Volume 1 Issue 3, February 2012

International Journal of Engineering and Advanced Technology

ISSN : 2249 - 8958
Website: www.ijeat.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

S. No	Volume-1 Issue-3, February 2012, ISSN: 2249-8958 (Online) Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.	Page No.

1.

Authors: Rajesh Kumar, Rituraj Chandrakar

Paper Title: Overview of Green Supply Chain Management: Operation and Environmental Impact at Different Stages of the Supply Chain

Abstract: This paper emphasizes upon the application of Supply Chain Management and adding the `Green ` component to it so as to stress upon the need of environment friendly systems. The growing importance of GSCM is driven mainly by the escalating deterioration of environment. The waste and emissions caused by the supply chain have become one of the main sources of serious environmental problems including global warming and acid rain. One of the key aspects to green supply chains is to improve both economic and environmental performance simultaneously throughout the chains by establishing long-term buyer–supplier relationships. Efforts have been made by the authors to study the supply chain of the systems with the focus on its optimization and implementation.

Keywords: Green supply chain management (GSCM), Environmentally Preferable, Environmental Impact, Reverse logistic, Eco-design (ECO), Investment Recovery (IR).

References:

1. L. K. Toke, R. C. Gupta, Milind Dandekar. 2010. Green Supply Chain Management; Critical Research and Practices. Proceedings of the 2010 International Conference on Industrial Engineering and Operations Management Dhaka, Bangladesh, January 9 – 10, 2010.
2. Qinghua Zhu, Raymond P. Cote 2004. Integrating green supply chain management into an embryonic eco-industrial development: a case study of the Guitang Group. Journal of Cleaner Production 12 (2004) 1025–1035.
3. Lynn Johannson, 1994. How Can ATQEM Approach Add Value to Your Supply Chain? In Journal Total Quality Environmental Management, pp. 521-530.
4. Beamon, B. (1999). Designing the green supply chain. Logistics Information Management, 12(4), 332-342.
5. C. W. Hsu; A. H. Hu 2008. Green supply chain management in the electronic industry Int. J. Environ. Sci. Tech., 5 (2), 205-216, Spring 2008 ISSN: 1735-1472.
6. Vasco Sanchez-Rodrigues 2006. Supply Chain Management, Transport and the Environment- A Review Green Logistics Consortium Working Paper November 2006.
7. Dayna Simpson, Danny Samson. July 2008. Developing Strategies for Green Supply Chain Management. PRODUCTION/OPERATIONS MANAGEMENT Decision Line, July 2008.
8. King, A., Lenox, M., & Terlaak, A. (2005). The strategic use of decentralized institutions, Exploring certify cation with the ISO14001 management standard. Academy of Management Journal, 48(6), 1091-1106.
9. Melnyk S., Sroufe R., & Calantone, R. (2003). Assessing the impact of environmental management systems on corporate and environmental performance. Journal of Operations Management, 21(3), 329-351.
10. Geffen, C., & Rothenberg, S. (2000). Suppliers and environmental innovation: The automotive paint process. International Journal of Operations and Production Management, 20(2), 166-186.
11. Klassen, R., & Vachon, S. (2003). Collaboration and evaluation in the supply chain: The impact on plant-level environmental investment. Production and Operations Management, 12(3), 336-352.
12. Bowen, F., Cousins, P., Lamming, R., & Faruk, A. (2001a). The role of supply management capabilities in green supply. Production and Operations Management, 10(2), 174-189.
13. Lenox, M., & King, A. (2004). Prospects for developing absorptive capacity through internal information provision. Strategic Management Journal, 25, 331-345.
14. Kocabasoglu, C., Prahinski, C., & Klassen, R. (2007). Linking forward and reverse supply chain investments: The role of business uncertainty. Journal of Operations Management, 25(6), 1141-1160.
15. Richey, R., Chen, H., Genchev, S., & Daugherty, P. (2005). Developing effective reverse logistics programs. Industrial Marketing Management, 34(8), 830-840.
16. Corbett & Klassen. (2006). Extending the horizons: Environmental excellence as key to improving operations. Manufacturing and Service Operations Management, 8(1), 5–22.
17. Pagell, M., Wu, Z., & Murthy, N. (2007). The supply chain implications of recycling. Business Horizon, 50, 133-143.
18. Joy M. Field, Robert P. Sroufe. The Use of Recycled Materials in Manufacturing: Implications for Supply Chain Management and Operations Strategy.
19. Qinghua Zhua, Joseph Sarkisb, James J. Cordeiroc, Kee-Hung Laid 2008. Firm-level correlates of emergent green supply chain management practices in the Chinese context. Omega 36 (2008) 577 – 591
20. Ali Diabat, Kannan Govindan 2011.An analysis of the drivers affecting the implementation of green supply chain management. Resources, Conservation and Recycling 55 (2011) 659–667.
21. LMI The Green SCOR Model - Enabling Green Supply Chain Management through SCOR April 9, 2003.
22. Toshi H.Arimura , NicoleDarnall, HajimeKatayama . 2011. Is ISO 14001 a gateway to more advanced voluntary action? The case of green supply chain management. Journal of Environmental Economics and Management 61 (2011) 170–182.
23. Qinghua Zhu, Joseph Sarkis, Kee-hung Lai 2007. Green supply chain management: pressures, practices and performance within the Chinese automobile industry. Journal of Cleaner Production 15 (2007) 1041e1052.
24. Sanjeev Swami, Janat Shah 2011. Channel Coordination in Green Supply Chain Management: The Case of Package Size and Shelf-Space Allocation. SUPPLY CHAIN MANAGEMENT CENTRE WORKING PAPER NO: 348.
25. Joseph Sarkis 2009. A Boundaries and Flows Perspective of Green Supply Chain Management. WORKING PAPER NO. 2009-07 OCTOBER 2009.
26. Handfield R, Sroufe R, Walton S. Integrating environmental management and supply chain strategies. Business Strategy and the Environment 2005;14(1):1–19.
27. Simpson DF, Power DJ. Use the supply relationship to develop lean and green suppliers. Supply Chain Management: An International Journal 2005;10(1):60–8.
28. Min H, Galle WP. Green purchasing practices of US firms. International Journal of Operations and Production Management 2001;21(9):1222–38.
29. Zsidisin GA, Hendrick TE. Purchasing's involvement in environmental issues: a multi-country perspective. Industrial Management and Data Systems 1998; (7):313–20.
30. Rao P. Greening the supply chain: a new initiative in South East Asia. International Journal of Operations and Production Management 2002;21(6):632–55.
31. González-Benito J, González-Benito O. Environmental proactivity and business performance: an empirical analysis. OMEGA: The International Journal of Management Science 2005;33(1):1–15.
32. Partidario PJ, Vergragt PJ. Planning of strategic innovation aimed at environmental sustainability: actor-networks, scenario acceptance and backcasting analysis within a polymeric coating chain. Futures 2002;November–December:841–61.

