODV Routing Protocol”, International Journal of Soft computing and Engineering (IJSCE) ISSN: 2231-2307, January 2012.</li> <li>4. Amol A. Bhosle, Tushar P. Thosar and Snehal Mehatre “Black-Hole and Wormhole Attack in Routing Protocol AODV in MANET”, International Journal of computer Science, Engineering and Applications (IJCSSEA) Vol.2, No.1, February 2012</li> <li>5. Vivek Sharma, Amit Baghel “Analysis of AODV and DSR in Presence of Wormhole Attack in Mobile Ad-hoc Network”, International Journal of Engineering science and technology, vol.2 (11), 2010, 6657-6662.</li> <li>6. Subash Chandra Mandhata, Dr. Surya Narayan Patro ” A Counter Measure to Black Hole Attack on AODV Based Mobile Ad-hoc Networks”, International Journal of Computer and Communication Technology (IJCCCT), 2011.</li> <li>7. Marjan Kuchaki Rafsanjani, Zahra Zahed Anvari, Shahla Ghasemi “Methods of Preventing and Detecting Black/Gray Hole Attacks on AODV-based MANET”, IJCa, NSC, 2011.</li> <li>8. Satoshi Kurosawa, Hidehisa Nakayama, Nei Kato, Abbas Jamalipour, and Yoshiaki Nemoto “Detecting Blackhole Attack on AODV-based Mobile Ad Hoc Networks by Dynamic Learning Method “, International Journal of Network Security, Vol.5, No.3, PP.338–346, Nov. 2007</li> <li>9. Nital Mistry, Devesh C Jinwala, Member, IAENG, Mukesh Zaveri “Improving AODV Protocol against Blackhole Attacks”, International MultiConference of Engineers and Computer Scientists, march 17-19, 2010, hong Kong.</li> <li>10. Rajeshwar Singh, Dharmendra K Singh, Lalan Kumar ” Performance Evaluation of DSR and DSDV Routing Protocols for Wireless Ad Hoc Networks”, Int. J. Advanced Networking and Applications 732, Pages: 732-737 (2011).</li> <li>11. Prem Chand, Deepak Kumar “Performance Comparison of Two On-Demand Routing Protocols for Mobile Ad-hoc Networks” , International Journal of Advances in Engineering &amp; Technology, Sept 2011.</li> <li>12. Madhusudhananagakumar KS, G. Aghila “A Survey on Black Hole Attacks on AODV Protocol in MANET”, International Journal of Computer Applications (0975 – 8887) Volume 34– No.7, November 2011.</li> <li>13. Sirisha Medidi and Peter Cappelto “History-based route selection for reactive ad hoc routing protocols”, Pullman 99164-2752, USA.</li> <li>14. Nilesh P. Bobade, Nitiket N. Mhala ” Performance Evaluation of AODV and DSR On-Demand Routing Protocols with varying MANET Size”, International Journal of Wireless &amp; Mobile Networks (IJWMN) , February 2012..</li> <li>15. Yi Xu, Wenge Wang “Detecting and Migrating Dos Attacks in Wireless Networks without affecting the normal behaving nodes”, 1-4244-1513, IEEE, 2007 .</li> </ol>		

	<b>Authors:</b>	<b>Roohi Sharma</b>	
	<b>Paper Title:</b>	<b>Need for an Intrusion Detection System: A Systematic Review</b>	
	<p><b>Abstract:</b> The continuous increase within network size and its complexity, securing computer systems from attacks becomes important and a challenge. Because of dramatically increase in number of attacks, intrusion detection on internet becomes important and heated research field in computer science. The goal of intrusion detection is to identify or try to detects intrusion attempts like unauthorized use, misuse, abuse of computer systems by either internal or external penetrators, so that action may be taken to repair the damage later. This paper provides the review of existing techniques in intrusion detection to detect attacks.</p> <p><b>Keywords:</b> Attacks, intrusion detection system, intrusion prevention system, network security, worms.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. M. Darji, B. Trivedi, “Survey of Intrusion Detection and Prevention System in MANETs based on Data Gathering Techniques,” IJAIS,</li> </ol>		

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9.	<table border="1"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>Sunil Patel, Deepak Kulhare, Arif Khan</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Secure Software Development a Survey</b></td> </tr> </table>	<b>Authors:</b>	<b>Sunil Patel, Deepak Kulhare, Arif Khan</b>	<b>Paper Title:</b>	<b>Secure Software Development a Survey</b>	41-44
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	<b>Paper Title:</b>	<b>Secure Software Development a Survey</b>				
<p><b>Abstract:</b> Technology and its applications are raises day by day fashion, in our daily life we are various times interacted with different kinds of computer and its application that shows effects of technology in our daily life. To design and deploy an application that helps us on different utilities are made possible using the software engineering and its approaches. In this paper we provide the different aspects and issues on the traditional software development methodology, and discuss the proposed solution in the direction of optimize the approach to find better solutions with less effort and time. Additionally we focus mainly on the vulnerabilities in software engineering at the time of development and their solution. After all we propose a new way for scan and trace the vulnerabilities in software application development.</p> <p><b>Keywords:</b> Vulnerabilities, software development, security, processes.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. A Framework to Detect and Analyze Software Vulnerabilities- Development Phase Perspective, International Journal of Recent Trends in Engineering Vol 2, No. 2, November 2009</li> <li>2. The Role of the Security Analyst in the Systems Development Life Cycle, SANS Institute InfoSec Reading Room, Brad Gray, MBA GIAC Security Essentials Certification (GSEC Practical Assignment) January 12, 2005.