Volume 1 Issue 9, July 2013

International Journal of Emerging Science and Engineering

ISSN : 2319-6378 (Online)

Website: www.ijese.org

Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.

Exploring Innovation: A Key for Dedicated Services

Address:

22, First Floor, ShivLoke Phase-IV,
Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India

Website: www.blueeyesintelligence.org

Email: director@blueeyesintelligence.org, blueeyes@gmail.com

Cell #: +91-9669981618, **WhatsApp #:** +91-9669981618, **Viber #:** +91-9669981618

Skype #: beiesp, **Twitter #:** beiesp

Technical Advisory Board

Managing Editor

Editorial Board

1.

Authors: Pallavi Matkar, Lalit Dole

Paper Title: Energy Aware Blind Data Aggregation for Data Intergrity in Wireless Sensor Network

Abstract: Wireless sensor networks consist of sensor nodes with sensing and communication capabilities. This paper presents a new Energy aware routing protocol called SHHRP (Simple Homogenous Heterogeneous Routing Protocol) Simulation result shows that proposed protocol is energy efficient when compared to existing protocol. Though, the base station only fetches the aggregated result, which origin two problems. First, the usage of aggregation function is obliged. Second, the base station cannot confirm the data integrity and authenticity. This paper go to overcome the above two drawbacks. Besides, the design has been concluded and adopted on both homogeneous and heterogeneous wireless sensor networks. This paper also implements Elliptic curve cryptography for encryption and decryption of data in WSN.

Keywords: Blind data aggregation, data integrity, Elliptic Curve Cryptography, SHHRP protocol, wireless sensor network.

References:

1. Xiangqian Chen, Kia Makki, Kang Yen, and Niki Pissinou," Sensor Network Security: A Survey," IEEE COMMUNICATIONS SURVEYS & TUTORIALS, VOL. 11, NO. 2, SECOND QUARTER 2009
2. Huang Lu, Jie Li, Mohsen Guizani, "Secure and Efficient Data Transmission for Cluster-Based Wireless Sensor Networks," IEEE Transactions on Parallel and Distributed Systems, 25 Feb. 2013. IEEE computer Society Digital Library. IEEE Computer Society.
3. Li Lan-ying, Jiang Xiu-li; Zhong, Shenghai, Hu Lei. Energy Balancing Clustering Algorithm for Wireless Sensor Network Networks Security, Wireless Communications and Trusted Computing, 2009. NSWCTC '09. International Conference on Volume 1, 25-26 April 2009 Page(s):61 – 64
4. Jennifer Yick, Biswanath Mukherjee, Dipak Ghosal'" Wireless sensor network survey ," Department of Computer Science, University of California, Davis, CA 95616, United States, J. Yick et al. / Computer Networks 52 (2008) 2292–2330
5. Nandini. S. Patil, Prof. P. R. Patil, "Data Aggregation in Wireless Sensor Network," Proc. IEEE International Conference on Computational Intelligence and Computing Research, 2010.
6. R. Rajagopalan and P. Varshney, "Data-Aggregation Techniques in Sensor Networks: A Survey," IEEE Comm. Surveys Tutorials, vol. 8, no. 4, pp. 48-63, Oct.-Nov. 2006.
7. K. Wu, D. Dreef, B. Sun, and Y. Xiao, "Secure data aggregation without persistent cryptographic operations in wireless sensor networks", Ad Hoc Networks, vol. 5, no.1, pp. 100-111, 2007
8. S. Ozdemir, "Secure and Reliable Data Aggregation for Wireless Sensor Networks", LNCS 4836, H. Ichikawa et al. (Eds.), pp. 102-109, 2007
9. Chien-Ming Chen, Yue-Hsun Lin, Ya-Ching Lin, and Hung-Min Sun, "RCDA: Recoverable Concealed Data Aggregation for Data Integrity in Wireless Sensor Networks", IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, VOL. 23, NO. 4, APRIL 2012
10. S. Vijayanand, R.M. suresh, "AN OVERLOOK ON ROUTING TECHNIQUES IN WIRELESS SENSOR NETWORKS," IET-UK International Conference on Information and Communication Technology in Electrical Sciences, Dr. M.G.R. University, Chennai, Tamil Nadu, India, 2007, pp.557-998
11. Pardeep Malik "Elliptic Curve Cryptography For Security Inwireless Networks"Statistics 2011 Canada: 5th Canadian Conference in Applied Statistics/ 20th conference of the Forum for Interdisciplinary Mathematics - Interdisciplinary Mathematical Statistical Techniques, July 1- 4-2011, Concordia University, Montreal, Quebec, Canada
12. Sonali U. Nimbhorkar, and Dr. L. G. Malik "A Survey On Elliptic Curve Cryptography (ECC)" International Journal of Advanced Studies in Computers, Science and Engineering vol.1 ,issue 1 pp. 1-5, July, 2012

2.

Authors: A. Saminu, Abubakar, Nasiru, L. Sagir

Paper Title: Design of NDA Water Distribution Network Using EPANET

Abstract: This study presents the use of EPANETsoftwarein the design of the N.D.A water distribution network. EPANET is a computer program that performs extended period simulation of hydraulic and water quality behavior within pressurized pipe networks. A network consists of pipes, nodes (pipe junctions), pumps, valves and storage tanks or reservoirs. EPANET tracks the flow of water in each pipe, the pressure at each node, the height of water in each tank, and the concentration of a chemical species throughout the network, EPANET is designed to be a research tool for improving our understanding of the movement and fate of drinking water constituents within distribution systems. It can be used for many different kinds of applications in distribution systems analysis. In this paper it was used to carry out the hydraulic analysis of the distribution network in the study area. The results obtained verified that the pressures at all junctions and the flows with their velocities at all pipes are feasible enough to provide adequate water to the network of the study area.

Keywords: Epanet, Analysis and Water Distribution Networks.