1-6

33. Atkinson W. Team turns costs of wastes into profits. Purchasing 2002;131(8):22–4.
34. Prahinski C, Kocabasoglu C. Empirical research opportunities in reverse supply chains. OMEGA: The International Journal of Management Science 2006;34(6):519–32.
35. Hart S. A natural resource-based view of the firm. Academy of Management Review 1995;20(4):30–7.
36. Christmann P. Effects of 'best practices' of environmentalmanagement on cost advantage: the role of complementary assets. Academy of Management Journal 2000;43:663–80.
37. Russo M, Fouts P. A resource-based perspective on corporate environmental performance and profitability. Academy of Management Journal 1997;40:534–59.
38. Pun KF, Chin KS, Gill R. Determinants of employee involvement practices in manufacturing enterprises. Total Quality Management 2001;12(1):95–109.

2.

Authors: **Ali Akbar Motie Birjandi, Saeed Rahimi Gholami**

Paper Title: **Comparison between learning mechanism and pattern presentation techniques in voltage stability assessment**

Abstract: In this paper we compare learning mechanism and pattern presentation techniques in voltage stability assessment. In this way we use multilayer perceptron and classifiers models for assessing power system voltage stability margin in unstable point. In this paper we consider voltage magnitudes and phase angles as input and voltage stability margin as target of ANNs. Simulation was carrying out on IEEE-14 bus test system and numerical results show that minimum rule in combination gives better results rather than other models. Also be specified that use learning mechanism lead to better results than apply pattern presentation techniques.