</li> <li>3. NEXT GENERATION SOFTWARE SECURITY THROUGH TESTING STAGE OF SDLC, Vidyabhushan A. Upadhye1 and Shashank D. Joshi, IJCS Vol. 2, No. 2, July-December 2011, pp. 311-313</li> <li>4. REVIEW ON COMMON CRITERIA AS A SECURE SOFTWARE DEVELOPMENT MODEL, international Journal of Computer Science &amp; Information Technology (IJCSIT) Vol 4, No 2, April 2012, DOI: 10.5121/ijcsit.2012.4207 83</li> <li>5. Baking in Security During the Systems Development Life Cycle, CROSSTALK The Journal of Defense Software Engineering, March 2007</li> <li>6. SOURCE CODE ANALYSIS TO REMOVE SECURITY VULNERABILITIES IN JAVA SOCKET PROGRAMS: A CASE STUDY, International Journal of Network Security &amp; Its Applications (IJNSA), Vol.5, No.1, January 2013</li> <li>7. Software Vulnerabilities, Banking Threats, Botnets and Malware Self-Protection Technologies, IJCSI International Journal of Computer Science Issues, Vol. 8, Issue 1, January 2011 ISSN (Online): 1694-0814 www.IJCSI.org</li> <li>8. Design and Development of Software for Launcher Control System, Department of Computer Engineering and Information Technology College of Engineering, Pune - 411005. June 2012</li> </ol>						
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<p><b>Abstract:</b> In this paper, a face recognition method based on simultaneous sparse approximations under varying illumination is used. This method consists of two main stages. In the first stage, a dictionary is learned for each face class based on given training examples which minimizes the representation error with a sparseness constraint. In the second stage, a novel image is projected onto the span of the atoms in each learned dictionary. The resulting residual vectors are then used for classification. Furthermore to handle variations in lighting conditions an image relighting technique based on a non-stationary stochastic filter is used to generate multiple frontal images of the same person with variable lighting. As a result, given algorithm has the ability to recognize human faces with good accuracy even when only a single or a very few images are provided for training.</p> <p><b>Keywords:</b> Albedo, relighting, simultaneous sparse signal representation.</p>						
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11.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Pradeep Gurunathan, N. Ishwarya, V. Sridevi, C. Nandhini, S. Deepalakshmi</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>High-Dimensional Confidential Data Mash up using Service- Oriented Architecture</b></td> </tr> </table> <p><b>Abstract:</b> Mash up is integrating different service providers to expertise and to deliver highly customizable services to their customers. Simply joining multiple private data sets together would reveal the sensitive information to the other data providers. The integrated (mash up) data could potentially sharpen the identification of persons and therefore, expose their person-specific sensitive information that was not available before the mash up. The mash up data from multiple sources often contains many data attributes. When enforcing a established privacy model such as K-anonymity, the high-dimensional data would assit from the problem known as the curse of high dimensionality, resulting in ineffective data for further data analysis. In this paper, we introduced a new algorithm called Modified privacy preserving high dimensional confidential (MPHDC) mash up algorithm to provide the high dimensional security to the user from the data provider.</p> <p><b>Keywords:</b> Confidential mash up, High dimensionality, Mash up service, etc.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. C. Jackson and H.J. Wang (2007), "Subspace: Secure Cross-Domain Communication for Web Mashup," Proc. 16th Int'l Conf. World Wide Web, pp. 611-620.</li> <li>2. Jhingran, "Enterprise Information Mashups: Integrating Information, Simply," Proc. 32nd Int'l Conf. Very Large Data Bases, pp. 3-4, 2006.</li> <li>3. B.C.M. Fung, K. Wang, and P.S. Yu (May 2007), "Anonymizing Classification Data for Privacy Preservation," IEEE Trans. Knowledge and Data</li> <li>4. L. Sweeney (2002) "Achieving k-Anonymity Privacy Protection Using Generalization and Suppression," Int'l J. Uncertainty, Fuzziness, and Knowledge-Based Systems.</li> <li>5. P. Samarati and L. Sweeney (June 1998), "Generalizing Data to Provide Anonymity when Disclosing Information," Proc. 17th ACM SIGACT-SIGMOD-SIGART Symp. Principles of Database Systems, p. 188</li> <li>6. Y. Lindell and B. Pinkas (2009), "Secure Multiparty Computation for Privacy-Preserving Data Mining," J. Privacy and Confidentiality, vol. 1, no. 1, pp. 59-98</li> <li>7. Z. Yang, S. Zhong, and R.N. Wright (2005), "Privacy-Preserving Classification of Customer Data without Loss of Accuracy," Proc. Fifth SIAM Int'l Conf. Data Mining, pp. 92-102</li> </ol>	<b>Authors:</b>	<b>Pradeep Gurunathan, N. Ishwarya, V. Sridevi, C. Nandhini, S. Deepalakshmi</b>	<b>Paper Title:</b>	<b>High-Dimensional Confidential Data Mash up using Service- Oriented Architecture</b>	48-51