References:

1. U Tukur (2006) "Design of NDA water treatment sedimentation tank" submitted to department of civil engineering NDA Kaduna.
2. AWWA (2005). M32- Computer Modeling of Water Distribution Systems. Denver, CO., 159 pp. Cesario, L. (1995). Modeling, Analysis, and Design of Water Distribution Systems, American Water Works Association
3. Cross, H. (1936). "Analysis of flow in networks of conduits or Conductors." Engineering Experiment Station, University of Illinois, Bulletin No. 286
4. Mc Corale and denial (1960). pipeline network flow analysis J, Mer water works association 41, 422 – 428 1949
5. Martin, D.W. and Peters, G. (1963). "The application of Newton's method to network analysis by digital computer." Journal of the Institute of Water Engineers, 17, 115-129.
6. Shamir, U. and Howard, C.D.D. (1968). "Water distribution systems analysis." Journal of the Hydraulic division, ASCE, 94, Proc. Paper 5758, 219-234.
7. Epp R., and A.G. Fowler, Efficient code for steady-state flows in networks, J. Hydraulics Di v., Proc. Amer. Soc • Civil Engineers, 96

(HYl), 43-56, 1970
8. Mcllroy M. S. pipeline network flow analysis J, Mer water works association 41, 422 – 428 1949
9. McPherson M.B.~ E.C. Bolls, Jr., D.A. Brock, E.B. Cobb, H.A. Cornell, J.E. Flack, F. Holden, F.P. Linaweaver, Jr., R.C. McWhinnie, J.C. Neill, and R.V. Alson, Priorities in distribution research and applied development needs, J.Amer. WaterWorks Association, 66(9), 507 - 509, 1974.
10. Shamir U., and C.D. Howard, Water distribution system analysis, J. Hydraulics Dfv., Proc. Amer. Soc. Civil Engineers, 94 (HYl),219-234, 1968.
11. Todini, E. and Pilati, S. (1987). "A gradient algorithm for the analysis of pipe networks." Computer Applications in Water Supply, Research Studies Press Ltd. Taunton, UK., 1-20.
12. Rossman, L.A. (1993). "EPANET, Users Manual." Risk Reduction Engineering Laboratory, U.S. Environmental Protection Agency, Cincinnati,Ohio.
13. Alperovits, E. and Shamir, U. (1977). "Design of optimal water distribution systems." Water Resources Research, Vol. 13(6), pp. 885-900.
14. Gessler, J., Optimization of pipe networks, Proc. of the Ninth International. Symposium on Urban Hydrology, Hydraulics and Sediment Control, Univ. of Ky., Lexington, July 27-30, 1982.
15. Wood, D.J and Charles, C.O.A. (1972). "Hydraulic network analysis using linear theory." Journal of the Hydraulic division, ASCE, 98, Proc. Paper 9031, 1157-1170.
16. Jeppson, R. W., and A. L. Davis, (1976). "Pressure Reducing Valves in pipe Network Analysis," ASCE Journal of the Hydraulic Division, 102(HY7):987.
17. Wood, D.J. (1980). User's Manual - Computer Analysis of Flow in Pipe Networks Including extended Period Simulations, Department of Civil Engineering, University of Kentucky, Lexington, kY.
18. Wood D J, Algorithms for pipe network analysis and their reliability. University of Kentucty, Water resources Research Institution Research report No. 127 1981
19. Mays, L.W. (2000). Water Distribution System Handbook, L. W. Maysed.,McGraw Hill, New York. Pg409 - 482, pg 469.

3.

Authors: **Aparna D. Deshmukh, Archana Nikose**

Paper Title: **Resource Allocation Based on Agreement with Data Security in Cloud Computing**

Abstract: Cloud computing has been envisioned as the next-generation architecture of IT enterprise. In contrast to traditional solutions, where the IT services are under proper physical, logical and personnel controls, cloud computing moves the application software and databases to the large data centers, where the management of the data and services may not be fully trustworthy. Cloud migrating from traditional software to Cloud enables on-going revenue for software providers. However, in order to deliver hosted services to customers, SaaS companies have to either maintain their own hardware or rent it from infrastructure providers. This requirement means that SaaS providers will incur extra costs. In order to minimize the cost of resources, it is also important to satisfy a minimum service level to customers. Therefore, this paper proposes resource allocation algorithms for SaaS providers who want to minimize infrastructure cost and SLA violations. An SLA is a formal contract used to guarantee that consumers‟ service quality expectation can be achieved. Cloud Computing moves the application software and databases to the large data centers, where the management of the data and services may not be fully trustworthy. So in this paper focus on cloud data storage security, which has always been an important aspect of quality of service.

Keywords: Cloud computing; Service Level Agreement (SLA); Resource Allocation; Scheduling; Software as a Service.

References:

1. C.S. Yeo, and R. Buyya,"Service level agreement based allo-cation of cluster resources: Handling penalty to enhance utility". In Proceedings of the 7th IEEE International Conference on Cluster Computing Bostan, MA, USA, (Cluster 2005).
2. Y.C. Lee, C. Wang, A.Y. Zomaya and B.B. Zhou, "Profit-driven Service Request Scheduling in Clouds". In Proceedings of the International Symposium on Cluster and Grid Computing, (CCGrid 2010), Melbourne, Australia.
3. R. Buyya, J. Broberg, and A. Goscinski (eds). Cloud Compu-ting: Principles and Paradigms. ISBN-13: 978-0470887998, Wiley Press, USA, February.
4. R. Buyya, C. S. Yeo, S. Venugopal, J. Broberg, and I. Brandic, "Cloud Computing and Emerging IT Platforms: Vision, Hype, and Reality for Delivering Computing as the 5th Utility, Future Generation Computer Systems", 25(6), (pp. 599-616), Elsevier Science, Amsterdam, The Netherlands.
5. J. Broberg, S. Venugopal, and R Buyya, Market-oriented Grids and Utility Computing: The state-of-the-art and future directions, Journal of Grid Computing, 3(6), (pp.255-276).
6. I. Popovici, and J. Wiles, "Proitable services in an uncertain world". In Proceeding of the18th Conference on Supercomputing (SC 2005), Seattle, WA.
7. D. Parkhill, "The challenge of the computer utility", 1966, Addision- Wesley Educational Publishers Inc., USA.
8. Y. Song, Y. Li, H. Wang, Y. Zhang, B. Feng, H. Zang, Y. Sun, "A Service-Oriented Priority-Based Resource Scheduling Scheme for Virtualized Utility Computing", High Performance Computing-HiPC 2008.
9. S.K. Garg,R.Buyya, and H. J. Siegel, " Time and Cost Trade-off Management for Scheduling Parellel Application on Utility Gride ", Future Generation Computer System.26(8). (pp. 1344-1355).
10. Rodrigo N. Calheiros, Rajiv Ranjan, Anton Beloglazov, Cesar A. F. De Rose, and Rajkumar Buyya, CloudSim: A Toolkit for Modeling and Simulation of Cloud Computing Environments and Evaluation of Resource Provisioning Algorithms, Software: Practice and Experience (SPE), Volume 41, Number 1, Pages: 23-50, ISSN: 0038- 0644, Wiley Press, New York, USA, January, 2011.
11. A. Juels and J. Burton S. Kaliski, "PORs: Proofs of Retrieva-bility for Large Files," Proc. of CCS '07, pp. 584–597, 2007.
12. K. D. Bowers, A. Juels, and A. Oprea, "Proofs of Retrievabil-ity: Theory and Implementation," Cryptology ePrint Archive, Report 2008/175, 2008, http://eprint.iacr.org/.
13. G. Ateniese, R. D. Pietro, L. V. Mancini, and G. Tsudik, "Scalable and Efficient Provable Data Possession," Proc. of SecureComm '08, pp. 1– 10, 2008.