Keywords: Artificial Neural Network, Combination of Classifiers,Voltage Stability, Voltage Stability Margin

References:

1. Debbie.Q.Zhou,U.D.Annakkage,AthulaD.Rajjapakse"onloine voltage stability monitoring of voltage stability margin using an Artifical Neural Network."IEEE Transaction on powersystems,vol 25,No.3,august 2010
2. Gao,Marison G, Kudur P." Toward tht Development of a systemstic approach for voltage stability assessment of Larg-scale power systems". IEEE Trans power Syst 1996; 11(3):1314-23
3. Lof PA, Smed T, Anderson G, Hill DI. " Fast calculation of a voltage stability index". IEEE Trans power Syst 1992;2:54-64.
4. P.Kundur, Power system stability and control. Newyork: Mc Graw-Hill Education,1994.
5. P.J.Abrao, A.P.Aves da silva and A.C.Zambroni desouza,"Rule extraction from artificial neural networks for voltage security analysis",in proc.2002 int.Joint conf. Neural networks(AJCNN'02),May 12-17,2002,vol.3,pp.2126-2131
6. S.Kamalasadan,A.K.Srivastavaand D.Thukaram,"Novel algorithm for online voltage stability assessment basedon feed forward neural network",in proc.IEEE power Eng.soc.General meeting,Jun.18-22,2006.
7. T.M.L. Assis, AR.Nunes, and D.M.Falco," Mid and Long-term voltage stability assessment using neural network and quasi-steady-state simulation",in proc. Power Engineering,2007 Large Engineering systems conf., oct. 10-12, pp. 213-217.
8. T.Van Custem and C.Vournas, "voltage stability of Electric power systems", Norwell, MA:Kluwer, 1998.
9. V.R.Dinavahi and S.C.Srivastava,"Artifical Neural Network based voltage stability margin prediction", inproc.IEEE power Eng.Soc.summer Meeting, jul. 2001, vol.2, pp. 1275-1280
10. Ledesma, P. andJulio Usaol. 2005. "Doubly Fed Induction Generator Model for Transient Stability Analysis".IEEE TRANSACTIONS ON ENERGY CONVERSION. VOL. 20, NO. 2:388-397.
11. Haykin, Simon.1999. Neural Networks: "A Comprehensive Foundation." 2nd edition, Prentice-Hall.
12. Windeatt T, Ghaderi R.1998. "Dynamic Weighting Factors for Decision Combining", Proc. of IEE Int. Conf. On Data Fusion, Great Malvern, UK: 123-130.

7-11

3.

Authors: **Pratibhadevi Tapashetti, Ankur Gupta, Chandrashekhar Mithlesh, A.S Umesh**

Paper Title: **Design and Simulation of Op Amp Integrator and Its Applications**

Abstract: The Integrator is an essential circuit component in any analog circuit that performs mathematical operation of Integration mainly in solving differential equation. The integrator also used as a storage element in analog computing. It is used in that type of circuits where initial condition is of great importance which affects the future calculations. The present study purposes to find the basic use of integrator circuits in engineering design & simulation using the simulation software Edvin Xp. In this paper we have concentrated on the history of opamp development, the basics of opamp, integrator design and simulation and lastly few of the major integrator applications are discussed.

Keywords: Operational amplifier (OPAMP), Analog to digital converter (ADC), I/O(input output)

References:

1. Ramakant A.Gayakwad, "Op-Amps and linear integrated Circuits"
2. A. Younis and M. Hassoun, "A High Speed Fully Differential CMOS Opamp," Proceedings of the IEEE Midwest Symposium on Circuits and Systems, Vol. 2, pp. 780-783, August 2000.
3. National Semiconductor Linear Applications (I and II), published by National Semiconductor
4. National Semiconductor Audio Handbook, published by National Semiconductor IC Op-Amp Cookbook - Walter G Jung (1974), published by Howard W Sams & Co., Inc. ISBN 0-672-20969-1
5. Data sheets from National Semiconductor, Texas Instruments, Burr-Brown, Analog Devices, Philips and many others.
6. AN166 - Basic Feedback Theory, Philips Semiconductors Application Note, Dec 1988 Opamps For Everyone - by Ron Mancini, Editor in Chief, Texas Instruments, Sep 2001

12-19

4.