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	<ol style="list-style-type: none"> <li>2. <a href="http://en.wikipedia.org/wiki/Database_security">http://en.wikipedia.org/wiki/Database_security</a> 27th Oct, 2010 1:00am</li> <li>3. Amichai Shulman; Top Ten Database Security Threats, How to Mitigate the Most Significant Database Vulnerabilities, 2006 White Paper.</li> <li>4. Tanya Bacca; Making Database Security an IT Security Priority A SANS Whitepaper – November 2009</li> <li>5. <a href="http://www.freetecheams.com/computers-tips/computer-tips/database-security.html">http://www.freetecheams.com/computers-tips/computer-tips/database-security.html</a></li> <li>6. Kadhem, H.; Amagasa, T.; Kitagawa, H.; A Novel Framework for Database Security based on Mixed Conference on; Publication Year: 2009, Page(s): 163-170</li> <li>7. Luc Bouganim; Yanli GUO; Database Encryption; Encyclopedia of Cryptography and Security, S. Jajodia and H. van Tilborg (Ed.) 2009, page(s): 1-9</li> <li>8. Khaleel Ahmad; Jayant Shekhar; Nitesh Kumar; K.P. Yadav; Policy Levels Concerning Database Security; International Journal of Computer Science &amp; Emerging Technologies (E-ISSN: 2044-6004) 368 Volume 2, Issue 3, June 2011, page(s); 368-372</li> <li>9. Gang Chen; Ke Chen; Jinxiang Dong; A Database Encryption Scheme for Enhanced Security and Easy Sharing; Computer Supported Cooperative Work in Design, 2006. CSCWD '06. 10th International Conference on ; Publishing year 2006, page(s): 1 – 6</li> <li>10. Dr. Anwar Pasha Abdul GafoorDeshmukh; Dr. Anwar Pasha Abdul GafoorDeshmukh; Transparent Data Encryption- Solution for Security of Database Contents; (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 2, No.3, March 2011</li> <li>11. Tingjian Ge, Stan Zdonik; Fast, Secure Encryption for Indexing in a Column-Oriented DBMS; 2007 IEEE 23rd International Conference on Data Engineering (2007) Publisher: IEEE, Page(s): 676-685.</li> <li>12. Lianzhong Liu and Jingfen Gai; A New Lightweight Database Encryption Scheme Transparent to Applications; Published in Industrial Informatics, 2008. INDIN 2008. 6th IEEE International Conference Issue Date: 13-16 July 2008 On page(s): 135 – 140</li> </ol>					
13.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Authors:</b></td> <td><b>R. Sudha, Femina Sarbudeen, Sharmila Hussain</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Electric Field Effects on Biological Issues- A Case Study</b></td> </tr> </table> <p><b>Abstract:</b> Due to the population explosion of the world, towns are expanding, many building construct high voltage overhead power transmission lines. Because of power demand we need huge amount of power for over long distances. Large transmission lines configurations with high voltage and current level generates large value of electric and magnetic fields stresses which affect the human being and the nearby objects located at ground surfaces. But medical studies have shown that a low frequency EM field accelerates the healing of bone fractures. The non ionizing radiation causes the health effects in human which is low frequency electromagnetic fields which is produced by the electricity systems. This is not affect only the human ,it will affect the animals, plants, vehicles, fences, pipelines etc.</p> <p><b>Keywords:</b> Extra High Voltage Line (EHV), Electro Magnetic Field (EMF), Ultra High Voltage Line (UHV).</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Extra high voltage ac transmission engineering-Rakosh Das begamudre,</li> <li>2. Matthias Otto*,Karl Ernst von Muhlendahl-"EMF-Do they play a role in children's environmental health (CEH)?"-Kinderunwelt gGmbH of the german academy of paediatrics Adolescent Medicine, Westerbreite 7,49084 Osnabruck, Germany-Int J.Hyg.Enviroin.Health 210(2001)635-644,</li> <li>3. Edwin L.Carstensen-Department of Electrical Engineering, The University of Rochester. Rochester, NY 14627,USA-Journal of electrostatics 39 (1997) 157-174,</li> <li>4. Martin Blank-Department of Physiology and Cellular Biophysics,Columbia University,Newyork,NY 10032,USABiosystems 35 (1995) 175-178,</li> <li>5. Madurai kamaraj University-S.Somasekaran,</li> <li>6. SSGBCOE&amp;T,Electronics and Communication Engineering-Girish Kulkarni 1,Dr.W.Z.Gandhare.</li> </ol>	<b>Authors:</b>	<b>R. Sudha, Femina Sarbudeen, Sharmila Hussain</b>	<b>Paper Title:</b>	<b>Electric Field Effects on Biological Issues- A Case Study</b>	58-60
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<b>Authors:</b>	<b>G. Murugaboopathi, G. Sankar, T. Praveen</b>					
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<b>Authors:</b>	<b>Mada Yaswanth Manikanta, Bandarupalli Pavan Kumar, P. E. S. K. Sharan, M. V. D. Prasad</b>					
<b>Paper Title:</b>	<b>Optimum Zigbee based Wireless Control of Industrial Automation Processes</b>					



	<p><b>Keywords:</b> PLC, Ladder Logic, Automation, Microcontroller, Wireless Control.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Industrial Automation System XXXII National Systems Conference, NSC 2008</li> <li>2. <a href="http://www.pacontrol.com/download/Industrial-Automation-Pocket-Guide.pdf">http://www.pacontrol.com/download/Industrial-Automation-Pocket-Guide.pdf</a></li> <li>3. <a href="http://en.wikipedia.org/wiki/Automation">http://en.wikipedia.org/wiki/Automation</a></li> <li>4. <a href="http://en.wikipedia.org/wiki/Programmable_logic_controller">http://en.wikipedia.org/wiki/Programmable_logic_controller</a></li> <li>5. <a href="http://en.wikipedia.org/wiki/sensors">http://en.wikipedia.org/wiki/sensors</a></li> <li>6. <a href="http://www.atmel.com/avr">http://www.atmel.com/avr</a></li> <li>7. Shizhuang Lin, Jingyu Liu, Yanjun Fang. "ZigBee Based Wireless Sensor Networks and Its Applications in Industrial", IEEE International Conference on Automation and Logistics, 2007 .pp:1979 – 1983.</li> <li>8. Handbook of Design, Manufacturing and Automation by Richard C. Dorf, Andrew Kusiak.</li> <li>9. A web-based computer-aided pneumatic circuit design software by Chiaming Yen, Wu-Jeng Li - 2003 - Simulation Modelling Practice and Theory.</li> <li>10. Industrial Automation: Circuit Design and Components</li> <li>11. Wiley-Interscience publication, Author David W. Pessen, Edition illustrated, Publisher Wiley, 1989, ISBN 0471600717, 9780471600718</li> </ol>					