10-14

Authors: **Mairembam Birjit Singh, Vasudeva Banninthaya K, AtulSrivastava**

Paper Title: **Implementation of Power Management IC for Ultrabook Platform**

Abstract: Power management is an important criterion in today's high efficiency mobile platform devices. As the technology of the mobile platform devicesadvances day by day, lots of techniques have been introduced for the efficient management of power on the mobile platform as well as to improve the battery life of the devices. This paper will present the implementation of the Power Management IC(PMIC) for power management on the Ultrabook platform and will feature the advantages of using PMIC for Ultrabook over the conventional Voltage Regulator

7. Dr. Sadhu sigh "Experimental Stress Analysis" Khanna publisher, edition 2009.

7.	**Authors:**	**Eugene U. Okorie, Francis Akubuilo**
	Paper Title:	**Towards Improving Quality of Education in Chemistry: An Investigation into Chemistry Teachers' Knowledge of Chemistry Curriculum**

Abstract: The 21st century world is a knowledge society and a lot of emphasis is placed on possession of knowledge and skills. 21st century teachers are therefore expected to possess, to a great extent, pedagogic content knowledge (PCK), discipline-based knowledge (D-bK) and curriculum content and context knowledge (CCCK). These aspects of knowledge are essential for teachers to deliver lessons effectively and efficiently to students. Deficiency in any of these aspects of knowledge is bound to bear on teachers' effectiveness, and consequently reflect on students' learning and learning outcome. Secondary school students' underachievement in chemistry has often been associated with teachers' poor knowledge of the teaching curriculum on which students' learning is based. This study set out to ascertain how knowledgeable teachers are about the chemistry curriculum which they implement in schools. The study shows that about 80% of teachers are knowledgeable about the various dimensions of the new chemistry curriculum.The author asserts that lack of knowledge of the curriculum on the part of teachers, which very often is given as one of the contributing factors to students' underachievement in chemistry may after all be unfounded. The paper made suggestions towards improving quality of education in chemistry.

Keywords: Curriculum, Knowledge, learning outcomes, under-achievement.

References:

1. S. O. Adeyegbe,, The Importance of signs ,symbols and formulae in communicating and understanding of chemical concepts. 39thAnnual Conference Proceeding of Science Teachers Association of Nigeria, 1998, pp. 162-166.
2. F, A, Bettelheim and J. March, , Introduction to General Organic and Biochemistry (3rd ed.. New York: Saunders College Publishing, 1991.
3. T. L. Brown, H. E, Le May, B. U. Bursten, and C. J. Murphy, Chemistry: The Central Science.New Jersey: Pearson Education Inc. 2009.
4. J. E. Huleey, E. A. Keiter, and R. L. Keiter, (Inorganic Chemistry Principles of Structure and Reactivity (4th Edition). New York: Harper Collins College Publishers, 1993.
5. J. Kerr, Changing the Curriculum. University of London Press, 1968.
6. NERDC, Senior Secondary School Curriculum (Chemistry) for SS 1-3. Abuja: NERDC Press, 2009
7. NERDC, Teachers' Guide for the New Senior Secondary School Chemistry Curriculum. Lagos: NERDC Press, 2012.
8. R. O. Nnachi, Psychological Approach for the Guidance of New Science Teachers in Curriculum Implementation.Journal of Curriculum Studies, vol .18, 2011, pp.241 – 250.
9. C. L. Nwahunanya, C.L. (2011). New Teachers' Perception of Difficult Topics in SeniorSecondary School in Chemistry Curriculum. Journal of Curriculum Studies, vol. 18, June 2011, pp. 256-264.
10. E. O. Nwofor, E.O. An investigation with some possible factors responsible for the poor performance in school certificate chemistry of F.C.D.A.Abuja Secondary School Students, Unpublished post-graduate diploma in education project, Institute of Education, University of Nigeria, Nsukka, 1991.
11. A.N. Ochu, Evaluation of undergraduate chemistry education programme in the Universities in North Central Education Zone in Nigeria, Unpublished Ph.D. Thesis. Department of Science Education, University of Nigeria Nsukka, 2007.
12. E. U. Okorie, Secondary Schools Chemistry Curriculum Reforms in the 21st Century: Implication for Nigeria Educational System. Curriculum and Media Technology Research, Journal of CUDIMAC, vol. 2, 2010, pp. 108-119.
13. Pearson Education, Longman Dictionary of Contemporary English (New Edition). Essex: Pearson Education Limited, 2003.
14. J. Piaget, The Science of Education and the Psychology of the Child. Longman, 197.
15. A. C. Sharpe, Inorganic Chemistry (Third Edition). Harlow: Longman Group UK Ltd, 1992.
16. M. E. Udo, and I. T. Eshiet, Chemistry of corrosion of metals: A Resource for teaching kinetics. Journal of the Science Teachers Association of Nigeria. vol.43 (1&2), 2007, pp. 26 – 32.
17. A. A. Ugwuanyi, An investigation into the extent of use of practical activities in teaching chemistry in secondary schools in Nsukka LGA of Enugu State, Unpublished B.Sc. Research Project. University of Nigeria, Nsukka , 2011.

30-34

8.	**Authors:**	**K. Y. Madhavi, M. Krishna, C. S. Chandrashekhara Murthy**
	Paper Title:	**Effect of Diaphragm Geometry and Piezoresistor Dimensions on the Sensitivity of a Piezoresistive Micropressure Sensor using Finite Element Analysis**

Abstract: The performance of piezoresistive micropressure sensors based on their shape has been studied in this paper. Two sensors based on square and rectangular shaped diaphragms having the same surface area and thickness have been investigated. Performance parameters like the maximum induced stress, deflection and sensitivity of the diaphragms have been compared using the finite element tool ANSYS 10.0. An evaluation of the stress profile across both the diaphragms has been done. The role played by the dimensions of the piezoresistors in determining the performance of the sensor has been analyzed in detail using the computer aided design (CAD) tool Intellisuite. The analysis shows that the square diaphragm based sensor is more sensitive and has a higher gauge factor than the rectangular one but the stress profile of a rectangular based sensor is more suitable for making the placement of the piezoresistors less error prone. It has also been found that the variation in the length of the piezoresistor plays a greater role in determining the sensitivity of the sensor than width and thickness variations. From the results of the simulations the shape and design of the sensor can be optimized for a given pressure range.