Authors: **Sita Gupta, Vinod Todwal**

Paper Title: **Web Data Mining & Applications**

Abstract: With an enormous amount of data stored in databases and data warehouses, it is increasingly important to develop powerful tools for analysis of such data and mining interesting knowledge from it. Data mining is a process of inferring knowledge from such huge data. The main problem related to the retrieval of information from the World Wide Web is the enormous number of unstructured documents and resources, i.e., the difficulty of locating and tracking appropriate sources. In this article, a survey of the research in the area of web mining and suggest web mining categories and techniques. Furthermore, a presentation of a web mining environment generator

20-24

that allows naive users to generate a web mining environment specific to a given domain by providing a set of specifications.
Application of data mining techniques to the World Wide Web, referred to as Web mining, has been the focus of several recent research projects and papers. However, there is no established vocabulary, leading to confusion when comparing research efforts. The term Web mining has been used in two distinct ways. The first, called Web content mining in this paper,is the process of information discovery from sources across the World Wide Web.The second, called Web usage mining,is the process of mining for user browsing and access patterns. In this paper we define Web mining and present an overview of the various research is sues, techniques, and development efforts. We briefly describe WEBMINER, a system for Web usage mining, and conclude this paper by listing research issues.

Keywords: Data, Mining, Warehouse Web

References:

1. Introduction to Data Mining and Knowledge Discovery, Third Edition ISBN: 1-892095-02-5, Two Crows Corporation, 10500 Falls Road, Potomac, MD 20854 (U.S.A.), 1999.
2. Larose, D. T., "Discovering Knowledge in Data: An Introduction to Data Mining", ISBN 0-471-66657-2
3. John Wiley & Sons, Inc, 2005Han, J., Kamber, M. (2001) Data Mining: Concepts and Techniques, Morgan Kaufmann. Jain, A.K., Murty, M.N., Flynn, P.J. (1999) Data Clustering: A Review, ACM Computing Surveys, 31,3:264-323.
4. Salton, G. (1989) Automatic Text Processing: the Transformation, Analysis, and Retrieval of Information by Computer, Addison-Wesley, Reading.
5. Salton, G., Wong, A., Yang C.S.A. (1975) Vector Space Model for Automatic Indexing, Communications of the ACM , 18: 613-620.
6. Dunham, M. H., Sridhar S., "Data Mining: Introductory and Advanced Topics", Pearson Education,New Delhi, ISBN: 81-7758-785-4, 1st Edition, 2006.

5.

Authors:	**K. M. Pandey, Upendra Kumar, Subho Deb Verma**
Paper Title:	**CFD Analysis of Flow Field inside the Expansion Chamber of Internal Combustion Engines**

Abstract: Noise is a disturbance to the human environment that is escalating at such a high rate that it will become a major threat to the quality of human lives. There are numerous effects on the human environment due to the increase in noise pollution. In the present Paper, the causes and effects of noise pollution is presented. for 15m/s considering four different models of silencer through which exhaust gas passes at different velocities in atmosphere. The analysis carried with commercial package fluent software. The design of these models was carried out using Gambit. Flow is observed at different conditions. Different parameters like turbulent kinetic energy, turbulent viscosity, turbulent dissipation rate, velocity magnitude, static pressure and dynamic pressure were analyzed. . It is seen that near the source the noise is more, it decreases with increases the distance between source and observer So it is observed that muffler is also one of the major factors for noise reduction.

Keywords: Muffler, Silencer, Exhaust Pipes, Velocity, Noise pollution.

References:

1. Yu-JiaZhai and Ding-LiYu "Neural network model-based automotive engine air/fuel ratio control and robustness evaluation" Engineering Applications of Artificial Intelligence 22 (2009) 171–180, Control Systems Research Group, Liverpool John Moores University, UK.
2. Giorgio Zamboni, Massimo Capobianco, Enrico Daminelli "Atmospheric Environment", Volume 43, Issue 5, February 2009, Pages 1086-1092.
3. Thilo Bein et. al. "Aerospace Science and Technology, Volume 12, Issue 1, January 2008, Pages 62-73.
4. Amundsen, R. and Klæboe, A. Fyhri Atmospheric Environment, Volume 42, Issue 33, October 2008, Pages 7679-7 688.
5. Fredrik Ostman, Hannu T. Toivonen "Active torsional vibration control of reciprocating engines" Control Engineering Practice 16 (2008) 78–88, Faculty of Technology, Faculty of Technology, Abo Akademi University, FIN-20500, A°bo, Finland.
6. R. Stevens, P. Ewart, H. Mab, C.R. Stoneb. "Measurement of nitric oxide concentration in a spark-ignition engine using degenerate four-wave mixing." Combustion and Flame 148 (2007) 223–233, University of Oxford, Oxford, OX1 3PU, UK
7. Antonio Borghese and Simona S. Nerola "Detection of extremely fine carbonaceous particles in the exhausts of diesel and spark-ignited internal combustion engines, by means of broad-band extinction and scattering spectroscopy in the ultraviolet band 190-400 nm", Twenty-seventh symposium (international) on combustion/the combustion institute, 1998/pp. 2101–2109, Instituto Motori, Cnr via Marconi 8, 80125 Napoli, Italy.
8. M.M. Ettefagh, M.H. Sadeghi, V. Pirouzpanah and H. Arjmandi Tash. "Knock detection in spark ignition engines by vibration analysis of cylinder block: A parametric modeling approach" Mechanical Systems and Signal Processing 22 (2008) 1495–1514, Laboratory of Vibration and Modal Analysis, Department of Mechanical Engineering, University of Tabriz, Tabriz 51666, Iran.
9. Manfred-Andreas Beeck and Werner Hentschel "Laser metrology a diagnostic tool in automotive development processes", Optics and Lasers in Engineering 34 (2000) 101}120, Volkswagen AG, Research and Development, 38436 Wolfsburg, Germany.