16.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Parul Mohindru, Vikshant Khanna, Rajdeep Singh</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Forest Fire Detection: Various Approaches</b></td> </tr> </table> <p><b>Abstract:</b> Forest fire has been a severe risk to the forest capital and individual life from a long time. The threat could effectively be mitigated by timely and precise detection. In past there were many methods used for detection of fires among them were cameras, satellite images method, human observation. Wireless sensor network was introduced to remove the drawbacks of existing techniques. In this paper we will review different papers and will try to find out the advantages and disadvantages of existing techniques.</p> <p><b>Keywords:</b> Artificial neural network, Fuzzy logic, Image processing, Intelligent system, Satellite, Wireless sensor networks.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. YunusEmreAslan, IbrahimKorpeoglu, and OzguUluslo, "A framework for use of wireless sensor networks in forest fire detection and monitoring," Science direct, vol 36 pp.1-12, Mar 2012.</li> <li>2. Begoña C. Arrue, AnibalOllero, and J. Ramiro Martinez de Dios, "An Intelligent System for False Alarm Reduction in Infrared Forest-Fire Detection," IEEE, vol 15, pp.64-73, May 2000.</li> <li>3. HamdySoliman, Komal Sudan, and Ashish Mishra, "A Smart Forest-Fire Early Detection Sensory System:Another Approach of Utilizing Wireless Sensor andNeural Networks*," IEEE", 2010, pp.1900-1904.</li> <li>4. Vikshant Khanna, Rupinder Kaur Cheema,"Fire Detection Mechanism using Fuzzy Logic,"International Journal of Computer Application (0975-8887) Volume 65- No 12, March, 2013.</li> <li>5. Parul Mohindru, Rajdeep Singh,"Multi-Sensor Based Forest Fire Detection System," International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume-3, Issue-1, March 2013.</li> <li>6. Stuart Matthews, AndrewSullivan , JimGould , RichardHurley , PeterEllis , JohnLarmour, "Field evaluation of two image-based wildland fire detection systems,"Science direct , pp54-61,November 2011.</li> <li>7. S.D. Wanga,, L.L. Miao, G.X. Peng, "An Improved Algorithm for Forest Fire Detection Using HJ Data ,," Science direct,pp.140-150.</li> <li>8. E. Zervas, A. Mpimpoudis, C. Anagnostopoulos, O. Sekkas, S. Hadjiefthymiades,"Multisensor data fusion for fire detection," Information Fusion 12, 2011.</li> <li>9. A. Jaber, F. Guarnieri, J.L. Wybo, "Intelligent software agents for forest fire prevention and fighting,"Science direct,pp.1-15.</li> </ol>	<b>Authors:</b>	<b>Parul Mohindru, Vikshant Khanna, Rajdeep Singh</b>	<b>Paper Title:</b>	<b>Forest Fire Detection: Various Approaches</b>	68-70
<b>Authors:</b>	<b>Parul Mohindru, Vikshant Khanna, Rajdeep Singh</b>					
<b>Paper Title:</b>	<b>Forest Fire Detection: Various Approaches</b>					
17.	<table border="1"> <tr> <td><b>Authors:</b></td> <td><b>Hemant Singh Mittal, Harpreet Kaur</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Face Recognition Using PCA &amp; Neural Network</b></td> </tr> </table> <p><b>Abstract:</b> The Face Recognition Scheme Based on Neural Network and PCA technique for the detection of the persons. I have used the PCA technique which involves a mathematical method that transforms a number of possibly correlated variables into a smaller number of uncorrelated variables called principal components. Pre-processing stage –In this stage the images are made zero-mean and unit- variance. Dimensionality Reduction stage: (PCA) - Input data is reduced to a lower dimension to facilitate classification. In this stage dimension are reduced. Classification stage - The reduced vectors output from PCA are applied to the BPNN classifier for the training of the data and used to obtain the recognized image. I got good results from this proposed algorithm, MATLAB platform is used on various images to detect.</p> <p><b>Keywords:</b> Program Component Analysis, Face detection, Eigen values, Back Propagation neural networks.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. B.K.Gunturk,A.U.Batur, and Y.Altunbasak,(2003) "Eigenface- domain super-resolution for face recognition," IEEE Transactions of . Image Processing. vol.12, no.5,pp. 597-606.</li> <li>2. M.A.Turk and A.P.Petland, (1991) "Eigenfaces for Recognition," Journal of Cognitive Neuroscience. vol. 3, pp.71-86.</li> <li>3. T.Yahagi and H.Takano,(1994) "Face Recognition using neural networks with multiple combinations of categories," International Journal of Electronics Information and Communication Engineering., vol.J77-D-II, no.11, pp.2151-2159.</li> <li>4. S.Lawrence, C.L.Giles, A.C.Tsoi, and A.d.Back, (1993) "IEEE Transactions of Neural Networks. vol.8, no.1, pp.98-113.</li> <li>5. C.M.Bishop,(1995)"NeuralNetworks for Pattern Recognition" London, U.K.:Oxford University Press.</li> <li>6. Kailash J. Karande Sanjay N. Talbar "Independent Component Analysis of Edge Information for Face Recognition" International Journal of Image Processing Volume (3) : Issue (3) pp: 120 -131.</li> <li>7. Matthew Turk and Alex Pentland " vision and Modeling Group, The Media Laboratory , Massachusetts institute of Technology. Fernando L. Podio and Jeffrey S. Dunn2</li> <li>8. Jain, Fundamentals of Digital Image Processing, Prentice-Hall Inc., 1982.</li> <li>9. <a href="http://www.ijser.org">http://www.ijser.org</a>International Journal of Scientific &amp; Engineering Research Volume 2, Issue 6, June-2011</li> <li>10. E. Trucco, and A. Verri, Introductory Techniques for 3-D Computer Vision, Prentice-Hall Inc., 1998.</li> <li>11. L. G. Shapiro, and G. C. Stockman, Computer Vision, Prentice-Hall Inc., 2001.</li> <li>12. Phil Brimblecombe, 2005. Face Detection Using Neural Networks, Bachelor Thesis. School of Electronics and Physical Sciences, Department of Electronic Engineering. University of Surrey.</li> </ol>	<b>Authors:</b>	<b>Hemant Singh Mittal, Harpreet Kaur</b>	<b>Paper Title:</b>	<b>Face Recognition Using PCA &amp; Neural Network</b>	71-75