Keywords: Diaphragm geometry, Finite element analysis, Micropressure sensors, Piezoresistance.

References:

1. C.S. Smith,"Piezoresistive Effect in Germanium and Silicon,Phys.Rev" vol. 94, no. 1, pp. 42–49, (1954).
2. W P Eaton and J H Smith "Micro machined Pressure Sensors: Review and Recent Developments" Smart Mater. Struct. 6, 530–539, (1997).
3. B. Ziaie and K. Najafi, "An Implantable Microsystem for Tonometric Blood Pressure Measurement," Biomed. Microdev. vol. 3, .285–292, (2001).
4. Ashwin Mohan, Ajay P Malshe, Shyam Aravamudhan and Shekhar Bhansali, "Piezoresistive MEMS Pressure Sensor and Packaging for Harsh Oceanic Environment" Electronics Components and Technology Conference IEEE (2004).
5. A. Berns , U. Buder , E. Obermeier , A. Wolter , and A. Leder , "Aero MEMS Sensor Array for High-Resolution Wall Pressure

35-40

Measurements" Sensors and Actuators A 132 ,104–111, (2006).
6. Hussam Eldin A. Elgamel A simple and efficient technique for the simulation of capacitive pressure transducers Sensors and Actuators 77, 183–186, (1999).
7. T. Pedersena, G. Fragiacomoa, O. Hansena, and E.V. Thomsena, "Highly Sensitive Micromachined Capacitive Pressure Sensor with Reduced Hysteresis and Low Parasitic Capacitance", Sensors and Actuators A 154, 35–41, (2009).
8. G.K.Ananthasuresh, K.J.Vinoy, S.Gopalakrishnan, K.N.Bhat, and V.K.Atre, "Micro and Smart Systems", Wiley-India Pvt. Ltd, (2011).
9. Robert M. Panas, Michael A. Cullinan, and Martin L.Culpepper, "A Systems Approach to Modeling Piezoresistive MEMS Sensors", www.mit.edu.
10. W.H. Ko, Q. Wang, "Touch Mode Capacitive Pressure Sensors", Sensors and Actuators 75, 242–251, (1999).
11. Samuel K Clark and Kensall D Wise, "Pressure Sensitivity in Anisotropically Etched Thin-Diaphragm Pressure Sensors", IEEE Transactions on Electron Devices, vol. ED-26, No. 12, (1979).
12. Liu Xiaowei, Li Xin,WangWei,Wang Xilian, CheWei, Liu Zhenmao, "Computer Simulation Of Polysilicon Piezoresistive Pressure Sensors",IEEE Conference Proceedings, 891–894, (1998).
13. R. Khakpour, Solmaz R. M. Mansouri, and A.R. Bahadorimehr, "Analytical Comparison for Square, Rectangular and Circular Diaphragms in MEMS Applications" International Conference on Electronic Devices, Systems and Applications (ICEDSA2010).
14. T.Pravinraj, S.B.Burjee, Pradeep Kumar, "Piezoresistor Size Effect On Sensitivity Of SOI Piezoresistive Pressure Sensor", Proc. of the International Conference on Science and Engineering (ICSE 2011).
15. Timoshenko S and Woinosky-Krieger S, "Theory of Plates and Shells" (1987).
16. Tai Ran Hsu, "Mems and Microsystems" Tata McGraw-Hill (2002).

9.

Authors:	**Vijayakrishna Rapaka E, Rajagopan S, Pranitha V, Kathambari R**
Paper Title:	**Modeling of Hydrogen Production through an Ocean Thermal Energy Conversion System**

Abstract: OTEC (Ocean Thermal Energy Conversion) is one of the renewable energy technologies that convert solar radiation to electric power through different process. OTEC systems use the ocean's natural thermal gradient to drive a power producing cycle. The oceans are thus a vast renewable resource, with the potential to help us produce billions of watts of electric power. The cold, deep seawater used in the OTEC process is also rich in nutrients, and it can be used to culture both marine organisms and plant life near the shore or on land. The temperature gradient between the depths of ocean surfaces plays a major role in power generation. This power can be used for the production of hydrogen which is stored as fuel cells. In this paper, the OTEC System along with PEM electrolyser has been analyzed. The mathematical modeling of Poly Electrolyte Membrane Electrolyser coupled with OTEC has been carried out. The Ideal Power Input, Actual Power Input, Ideal Power Output, Actual Power Output, Ideal Conversion Efficiency, Actual Conversion Efficiency, Ideal Rate of Hydrogen Production and Actual Rate of Hydrogen Production outputs for various combinations of warm water temperature (26 °C to 32 °C) and cold water temperature (5 °C to 25 °C) have been reported.

Keywords: OTEC, PEM, Hydrogen Production, Ocean Energy.

References:

1. Abrahim Law and Gay Heit Lavi, Ocean thermal energy conversion (OTEC): social and environmental issues, Energy, (4), 833-840, 1979
2. Ayoub Kazim, Hydrogen production through an ocean thermal energy conversion system operating at an optimum temperature drop, Applied Thermal Engineering,(25), 2005, 2236–2246.
3. Chakwat A.F. and Ridgway S.L., The mist-lift OTEC cycle, Energy, (5), 1980, 511- 524.
4. Chih Wu, A performance bound for real OTEC heat engines, Ocean Engg, (14), 4, 1987, 349-354.
5. Chih Wu, Specific power analysis of thermoelectric OTEC plants,Ocean Engng,(20), 4, 1993, 433-442.
6. Chih Wu, Specific power optimization of closed-cycle OTEC plants, Ocean Engng, (17), 3, 1990, 307-314.
7. Curto. P.A., An update of OTEC baseline design costs, Energy, (5),1980, 529-538.
8. Damy G. and Marvaldi J., some investigations on the possibility of using ocean thermal gradient (OTG) for seawater desalination, Desalination, (67), 1987, 197-214.
9. Dugger, Francis and Avery. Technical and economic feasibility of ocean thermal energy conversion, Solar Energy, (20), 1978, 259-274.
10. Ganic E. N. and Wu J., The selection of working fluids for OTEC power plants, Energy Cont. & Vlgmt, (20), 1980, 9 to 22.
11. Gay Heit Lavi, Issues in OTEC commercialization, Energy, (5), 1980, 551-560.
12. Griffin, OTEC cold water pipe design for problems caused by vortex-excited oscillations, Ocean Engg, (8), 2, 1981, 129-209.
13. Lennard D.E., The viability and best locations for ocean thermal energy conversion systems around the world, Renewable Energy, (6), 3, 1995, 359-365.
14. Mark S. Olsson, Salinity-gradient vapor-pressure power Conversion, Energy, (7), 3, 1982, 237-246.
15. Raghavan V. R. and Murthy M. S., The selection of fin profiles for OTEC plate-fin evaporators, Energy Convers. Mgmt, (23), 4, 1983, 193-199.
16. Rey M. and Lauro F., OCEAN THERMAL ENERGY AND DESALINATION, Desalination, (39), 1981, 159 -168.
17. Rong-Hua Yeh, Tar-Zen Su and Min-Shong Yang, Maximum output of an OTEC power plant, Ocean Engineering, (32), 685–700, 2005
18. Uehara, Dilao, and Nakaoka, Conceptual design of ocean thermal energy conversion (OTEC) power plants in the philippines, solar energy, (41), 1988, 431-441.
19. Wu C. and Burke T.J, Intelligent computer aided optimization on specific power of an OTEC Rankine power plant, Applied thermal engineering,(18), 5, 1998, 295-300.