25-29

6.

Authors:	**P Bose, K M Pandey**
Paper Title:	**Analysis of Thrust Coefficient in a Rocket Motor**

Abstract: In motors of artillery rockets and anti tank missiles solid propellant is used to provide high thrusts for short period of time. On fixing of propellant composition and its grain geometry nozzle design becomes the controlling factors for optimum performance of rocket. Thrust coefficient is one of the most important parameters for its performance. It is the thrust per unit chamber pressure and throat area. It is a dimensionless multiplication factor and signifies the degree to which the thrust is amplified by the nozzle. It is a function of gas property i.e. specific heat ratio of the gas and other thermodynamic parameters. It is also a function of nozzle geometry i.e. expansion ratio and pressure ratio. It is highest when the nozzle expands the gases exactly down to ambient pressure at the exit plane. However, thrust coefficient is independent of chamber pressure. In this paper thrust coefficient is analysed as a function of expansion ratio at three different values of specific heat ratio. It is observed that flow separation typically occurs when the ratio of exit pressure to atmospheric pressure is less than 0.25 to 0.35 and thus kept less than 0.40. Thrust coefficient losses are due to divergence of the flow at the nozzle exit, skin friction losses, two-phase flow and also propellant performance. These are minimized by developing proper propellant and designing suitable nozzle.

30-33

However, the losses cannot be brought down to zero. The paper analyses the various parameters that affect the thrust coefficient and brought out methods to improve the performance of solid rocket motor.

Keywords: Flow separation, Nozzle throat area, Propellant, Rocket motor, Thrust coefficient.

References:

1. Edwin D Brown, Model rocket engine performance, Technical notes of ESTES Industries, Colorado, USA, 2.
2. Nakka R A, Grain design and performance evaluation, Solid Propellant Rocket Motor – Design and Testing by Richard Allan, pp. 1-3, (1984).
3. HMSO, Thrust coefficient analysis, Text Book of Ballistics and Gunnery, vol. 2, 1986, pp. 79-81.
4. Yahya S M, Relation of thrust coefficient with specific heat ratio, Fundamentals of Compressible Flow with aircraft and Rocket Propulsion, 2006, pp. 234-337.
5. AMCP Pamphlet, Sources of energy, Elements of Armament Engineering, vol. 1, 1979, pp. 321-322.
6. Sutton G P and Biblarz O, Rocket nozzle, Rocket propulsion elements, 1982, pp. 156-157.
7. Royal Military College of Science, Minimising losses in rocket nozzle, The handbook of Artillery weapons, 1984, pp. 298-299.
8. www.lr.tudelft.nl/live/pagina.jsp
9. www.456fis.org/THE BLACKBIRD AND NASA
10. www.nakka-rocketry.net
11. www.rimworld.com
12. www.aerospaceweb.org

7.

Authors: **Vinay Kumar Nassa, Sri Krishan Yadav**

Paper Title: **Project Management Efficiency –A Fuzzy Logic Approach**

Abstract: Fuzzy logic is a relatively new technique for solving engineering control problems. This technique can be easily used to implement systems ranging from simple, small or even embedded up to large. The objective of this paper is to present an approach that utilizes a fuzzy decision making system (FDMS) to quantify the Project Management Efficiency (PME). The algorithm developed in this paper is based upon fuzzy logic, giving it the ability to solve complex problems plagued with uncertainty and vagueness. A fuzzy decision making system is designed and implemented using the MATLAB Fuzzy Logic tool box for the evaluation of the PME. This algorithm once refined to each area under the industry of software development can be used for subsequent projects, saving large percentages of time, money, and effort, without sacrificing quality

Keywords: Project management efficiency; Fuzzy decision making system; Fuzzy sets; Project time delay; Project time delay gradient.