<b>Authors:</b>	<b>Hemant Singh Mittal, Harpreet Kaur</b>					
<b>Paper Title:</b>	<b>Face Recognition Using PCA &amp; Neural Network</b>					

	<p>13. Farah Azirar, 2004. Facial Expression Recognition. Bachelor Thesis. School of Electronics and Physical Sciences, Department of Electronic Engineering, University of Surrey.</p> <p>14. Konrad Rzeszutek, <a href="http://darnok.com/projects/facerecognition">http://darnok.com/projects/facerecognition</a> Terrillion, J.C., Shirazi, M., Fukamachi, H., and Akamatsu, S. (2000).</p> <p>15. Rowley, H., Baluja, S. and Kanade, T., Neural Network-Based Face Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 20, No. 1, January, 1998, pp. 2338.<a href="http://www.ri.cmu.edu/pubs/pub_926_text.html">http://www.ri.cmu.edu/pubs/pub_926_text.html</a></p> <p>16. Duda, R.O., Hart, P.E. and Stork, D.G. Pattern Classification. Wiley, New York, 2001.</p> <p>17. B.K.Gunturk, A.U.Batur, and Y.Altunbasak, (2003) "Eigenfacedomain super-resolution for face recognition," IEEE Transactions of Image Processing. vol.12, no.5.pp. 597-606.</p> <p>18. Paul Viola and Michael Jones. Rapid object detection using a boosted cascade of simple features. In CVPR, 2001,<a href="http://citeseer.nj.nec.com/viola01rapid.html">http://citeseer.nj.nec.com/viola01rapid.html</a></p> <p>19. Meng Joo Er, Weilong Chen, Shiqian Wu. High-Speed Face Recognition Based on Discrete Cosine Transform and RBF Neural Networks. IEEE Transactions on Neural Networks, Vol 16, No. 3, May 2005</p>	
18.	<p><b>Authors:</b> Naresh Kumar, Pinky Chandwal</p> <p><b>Paper Title:</b> Comparison of SDLC-2013 Model with Other SDLC Models by Using COCOMO</p> <p><b>Abstract:</b> There exist a large number of Models to develop software. Each model has its own characteristics, limitations and working environment. According to the requirements, software industry people use different models to develop different software. Waterfall model is generally used for development of software that is small with clear and stable requirements. While prototype model is used for the development of that software whose requirements are unclear and unstable, Incremental model is similar to the waterfall model but the software is developed in increments. Due to different architecture of SDLC models, each of them leads to different LOC provided that the same software is being developed. Simply we can put this discussion as different SDLC if used for developing same software then the amount of LOC that would be coded will be different. In this study we compare software build by different SDLC models in terms of cost schedule and effort estimated by using COCOMO.</p> <p><b>Keywords:</b> SDLC, Software Development, SDLC Phases, LOC, COCOMO Model.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Naresh Kumar , A. S. Zadgaonkar, Abhinav Shukla - Estimation of software Quality by Using fuzzy (FIS) : volume 2, issue-1 IISCE.</li> <li>2. K. K. Aggarwal, Yogesh Singh Software Engineering 3rd Edition.</li> <li>3. Software Development Life Cycle (SDLC) – the five common principles.htm</li> <li>4. Software Methodologies Advantages &amp; disadvantages of various SDLC models.mht</li> <li>5. Comparative analysis of different types of models in Software Development Life Cycle, International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE), Volume 2, May 2012, Ms. Shikhamaheshwari, Prof. Dinesh Ch. Jain</li> <li>6. Comparing various SDLC models and the new proposed model on the basis of available methodology, International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE), volume 2, April 2012, Vishwas Massey, Prof. K. J Satao.</li> <li>7. Roger Pressman titled Software Engineering - a practitioner's approach</li> <li>8. Seminar on Software Cost Estimation by Requirements Engineering Research Group, Department of Computer Science, University of Zurich, Switzerland. Prof. Dr. Martin Glinz, Arun Mukhija.</li> <li>9. <a href="http://www.en.wikipedia.org/wiki/COCOMOMODEL">www.en.wikipedia.org/wiki/COCOMOMODEL</a></li> <li>10. <a href="http://www.en.wikipedia.org/wiki/COCOMO_Different_Models">www.en.wikipedia.org/wiki/COCOMO_Different_Models</a></li> </ol>	76-84
19.	<p><b>Authors:</b> Vikshant Khanna, Parul Mohindru</p> <p><b>Paper Title:</b> Performance Analysis of Low Energy Adaptive Clustering Hierarchy (LEACH) Protocol</p> <p><b>Abstract:</b> Based on the research of LEACH protocol, a low energy-consumption routing protocol LEACH-E is proposed in this paper. The new protocol is characterized by each node will send information about its current location and energy level to the cluster head. The simulated algorithm will determine the clusters for that round. Finally, the experimental results show that LEACH-E performs better than LEACH protocol. It not only extends the lifetime of the network, but also improves the energy efficiency. Therefore LEACH-E protocol is an attempt to overcome the most common issue present in wireless sensor network energy efficiency. It is a popular energy efficient adaptive clustering algorithm that forms node clusters based on the received signal strength and uses these local cluster heads as routers to the base station.</p> <p><b>Keywords:</b> Cluster, Energy efficiency, LEACH protocol, Network lifetime, Wireless sensor networks.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Jun Zheng and Abbas Jamalipour. New Jersey, John Wiley &amp; Sons, 2009.</li> <li>2. Wendi Rabiner Heinzelman, Anantha Chandrakasan, and Hari Balakrishnan, "Energy-Efficient Communication Protocol for Wireless Microsensor Networks", Hawaii International Conference on System Sciences – 2000.