Authors:	**R. Subalakshmi, M. Shiva Kumar, K. Krishnamoorthy**
Paper Title:	**Effective Role of Mobile Agents based IPS (MAIPS) in Distributed Environment**

Abstract: As the need of IDS and IPS Technologies are increasing in this generation, in the same view point the concept of Agents activity is very important. Since the Mobility of Agents and their characteristics are profound, here in this paper the concept of IDS & IPS, with the act of Agents and their autonomous capability is expressed in the view of distributed Networks, hence this paper proposes a survey form based on the role of MA in IPS, wherein actual implementation is at par.

Keywords: IDS, IPS, MA, HIPS, NIPS, MAIPS.

References:

1. Intrusion Prevention Systems (IPS) - January 2004, NSS Group.

2. M. Eid, “A New Mobile Agent-Based Intrusion detection System Using distributed Sensors”, In proceeding of FEASC, 2004.
3. G. Hulmer, J. S.K. Wong, V. Honavar, L. Miller, Y. Wang, “Lightweight Agents for Intrusion Detection”, Journal of Systems and Software 67 (03), pages 109-122, 2003.
4. M. Benattou and K. Tamine, “Mobile Agents Community For Distributed Intrusion Detection System”, accepted for publication in proceeding of International conference on Computing, Communication and Control Technologies, Austin, USA, July 2005.
5. C. Kruegel and T. Toth “Applying Mobile Agent Technology to Intrusion Detection”, technical report, University of Vienna, TUV- 1841-2002-31, 2002.
6. Y. Zhang, W. Lee, and Y. A. Huang, 'Intrusion Detection Techniques for Mobile Wireless Networks', ACM J. Wireless Net., vol. 9, no. 5, Sept. 2003,
7. [BRAD97] Jeffrey M. Bradshaw, “An Introduction to Software Agents,” In Jeffrey M. Bradshaw, editor, Software Agents, chapter 1. AAAI Press/The MIT Press, 1997.
8. [CHES95] Chess, D., B. Grosof, C. Harrison, D. Levine, C. Parris, G. Tsudik, “Itinerant Agents for Mobile Computing,” IBM Research Report, RC 20010, March 1995. <URL: http://www.research.ibm.com/massdist>
9. [FINI94] Finin, T., R. Fritzson, D. McKay, and R. McEntire. “KQML as an Agent Communication Language,” Proceedings of the Third International Conference on Information and Knowledge Management (CIKM ’94), ACM Press, Nov. 1994.
10. [FRIN98] Frincke, D., Don Tobin, Jesse McConnell, Jamie Marconi, Dean Polla, “A Framework for Cooperative Intrusion Detection,” Proceedings of the 21st National Information Systems Security Conference, pp. 361-373, October 1998. <URL: http://csrc.nist.gov/nissc/1998/papers.html>
11. [HANS97] Hansoty, Jatin N., “LAVA: Secure Delegation of Mobile Applets,” Master’s Thesis North Carolina State Univ., 1997. <URL: http://shang.csc.ncsu.edu:80/lava.html >
12. [HARR95] Harrison, C.G., D.M. Chess, A. Kershenbaum, “Mobile Agents: Are they a good idea?,” IBM Research Report, March 1995.
13. WHIT96] Gregory B. White, Eric A. Fisch, and Udo W. Pooch, “Cooperating Security Managers: A peer-based intrusion detection system,” IEEE Network, 10(1), pp.20-23, January/February 1996.
14. [WU96] Wu, S.F., M. S. Davis, J. N. Hansoty, J. J. Yuill, S. Farthing, J. S. Webster, X. Hu. “LAVA: Secure Delegation of Mobile Applets,” Technical Report 96/42, Center for Advanced Computing and Communication, North Carolina State Univ., Raleigh, NC, October 1996.
15. NIST Special Publication (SP) 800-61, Computer Security Incident Handling Guide, which is available at http://csrc.nist.gov/publications/nistpubs/.
16. GUIDE TO INTRUSION DETECTION AND PREVENTION (IDP) SYSTEMS (DRAFT) - Recommendations of the National Institute of Standards and Technology - Karen Kent & Peter Mell
17. NIST SP 800-92 (DRAFT), Guide to Computer Security Log Management, which is available at.

10. **47-50**

Authors: **Manalisha Hazarika, Mirzanur Rahman**

Paper Title: **A Compendium on Data Mining Algorithms and Future Comprehensive**

Abstract: Data mining is a powerful and new method of analyzing data and finding out new patterns from vast volume data .There is an enormous amount of data stored in databases and data warehouse due to enormous technological advancements in computing and Internet. In recent days multinational companies and large organizations have operations in many places in the world. Each place of operation may generate bulk volumes of data. Corporate decision makers require access from all such sources and take strategic decisions. The information and communication technology have highly used in the industry. One of the main challenges in database mining is developing fast and efficient algorithms that can handle large volumes of data as most of the mining algorithms perform computation over the entire databases, often very large. Today’s business environment, efficiency or speed is not the only key for competitiveness. Such tremendous amount of data, in the order of tera- to peta-bytes, has fundamentally changed science and engineering, transforming many disciplines from data-poor to increasingly data-rich, and calling for new, data-intensive methods to conduct research in science and engineering. This paper gives an outline of the existing data mining algorithms and give the future space of some algorithm.

Keywords: Data Mining, frequent item, load balance, parallel algorithm.