References:

1. A. Kandel, Fuzzy Expert Systems, CRC PRESS, Boca Raton, FL, 1992.
2. B. W. Boehm, "Software Engineering Economics", Prentice-Hall, Enlewood Cliffs, New Jersy, 1981.
3. C. Jones , "Applied Software Measurement: Assuring Productivity and Quality", McGraw-Hill, New York, 1991.
4. C. Lee, Fuzzy logic in control systems: fuzzy logic parts I, II, IEEE Transactions on Systems, Man, and Cybernetics 20 (1990) 404.
5. D.H Kitson and S. Masters, "An Analysis of SEI Software Process Results 1987-1991.", Proc. 15th International Conference on Software Engineering, pp 68-77, 1993.
6. D.Merrill,"Software Development Project Managers with a Software Project Simulator" Master of Science Thesis Proposal,Department of Computer Science and Engineering Arizons State University Training Feb 4,1996.
7. F. Dweiri, Fuzzy development of crisp activity relationship charts for facilities layout, Computers and Industrial Engineering 36 (1999) 1 – 16.
8. H. Yang, C.J. Anumba, J. Kamara, P. Carrillo, A fuzzy-based analytic approach to collaborative decision making for construction teams, Logistics Information Management 14 (5/6) (2001) 344–354.
9. L.A. Zadeh, The role of fuzzy logic in the management of uncertainty in expert systems, Fuzzy Sets and System 11 (1983).
10. R.D. Archibald, Managing High-Technology Programs and Projects, John Wiley, New York, 1976.

34-38

8.

Authors: **Trinadh Balaga, B.Bhaskar Rao**

Paper Title: **1D Discrete Cosine Transform Using Distributed Algorithm**

Abstract: Discrete Cosine Transform（DCT）, which is an important component of image and video compression, is adopted in various standardized coding schemes, such as JPEG, As the ongoing demand increases, for better compression performance of the latest video coding standard, the H.264/AVC (Advanced Video Coding) is formulated .The H.264/AVC is also known as MPEG-4 .An advantage of the H.264/AVC is the simplicity of its transform. Distributed Arithmetic (DA) is an effective method for computing inner products when one of the input vectors is fixed. It uses pre computed look-up tables and accumulators instead of multipliers for calculating inner products and has been widely used in many DSP applications such as DFT, DCT, convolution, and digital filters. In particular, there has been great interest in implementing DCT with parallel distributed arithmetic and in reducing the ROM size required in the implementations since the DA-based DCT architectures are known to have very regular structures suitable for VLSI implementations. Low hardware circuit cost as well as low power consumption. Low hardware cost is achieved by exploiting redundant computational units and a technique to reduce error introduced by sign extension is also presented. The results indicate the considerable power as well as hardware savings in presented architecture.

Keywords: Distributed Arithmetic (DA), JPEG, Discrete Cosine Transform (DCT), MPEG.

References:

1. T. Acharya and P. Tsai, "JPEG2000 Standard for Image Compression: Algorithms and VLSI Architectures" J. Wiley & sons. NJ, 2005.
2. Gregory K. Wallace, "The JPEG Still Picture Compression Standard,"