</li> <li>3. M. Bani Yassein, A. Al-zou'bi, Y. Khamayseh, W. Mardin, "Improvement on LEACH Protocol of Wireless Sensor Network ", International Journal of Digital Content Technology and its Applications Volume 3, Number 2, June 2009.</li> <li>4. Nazia Majadi, "U-LEACH: A Routing Protocol for Prolonging Lifetime of Wireless Sensor Networks ", International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622 <a href="http://www.ijera.com">www.ijera.com</a> Vol. 2, Issue4, July-August 2012, pp.1649-1652.</li> <li>5. Yun Li1,2, Nan Yu1, Weiyi Zhang 3, Weiliang Zhao 1, Xiaohu You2, Mahmoud Daneshmand, "Enhancing the Performance of LEACH Protocol in Wireless Sensor Networks ", IEEE INFOCOM 2011 Workshop on M2MCN-2011.</li> <li>6. M.Shankar, Dr.M.Sridar, Dr.M.Rajani, "Performance Evaluation of LEACH Protocol in Wireless Network ", International Journal of Scientific &amp; Engineering Research, Volume 3, Issue 1, January-2012 1 ISSN 2229-5518.</li> </ol>	85-88
	<p><b>Authors:</b> Ankita Dhankar, Satyajit Anand</p> <p><b>Paper Title:</b> 8-Bit Radix-4 Booth Multiplier Using GDI Technique</p> <p><b>Abstract:</b> An 8-bit radix-4 Booth Multiplier is implemented that demand high speed and low energy operation. It is a good approach if we implement the multiplier as a hybrid architecture of the radix-4/-8 because the radix-8 mode has low power consumption capability, occupying less area and number of partial products obtained in this</p>	

20.	<p>mode are less(<math>N/3</math>). But the detection of the 3B term while computing the partial products is very difficult and it is difficult to implement it on the FPGA board. So by comparing the performances of the two multipliers we suggest to go with the radix-4 multiplier. Compared to a conventional CMOS Multiplier, the proposed multiplier's power delay product is 10% less with the use of only 1656 transistors in comparison to conventional CMOS circuit, which uses 2782 transistors.</p> <p><b>Keywords:</b> Encoder, multiplier, gate-diffusion input (GDI), power consumption, PPG.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. B.S. Chekauer and E.G. Friedman, "A Hybrid Radix-4/Radix-8 Low 75Power Signed Multiplier Architecture", IEEE Trans. Circuits and Systems-II: Analog and Digital Signal Processing, vol. 44, no.8, pp656- 659, Aug. 1997.</li> <li>2. Gyeonghoon Kim, Seungjin Lee, Junyoung Park, and Hoi-Jun Yoo, "A Low-energy Hybrid Radix-4/-8 Multiplier for Portable Multimedia Applications", 978-1-4244-9472-9/11/\$26.00 ©2011 IEEE.</li> <li>3. A.P. Chandrakasan, S.Sheng, and R.W. Broderson, "Low-power CMOS digital design", IEEE J. Solid-State Circuits, vol.27, pp. 473-483, Apr. 1992.</li> <li>4. G. N. Sung, Y. J. Ciou, and C. C. Wang, "A power-aware 2-dimensional bypassing multiplier using cell-based design flow," IEEE International Symposium on Circuits and Systems, May 2008</li> <li>5. H. B. Bakoglu, Circuits, Interconnections, and Packaging for VLSI. Reading, MA: Addison-Wesley, 1990.</li> <li>6. A. Morgenshtein, A. Fish, and I. A. Wagner, "Gate-diffusion input (GDI) – A novel power efficient method for digital circuits: A detailed methodology," in Proc. 14th IEEE Int. ASIC/SOC Conf., Sept. 2001, pp. 39–43.</li> <li>7. "Gate-diffusion input (GDI) – A power efficient method for digital combinatorial circuits," IEEE Trans. VLSI Syst., vol. 10, pp. 566–581, Oct. 2002.</li> <li>8. Ankita Dhankar, Satyajit Anand, "Radix -4/-8 Dual Encoder Block for Multiplier Architecture using GDI Technique," ISSN: 2278 – 1323 International Journal of Advanced Research in Computer Engineering &amp; Technology (IJARCET) Volume 1, Issue 9, November 2012.</li> <li>9. Shiann-Rong Kuang, and Jiun-Ping Wang, "Modified Booth Multipliers With a Regular Partial Product Array", IEEE Trans. vol. 56, no.5, pp404-408, May. 2009.</li> </ol>	89-91
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21.	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;"><b>Authors:</b></td> <td><b>R. Uday Kumar</b></td> </tr> <tr> <td><b>Paper Title:</b></td> <td><b>Distribution of Radial Stresses In Deep Drawing Process</b></td> </tr> </table> <p><b>Abstract:</b> Deep drawing is one of the sheet metal forming processes; it is widely used in industry for making seamless shells, cups and boxes of various shapes. The Fluids are introduced in this area of deep drawing process is get higher in forming limits. In this the viscosity is maintained the major role in the hydro forming-deep drawing process. The Hydraulic pressure can enhance the capabilities of the basic deep drawing process for making metal cups and this hydraulic pressure contributes positively in several ways to the deep drawing process. In hydro assisted deep drawing process, applying the hydraulic pressure in radial direction on the periphery of the blank is obtained through the punch movement with in the fluid chamber. The fluid is taking place in the die cavity and punch chamber and these are connected with the bypass path provided in the die. The pressure is generated in fluid due to punch movement with in the fluid chamber and directed through the bypass path to blank periphery and is to reduce tensile stresses acting on the wall of the semi drawn blank. This fluid creates the fluid film on the upper and lower surfaces of the blank and subsequently reduces frictional resistance. During the process, the blank is taking at centre place in between blank holder and die surface with supporting of pressurized viscous fluid. In this process the radial stresses are produced in the blank due to punch force applied on it, the shear stresses acted by viscous fluid on the both sides of blank, so apply viscosity phenomenon to this analysis. The blank holder pressure is controlled by the radial pressure of fluid and these are equal for uniform deformation of blank to obtain required shape and also elimination of failure of blank in deformation. In this paper, the radial stresses are evaluated through castor oil medium for magnesium alloy using FEA and also the radial stress distribution of magnesium alloys and fluid pressure were studied.