References:

1. Heikki, Mannila. 1996. Data mining: machine learning, statistics, and databases, IEEE
2. R. Agrawal, T. Imienski and A. Swamy, Database Mining : A Performance Perspective, IEEE Tran. On Knowledge and Data Engg., December,1991.
3. M-S Chen, J Han and P. S. Yu, Data Mining : An Overview from a Database Perspective, IEEE Tran. On Knowledge and Data Engg., December, 1996.
4. A.Y. Zomya, T.E. Ghazawi and O. Frieder, Parallel and Distributed Computing for Data Mining, IEEE Concurrency, Oct./Nov. 1999
5. Jong Soo Park, Ming-Syan Chenand Philip S. Yu. An effective hash-based algorithm for mining association rules. In Proceedings of 1995
6. R. Agrawal, and R. Srikant, "Mining sequence patterns," proceedings of the 11th International Conference on Data Engineering. Taipei, 1995, pp3-14.
7. R. Agrawal , and R. Srikant, "Mining sequence patterns: Generalizations and Performance improvements," proceedings of the 11th International Conference on Extending Database Technology. Heidelberg, Springer-Verlag, 1996, pp13-20.
8. Jiawei Han, Micheline Kamber, Simon Fraser University, A book on “Data Mining: Concepts and Techniques”, Academic Press, Morgan Kaufmann Publishers, 2001, pp. 227-240.
9. Zaki, "Parallel sequence mining on share-memory machines", Journal of Parallel and Distributed Computing. vol. 61, pp401-426, 2001.
10. M. J. Zaki, S. Parthasarathy and W. Li., “Parallel data mining for association rules on shared memory multi- processors”. In Supercomputing 96, Pittsburg, PA, November 1996, pp. 17-22.
11. W. Jian, and L. Xingming, "An efficient association rule mining algorithm in distributed database," the first International Workshop on Knowledge Discovery and Data Mining. 2008, pp108-113.
12. Q. Shaojie, T. Changjie, D. Shucheng, Z. Mingfang, P. Jing, L.Hongjun, and K. Yungchang,, "PartSpan: Parallel Sequence Mining of Trajectory patterns," the fourth International Conference on Fuzzy Systems and Knowledge Discovery. 2008, pp363-367.
13. Y. Kunming, Z. Jiayi, H. Tzungpei, and Z. Jialing, "A load-balanced distributed parallel mining algorithm," Expert Systems with Applications. vol.37, pp2459-2464, 2009.
14. V. Guralnik, N. Garg, and G. Karypis, "Parallel tree projection algorithm for sequence Mining," proceed ings of the 7th International Euro-Par Conference Manchester on Parallel Processing. London, UK: Springer-Verlag , 2001, pp310-320.
15. H. Jiawei, C. Shengnan, and P.David, "Parallel mining of Closed sequence patterns," proceedings of the 11th ACM SIGKDD International Conference on Knowledge Discovery in data mining. USA:New York,2005, pp562-567.
16. F. Niagara, "A Parallel Mining Algorithm for Closed sequence Patterns," proceedings of the 21st International Conference on Advanced Information
17. Kun-Ming Yu, Jiayi Zhou and Wei Chen Hsiao, “Load Balancing Approach Parallel Algorithm for Frequent Pattern Mining”, V. Malyshkin (Ed.): PaCT 2007. © Springer-Verlag Berlin Heidelberg 2007.LNCS 4671, pp. 623–631. Networking and Applications Workshops.. 2007,

11. **51-56**

pp392-395.
18. [18] A book "Introduction to Parallel computing", by A. Grama, A. Gupta, G. Karypis and V. Kumar, second edition, published by Pearson Education, pp. 95, 110-112, 115-120.
19. [19] International Journal of Advancements in Technology http://ijict.org/ ISSN 0976-4860 Exploiting Parallelism in Association Rule Mining Algorithms Rakhi Garg, P. K. Mishra Department of Computer Science, Banaras Hindu University, Varanasi, Uttar Pradesh-221005, India
20. [20] Parallel Data Mining Algorithms for Association Rules and Clustering Jianwei Li Northwestern University Ying Liu DTKE Center and Grad. Univ. of CAS Wei-keng Liao Northwestern University Alok Choudhary Northwestern University

12.

Authors: **Savita Gahlot, Rakesh Gill**

Paper Title: **Energy Efficient Solution Approach to Capacitive Touch Sensors Using Noise Immunity and Comparative Work**

Abstract: Touch sensing devices giving best application to the world in matter of digitalization as well as power consumption. No matter we are using resistive touch or capacitive touch but this touch is far better in comparison of manual buttons. The switches which operates manually need similar power supply for respective functions. The life of the resistive switches are better as compared to capacitive touch but the switches used through capacitive touch has better immunity to noise. This paper has a aim to compare all the characteristics and present useful outcome for the future researchers in matter of touch sensors. This paper contains various formation method of the device as well as improved method through oscillator results. The paper presents well compared result for both the touch available in market with the research.

Keywords: Capacitive sensitivity layer formation mapping touch data data process.

References:

1. Asad A. Abildi and Robert G. Meyer. Noise in Relaxation Oscillators. IEEE, 1983.
2. Larry K. Baxter. Capacitive Sensors Design and Applications. Wiley- Blackwell, 1997.
3. Jens Borch, M. Bruce Lyne, Richard E. Mark, and Charles Habeger. Handbook of Physical Testing of Paper. CRC Press, 2001.
4. Maxim Integrated Circuits. MAX921-MAX924 Datasheet.
5. A. McPherson and Y. Kim. Design and applications of a multi-touch musical keyboard. In Proc. SMC, 2011.
6. Massoud Pedram and Jan M. Rabaey. Power Aware Design Methodologies. Kluwer Academic Publishers, 2002.
7. Microchip Technology Inc. Tom Perme. Introduction to Capacitive Sensing
8. Microchip Technology Inc. Tom Perme. Layout and Physical Design Guidelines for Capacitive Sensing.
9. G. Moore, BNo exponential is forever: But Fforever_ can be delayed!'' in Proc. IEEE Int. Solid-State Circuits Conf., 2003, Keynote address.
10. X. Huang, W.-C. Lee, C. Kuo, D. Hisamoto, L. Chang, J. Kedzierski, E. Anderson, H. Takeuchi, Y.-K. Choi, K. Asano, V. Subramanian, T.-J. King, J. Bokor, and C. Hu, BSub 50-nm p-channel FinFET,[IEEE
11. 1United State Patent Application 2006/0097991.
12. Keith Curtis Tom Perme Microchip Technology Inc. DS01104 (2007).
13. Andrew McPherson Centre for Digital Music, School of EECS Queen Mary University of London Mile End Road, London E1 4NS, United Kingdom Capacitive Multi-Touch Sensing on a Physical Keyboard 2008.
14. Capacitive Touch Sensors Application Fields, technology overview and implementation Fujitsu Microelectronics Europe GmbH Pittlerstrasse 47 63225 Langen, Germany

57-60

13.

Authors: **P. Nagasekhara Reddy**

Paper Title: **Microcontroller Based Speed Control of Induction Motor using Wireless Technology**

Abstract: Induction motors are the most extensively used motors in most power-driven home appliances, agricultural and industrial applications. Simple and rugged design, low cost, low maintenance and direct connection to an AC power source are the chief advantages of an AC induction motor. Many applications need variable speed operation and one of them is a simple fan load. The DTMF generator which generates the analogue output signal for the corresponding button pressed using key pad. This analogue output is fed to the FM Transmitter and sent through the antenna. At the other end, the FM Receiver picks up the signal and feeds it to the signal decoder, there the decoding takes place and this decoding data is given to the PIC Micro controller. The software in the PIC receives the signal and accordingly drives the SCR Circuit, which in turn is connected to load serially. Simulation of DTMF is carried out using SIMULINK and in the experimental work a prototype model is built through the PIC microcontroller (PIC 16F873) which is used to generate the PWM pulses for speed control of the motor. The main aim of the this paper is to design an real time electronic control system that can be used to control the speed of motors kept at remote locations using an embedded technology.

Keywords: Induction Motor (IM), DTMF(dual tone multiple frequency), Transmitter, Receiver, Pulse Width Modulation (PWM), Peripheral Interface Controller (PIC), DTMF, wireless technology, Speed control.

References:

1. Rakesh Parekh (2003). AC Induction Motor Fundamentals. Microchip Technology Inc.
2. Seyi Stephen OLOKEDE, 2008. Design of a Clap Activated Switch. Leonardo Journal of Sciences ISSN 1583-0233
3. Muhammad H. Rashid: "Power Electronics Circuits, Devices & Application" PHI, New Delhi,2001
4. W. Leonhard, Control of Electrical Drives, Springer-Verlag Berlin Heidelberg, New York, Tokyo, 1985.
5. B.K. bose, "Adjustable speed AC drives – A technology status review", IEEE transaction, Vol.70, No.2, PP-116-33, Feb-1982.
6. V.K. Varma & Dr. Promod Agarwal, Short term summer course on "Micro controlled A.C. drives" University of Roorkey (U.P.) – April – 1995.
7. R.Saravanan and F.X.Edwin Deepak, "development of single phase induction motor adjustable speed control using pic-16f877 microcontroller" International Conference on Computing and Control Engineering (ICCCE 2012), 12 & 13 April, 2012.
8. Microchip Technology, 2001, PIC16F877A Data sheet, www.microchip.com.
9. Minas, G., Martins, J.S. & Couto, C. (1999). A Microcontroller Based Voltage Space Vector Modulator Suitable for Induction Motor Drive. IEEE International Symposium, 2, 469 – 473.
10. Padmaraja Yedamale. (2002). Speed Control of 3-Phase Induction Motor Using PIC18 Microcontrollers. Microchip Technology Inc.

61-65

14.

Authors:	**Kanthalakshmi S, Vivekandan C, Kavithamani A, Manikandan V**
Paper Title:	**Design and Implementation of Robust Digital Redesigned Controller to Balance an Inverted Pendulum System**

Abstract: This paper aims at designing a robust digital redesigned controller for a system of inverted pendulum. The issues considered for evaluation of the designed controller are the 'closeness' between the closed loop response of the continuous-time and discrete-time system and the stability of the redesigned digital system. The closeness aspect between the continuous-time system and its discrete-time equivalent is measured in the form of the integral error performance index and the stability of the redesigned system is ascertained in the sense of Lyapunov. The error in the digital redesign process is reduced using Feed Forward Back Propagation Neural Network Approach. The robustness and stability are achieved and tested with Lyapunov criteria. The design is practically verified with a real time implementation.

Keywords: Digital Controller, Digital Redesign, Neural Networks, Robustness, Lyapunov Stability.

References:

1. V. I. Utkin, "Variable structure system with sliding modes", IEEE Trans. on Industrial Electronics, Vol. 22, 1977, pp. 212-222.
2. John J. D'Azzo and Constantine H. Houpis, Linear Control Systems Analysis and Design - Conventional and Modern, McGraw Hill, New Delhi, 1988.
3. D. Sivanandakumar, K. Ramakrishnan, and V. Manikandan, "A Comparative Evaluation of the Digital Redesign Techniques for State Feedback Control of LTI Systems", Proceedings of National Conference on Electrical Systems and Control Technology, May 2007, Vol. 1, pp. 270-275.
4. C.A. Rabbath, and N. Hori, "On a Comparative Study of Digital Redesign Methods", Proceedings of the American Control Conference Chicago, June 2000, pp. 1154 - 1158.
5. Chang, W. J., Park, B., Lee, H. J. and Joo, Y. H. (2002) "LMI approach to digital redesign of linear time-invariant systems", IEE. Proc-Control Theory Appl., 149(4):297-302.
6. H. J. Lee, J. B. Park, and Y. H. Joo, "An Efficient Observer-based Sampled-data Control: Digital Redesign Approach", IEEE Trans. Circuits and Systems-I: Fundamental Theory and Applications, Vol. 50, No. 12, 2003, pp. 1595-1601.
7. H. J. Lee, J. B. Park, and Y. H. Joo, "Further Refinement on LMI based Digital Redesign: Delta-Operator Approach", IEEE Trans. Circuits and Systems-II: Express Briefs, Vol.53, No. 6, 2006, PP. 473-477.
8. K. Ogata, Discrete-Time Control Systems, Prentice Hall, New Delhi, 1995.

66-69

15.

Authors:	**Shruti Vashist, M. K Soni, P. K. Singhal**
Paper Title:	**Genetic Approach in Patch Antenna Design**

Abstract: Microstrip patch antenna is one of the important elements in modern wireless communication systems and hence its design optimization is an important aspect for improving the overall performance of the system. In this paper Genetic Algorithm optimization technique has been utilized in IE3D software for optimization of the rectangular microstrip patch antenna dimensions in order to achieve better return loss, SWR and radiation properties. The patch is designed to operate in ISM band with the centre frequency at 2.4GHz and various important performance metrics of the patch antenna are analyzed for performing comparative analysis between un-optimized patch design and optimized patch design. A GUI has been designed in MATLAB for obtaining the patch dimensions based on theoretical formulas.

Keywords: Rotman lens Antenna, IE3D, Genetic Algorithm, MPA.