</p> <p><b>Keywords:</b> Deep Drawing Process, viscosity, radial Stress and fluid pressure.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. W.Panknin, W.—Mulhauser, —Principles of the hydro form process, I Mittlelungen der forschungges Blechvererbeitung, Vol.24 pp.269-277 (1957).</li> <li>2. J.M. Alexander, —An appraisal of the theory of deep drawingI, Met. Rev.5 Vol.19 pp.349-409 (1960).</li> <li>3. B.Larsen, —Hydromechanic forming of sheet metall, Sheet Met.Ind. pp.162-166 (Feb. 1977).</li> <li>4. S.H. Zhang, J. Danckert,—Development of Hydro-Mechanical Deep DrawingI, Journal of Materials Processing Technology Vol. 83, pp.14-25 (1998).</li> <li>5. K.Nakamura, —Sheet metal forming with hydraulic counter pressureI in Japan, Ann. CIRP Vol.36 (1) pp.191-194 (1987).</li> <li>6. Takeo Nakagawa, Kazubiko Nakamura, Hiroyuki Amino,—Various Applications of Hydraulic Counter Pressure Deep DrawingI, Journal of Materials Processing Technology Vol. 71 pp.160-167 (1997).</li> <li>7. A. EL-DOMIYATI, M.A. SHABARAT, 1993 —Improvement of Deep Drawability by Radially Pressurised FluidI, Int. J. Mach. Tools Manufact. Vol. 35, No.5. pp. 739-749,(1995).</li> <li>8. Lihui LANG, Joachim danckert, Karl Brain Nielsen,— Investigation into Hydro-dynamic Deep Drawing assisted by Radial Pressure part-I.Experimental observations of the forming process of Aluminium AlloyI, Journal of Materials Processing Technology Vol.148 pp.119-131 (2004).</li> <li>9. Lihui LANG, Joachim DANCKERT and Karl Brain NIELSEN, —Forming Process of Strong An-Isotropic Material based on the Hydrodynamic Deep Drawing with Radial PressureI, J. of Mater. Sci. Technol., Vol.21 No.5, 2005.</li> <li>10. Lihui LANG, Joachim danckert, Karl Brain Nielsen, —Investigation into Hydro-dynamic Deep Drawing assisted by Radial Pressure part-II. Numerical Analysis of the Drawing Mechanism and the Process parametersI,J. of Materials Processing Technology Vol.166 pp.150-161 (2005).</li> <li>11. S.Thiruvardchelvan, F.W. Travis,—An Exploration of the Hydraulic-Pressure Assisted Redrawing of CupsI, Journal of Materials Processing Technology Vol.72 pp.117-123 (1997).</li> <li>12. S. Yossifon, J. Tirosh, —on the permissible fluid-pressure path in hydroforming deep drawing processes—analysis of failures and experiments,I Trans. ASMEJ. Eng. Ind. Vol.110, pp.146-152 (1988).</li> </ol>	<b>Authors:</b>	<b>R. Uday Kumar</b>	<b>Paper Title:</b>	<b>Distribution of Radial Stresses In Deep Drawing Process</b>	92-95
<b>Authors:</b>	<b>R. Uday Kumar</b>					
<b>Paper Title:</b>	<b>Distribution of Radial Stresses In Deep Drawing Process</b>					

22.	<b>Authors:</b>	<b>R. Behnood, B. Anvaripour, N. Jaafarzade Haghighi Fard, M. Farasati</b>	
		<b>Paper Title:</b>	
	<p><b>Abstract:</b> One of the major sources of water pollution is oil spills or oily waste waters and removing this pollution is a global concern. Oil spills may be due to the release of crude oil or its products from pipes, tankers, ships, offshore platforms. In general wherever oil is produced, transported, stored and used there will be the risk of a spillage. Nowadays natural sorbents are applied as single solution for oil spills since this technique is effective, rapid and cost saving for cleaning these pollutions and reduce environmental effects. In this paper, raw sugarcane bagasse in different particle sizes was used for the sorption of layer of crude oil from surface of sea water. FTIR analysis of raw bagasse was performed. Effect of time and particle size for dry system and crude oil layer system was evaluated. The results showed that maximum adsorption capacity of raw sugarcane bagasse for dry system and crude oil layer system was about 8 g and 6.6 g crude oil per g sorbent, respectively.</p>		96-99
	<p><b>Keywords:</b> Oil spills, natural sorbents, sugarcane bagasse, adsorption.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. UN, water global annual assessment of sanitation and drinking-water (GLAAS) 2012 report: the challenge of extending and sustaining services, World Health Organization, 2012.</li> <li>2. Annunciado, T.H.D. Sydenstricker S.C. Amico, —Experimental investigation of various vegetable fibers as sorbent materials for oil spills, Marine Pollution Bulletin vol. 50, 2005, pp. 1340-1346.</li> <li>3. M. Hussein, A. A. Amer, A. El-Maghraby, N. A.Taha, —Availability of barley straw application on oil spill clean up: International Journal of Environmental Science and Technology vol. 6, 2009, pp. 123-130.</li> <li>4. L. Vlaev, P. Petkov, A. Dimitrov, S. Genieva, —Cleanup of water polluted with crude oil or diesel fuel using rice husks ash, Journal of the Taiwan Institute of Chemical Engineers, vol. 42, 2011, pp. 59-964.</li> <li>5. C. Cojocar, M. Macoveanu, I. Cretescu, —Peat-based sorbents for the removal of oil spills from water surface: Application of artificial neural network modeling, Colloids and Surfaces A: Physicochemical and Engineering Aspects, vol. 384, 2011, pp. 675-688.</li> <li>6. Shashwat S. Banerjee, Milind V. Joshi, Radha V. Jayaram, —Treatment of oil spill by sorption technique using fatty acid grafted sawdust, Chemosphere vol. 64, 2006, pp. 1026–1031.</li> <li>7. M. Hussein, A.A. Amer, Is.Ib. Sawsan, —Oil spill sorption using carbonized pith bagasse, Global NEST Journal vol.11, 2009, pp. 440-448.</li> <li>8. Xiao-Feng Sun, R. C. Sun, J. X. Sun, —A convenient acetylation of sugarcane bagasse using NBS as a catalyst for the preparation of oil sorption-active materials, Journal of Materials Science vol.38, 2003, pp. 3915-3923.