References:

1. Balanis, C.A. (1997). "Antenna Theory: Analysis and Design." 2nd ed.New York: John Wiley and Sons, Inc.
2. Muhammad Mahfuzul Alam, Md. Musta zur Rahman Sonchoy and Md. Osman Goni," Design and Performance Analysis of Microstrip Array Antenna", Progress In Electromagnetics Research Symposium Proceedings, Moscow, Russia, August 18-21, 2009.
3. Yahya S. H. Khraisat,Al-Balqa," Design of 4 Elements Rectangular Microstrip Patch Antenna with High Gain for 2.4 GHz Applications," Modern Applied Science Vol. 6, No. 1; January 2012.
4. Md. Maruf Ahamed, Kishore Bhowmik, Md. Shahidulla,Md. Shihabul Islam, Md. Abdur Rahman,"Rectangular Microstrip Patch Antenna at 2GHZ on different dielectric Constant for Pervasive Wireless Communication" International Journal of Electrical and Computer Engineering (IJECE),Vol.2, No.3, June 2012, pp. 417 ~ 424,ISSN: 2088-8708 _ 417.
5. Fouzi Harrou, Benamar Bouyeddou, Abdelwahab Tassadit and Djamal Ameziane," Design of Linear and Planar Microstrip Antennas Array", International Journal of Information Systems and Telecommunication Engineering (Vol.1-2010/ pp. 4-11).
6. Md. Tanvir Ishtaique-ul Huque1, Md. Kamal Hosain, Md. Shihabul Islam, and Md. Al-Amin Chowdhury," Design and Performance Analysis of Microstrip Array Antennas with Optimum Parameters for X-band Applications",(IJACSA) International Journal of Advanced Computer Science and Applications,Vol. 2,No. 4, 2011.
7. Marek Bugaj, Rafal Przesmycki, Leszek Nowosielski,Kazimierz Piwowarczyk, and Marian Wnuk," Multilayer Microstrip Antennas Array Operating in Dual Bands, "Progress In Electromagnetics Research Symposium Proceedings, Moscow, Russia, August 19{23, 2012 1429.
8. K.Meena and A.P.Kabilan," Modeling and simulation of Microstrip patch array for smart antennas,"International Journal of Engineering, IJE volume (3), Issue (6).
9. Anitha.V.R, Dr. S. Narayana Reddy and P.Srinivasulu," Design and Analysis of 1X16 Square microstrip linear array for wind profiling radar," Journal of Theoretical and Applied Information Technology.

70-75

Authors:	**Virendra Kumar Swarnkar, K. J. Satao**
Paper Title:	**A Survey on Performance of Different Text Editor**

Abstract: A program that allows its user to pen, view, and edit plain text files is known as Text Editor. On contrary to word processors, text editors focuses on editing functions for plain text instead of adding formatting to text. Text editors serve wide variety of people with wide variety of purposes. Text Editors are generally used by software programmers and web developers use text editors to write and edit in programming and markup languages. However, text editors are ideal tools for anyone who needs to write quickly and simply, read source code, or create text files. One of the most useful tools in a text editor's repertoire is Syntax Highlighting. Programming/markup languages

19.	**Authors:**	**Renu Singh, Alka Bani Agrawal**	
	Paper Title:	**Performance Analysis of Water (R718) As a Refrigerant in Medium Range Temperature**	
	Abstract: Water as a refrigerant (R718) is compared with itself for sub-cooling and superheating conditions regarding various performance parameters in medium range temperature (50C to 350C). These performance parameters i.e. COPs, Pressure ratios, outlet temperature of refrigerants from the compressor and evaporator temperature, are simulated with the help of computer program in language C++ . "In this paper study of sub-cooling and superheating effect of water (R718) as a refrigerant is compared. In case of superheating evaporator temperature is changed in which throttling valve exit temperature, evaporator temperature, and compressor outlet is kept constant, while condenser temperature varies (5oC to 35oC)". It is found that for small range of degree of superheat COP is highest, and decreases with increase in degree of superheat. Assuming exactly the same cycle parameters, with increase in degree of sub-cooling, it increases again. **Keywords:** Comparison, compressor, cycle, refrigeration, refrigerants, water, sub-cooling, superheating. **References:** 1. Ali Kilicarsln1 and Nobert Muller2, A comparative study of water as a refrigerant with some current refrigerants, Int. J. Energy Res. (2005). 2. S.E. Wight T.Yoshinaka B.A.Le Drew N.C. D'orsi', The efficiency limits of water vapor compressors, Report for Air-Conditioning and Refrigeration technology institute (2000). 3. S.Devotta, A.S. Padalkar, S.N. Joshi N.N., Sawant N.K. Sane, Comparitive assesement of CO2 for window air-conditioner, in proceeding of the fourth IIR-Gustav lorentren Conference on Natural Working Fluids, Purdue, IN , (2000). 4. J.A. Duffie , W.A. Beekman, Solar Engineering of Thermal Processes, second ed. John Wiley & Sons, New York. NY(1991) 5. F.de Rossi, R Mastrullo, Working Fluids, Thermodynamics Behavior for vapor Compression Cycles, Applied Energy 38.163-180 (1991) 6. A. Kilicarslan1 and N. Muller2, COPs Of R718 In Comparison With Other Modern Refrigerants, (2004) 7. Ali KILICARSLAN, Irfan KURTBAS, Comparison of superheating effect of water as a refrigerant with the other refrigerants, thermal science and technology, ISSN 1300-3615, (2010).	**86-89**
20.	**Authors:**	**Rohit Chandrashekar, Jayashree Shinde, Dashrath Mane**	
	Paper Title:	**Importance and Analysis of RFID in Attendance System**	
	Abstract: Short for radio frequency identification, a technology similar in theory to bar code identification. With RFID, the electromagnetic or electrostatic coupling in the RF portion of the electromagnetic spectrum is used to transmit signals. An RFID system consists of an antenna and a transceiver, which read the radio frequency and transfer the information to a processing device, and a transponder, or tag, which is an integrated circuit containing the RF circuitry and information to be transmitted. The proposed system consists of a mobileRFID solution in a logical context. This paper proposes architecture and a prototype of a system that uses RFID and a demonstration on how to automate an entire student'sattendance registration system by using RFID in an educational institution environment. Although the use of RFID systems ineducational institutions is not new, it is intended to show how the use of it came to solve daily problems in our institution. The main objective of this paper is to enhance the school's monitoring system taking into account factors such as reliability, time saving, and easy control also advantages and disadvantages of the proposed RFID over barcode system will be presented. **Keywords:** Analysis of Attendance Management using RFID, RFID. **References:** 1. Nambiar A.N, (2009), "A supply chain perspective of RFID Systems", World Academy of Science, Engineering and Technology Journal, Volume 6, pp1-5. 2. Intermec Technologies Corp., "RFID Overview: Introduction to Radio Frequency Identification", RFID Journal, 2006. 3. Longe O.O.(2009),"Implementation of Student Attendance System using RFID Technology", B. Tech Project Report,LadokeAkintola University ofTechnology, Ogbomoso, Niger. 4. DNA technology, http://www.dnatechindia.com/	**90-92**