</li> <li>9. M.O. Adebajio, R.L. Frost, J.T. Klopogge, O. Carmody and S. Kokot, —Porous materials for oil spill cleanup: A review of synthesis and absorbing properties, Journal of Porous Materials vol.10, 2003, pp. 159-170.</li> <li>10. D. She, R.C. Sun, G.L. Jones, —Cereal straw as a resource for sustainable biomaterials and biofuels, Elsevier Book, 2010, pp. 209-217.</li> <li>11. M. Hussein, A.A. Amer, I.I. Sawsan, —Oil spill sorption using carbonized pith bagasse: 1. Preparation and characterization of carbonized pith bagasse, Journal of Analytical and Applied Pyrolysis, vol. 82, 2008, pp. 205-211.</li> <li>12. P.C. Brandão, T.C. Souza, C.A. Ferreira, C.E. Hori, L.L. Romanielo, —Removal of petroleum hydrocarbons from aqueous solution using sugarcane bagasse as adsorbent, Journal of Hazardous Materials, vol. 175, 2010, pp. 1106-1112.</li> <li>13. Abd El-Aziz A. Said, Adriane G. Ludwick, Heshmat A. Aglan, —Usefulness of raw bagasse for oil absorption: A comparison of raw and acetylated bagasse and their components, Bioresource Technology, vol.100, 2009, pp. 2219–2222.</li> <li>14. Kathiresan Sathasivam, Mas Rosemal Hakim Mas Haris, —Adsorption kinetics and capacity of fatty acid-modified banana trunk fibers for oil in water, Water, Air, &amp; Soil Pollution An International Journal of Environmental Pollution, vol. 213, 2010, pp. 413-423.</li> </ol>		
23.	<b>Authors:</b>	<b>D. Padma Subramanian, Harinee K</b>	
	<b>Paper Title:</b>	<b>Effect of Wind Speed, Slip and Field Excitation on Dynamic Behavior of Multi-Machine Power Systems with Doubly Fed Induction Generator</b>	
	<p><b>Abstract:</b> This paper work presents a study on the effect of wind speed, slip and field excitation on dynamic behaviour of multi-machine power systems installed with Doubly Fed Induction Generator (DFIG) based Wind Energy Conversion System (WECS). A method to construct linear model of DFIG, a framework for interfacing DFIG with multi-machine power systems, formation of system matrix and eigen-value analysis for the investigation of small signal stability are presented in this paper. A MATLAB program is developed and effectiveness of developed program is tested in a test system interfaced with DFIG. The impact of varying wind speed, slip and field excitation on the small signal stability analysis of multi-machine power system interfaced with DFIG is studied and the results are presented.</p>		100-105
	<p><b>Keywords:</b> Doubly Fed Induction Generator, Wind Energy Conversion System, Multi-Machine System, Small Signal Stability Analysis, Eigen-value Analysis.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. F.Mei., _Small Signal modeling and analysis of doubly fed induction generator in wind power applications_, ph.D.Thesis , Imperial college London, University of London, 2007 .</li> <li>2. J.L. Rueda., Istran Erlich, _Impact of large scale integration of wind power on power system small signal stability_, Proc. IEEE Int. Conf. on power systems, 2011.</li> <li>3. Alvaro Luna, Fransisco Kleber de Arauj Lima, David Santos and Pedro Rodriguez, _Simplified Modelling of doubly fed induction generator for transient studies in wind power applications_, IEEE Transaction Industrial Electronics, 58, 2011.</li> <li>4. R.Peña., R.Cárdenas, J.Proboste, G.Asher and J.Clare, _Sensorless control of doubly-fed induction generators using a rotor-current-based MRAS observer_, IEEE Trans. Ind. Electron., 55, (1), pp. 330–339, 2009.</li> <li>5. R. Cárdenas, R., Peña., J.Clare, G.Asher, and J. Proboste, _MRAS observers for sensorless control of doubly-fed induction generators_, IEEE Trans. Power Electron., 23, (3), pp. 1075–1084, 2008.</li> <li>6. F Bonnet, P.E.Vidal and M.Pietrzak-David, _Dual direct torque control of doubly fed induction machines_, IEEE Trans. Ind. Electron, 54, (5), pp. 2482–2490., 2007.</li> <li>7. G.Abad.,M.A.Rodrigue and J.Poza, _Three-level NPC converter based predictive direct power control of the doubly fed induction machine at low constant switching frequency_, IEEE Trans. Ind. Electron., 55, (12), pp. 4417–4429, 2008.</li> <li>8. W.Qiao, _Dynamic modeling and control of Doubly Fed Induction generator driven by wind turbines_, Proc. IEEE Int. Conf. on Power Systems, 2009 .</li> </ol>		

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**Paper Title:** A Novel Approach for Displaying Data on LCD Directly From PC Using FPGA

**Abstract:** In traditional microcontroller or micro processor based approach, every LCD display is associated with a static input. This input is static and cannot be changed by user easily as and when needed. Thus restricting the flexibility to user can have in updating the data. In this paper, we propose to design a prototype where we interface UART with LCD display through FPGA board so as to provide flexibility of data which is being displayed directly to LCD. The primary goal is to provide serial communication of keyboard character using USART hyper terminal and display it on HD44780 based LCD controller. This prototype can be further enhanced into single chip which is significance to SOC as ASIC. Thus, this design based Device can prove beneficial for future Consumer Electronics Market. In this design, for serial communication, multi UART with configurable baud rate is implemented. The multi UART and LCD driver are implemented with VHDL language and can be integrated into the FPGA to achieve compact, stable and reliable data transmission. The design has been simulated on ModelSim and implemented using Quartus II on Altera DE1 FPGA board.

**Keywords:** UART; Asynchronous serial communication; VHDL; Quartus II; ModelSim, Altera DE1 Cyclone II FPGA board.

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