39-43

3. IEEE Transactions on Consumer Electronics, vol.38(I), Feb. 1992. [3] R. C. Gonzalez, R. E. Woods, "Digital Image Processing," 2nd.Ed.,Prentice Hall, 2002.
4. F.H.P. Fitzek, M. Reisslein, "MPEG-4 and H.263 Video Traces for Network Performance Evaluation ," IEEE Network , vol.15, no.6, pp.40-54, Nov/Dec 2001.
5. Luciano Volcan Agostini, Ivan Saraiva Silva and Sergio Bampi, "Multiplierless and fully pipelined JPEG compression soft IP targeting
6. FPGAs," Microprocessors and Microsystems, vol. 31(8), 3 pp.487-497, Dec. 2007.
7. S. A. White, "Applications of distributed arithmetic to digital signal processing: a tutorial review," IEEE ASSP Magazine , vol.6, no.3, pp.4-19,Jul.1989.
8. M.-T. Sun, T.-C. Chen, A.M. Gottlieb, ''VLSI Implementation of a 16x16 Discrete Cosine Transform," IEEE Transactions on Circuits and Systems, vol.36, no. 4, pp. 610 – 617, Apr. 1989.
A. Shams, A. Chidanandan, W. Pan, and M. Bayoumi, "NEDA: A low power high throughput DCT architecture," IEEE Transactions on Signal Processing, vol.54(3), Mar. 2006.
9. Peng Chungan, Cao Xixin, Yu Dunshan, Zhang Xing, "A 250MHz optimized distributed architecture of 2D 8x8 DCT," 7th International Conference on ASIC, pp. 189 – 192, Oct. 2007.
10. M. Kovac, N. Ranganathan, "JAGUAR: A Fully Pipelined VLSI Architecture for JPEG Image Compression Standard," Proceedings of the IEEE, vol.83, no.2, pp. 247-258,Feb.1995.
11. Yuan-Ho Chen, Tsin-Yuan Chang, Chung-Yi Li, "High Throughput DA-Based DCT With High Accuracy Error-Compensated Adder Tree," IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. PP, issue 99, pp. 1-5, Jan 2010.
12. A. Kassem, M. Hamad, E. Haidamous, "Image Compression on FPGA using DCT," International Conference on Advances in Computational Tools for Engineering Applications, 2009 , ACTEA '09, pp.320-323, 15-17 July 2009.
13. Leila Makkaoui, Vincent Lecuire and Jean-Marie Moureaux, "Fast Zonal DCT-based image compression for Wireless Camera Sensor Networks," 2nd International Conference on Image Processing Theory Tools and Applications (IPTA), pp. 126-129, 2010.
14. Byoung-Il Kim and Sotirios G. Ziavras, "Low-Power Multiplierless DCT for Image/Video Coders," IEEE 13th International Symposium on Consumer Electronics, 2009. ISCE '09, pp. 133-136.
15. C. H. Chen, B. D. Liu and J. F. Yang, "Direct Recursive Structures for Computing Radix-r Two-Dimensional DCT/IDCT/DST/IDST", IEEE Transactions On Circuits And Systems ,I Regular Papers , vol. 51, no. 10, October 2004.
16. S. An C. Wang, "Recursive algorithm, architectures and FPGA implementation of the two-dimensional discrete cosine transform," IET Image Process ., vol. 2(6), pp. 286–294, 2008.
17. Xilinx Inc., Web: www.xilinx.com.

9.

Authors: **Arvind Vishnubhatla**

Paper Title: **Hand Held Unit for Imaging**

Abstract: We implement Terahertz imaging arrays to get synthetic aperture imaging data.As the data rates are extremely high we have designed a custom processor for an unmanned vehicle taking due care of weight and DC power restrictions.

Keywords: We implement Terahertz imaging arrays to get synthetic aperture imaging data.

References:

1. FlightGear, [online], Available: h t tp://flightgear.org, September 2005, (Accessed September 2005).
2. Microsoft Corporation, "Microsoft Flight Simulator SDK", [online], Available:http://www.microsoft.com/games/flightsimulator/fs2004_downloads_sdk.asp, 2005, (Accessed April 2005).
3. MicroPilot, [online], Available: http://www.micropilot.com , 2005,(Accessed April 2005).
4. Autodesk, [online], Available: http://www.discreet.com , 2005,(Accessed May 2005).
5. Microsoft Corporation, "Texture Filtering with Mipmaps", [online],Available: http://msdn.microsoft.com , 2004, (Accessed June 2005).
6. Australian Government Geoscience Australia, [online], Available:http://www.ga.gov.au , July 2005, (Accessed September 2005).
7. Monash Aerobotics, [online], Available:http://www.ctie.monash.edu.au/hargrave/aerobotics.html , 2002,

44-48

10.

Authors: **Anshul Singh, Devesh Narayan**

Paper Title: **A Survey on Hidden Markov Model for Credit Card Fraud Detection**

Abstract: Credit card frauds are increasing day by day regardless of the various techniques developed for its detection. Fraudsters are so expert that they engender new ways for committing fraudulent transactions each day which demands constant innovation for its detection techniques as well. Many techniques based on Artificial Intelligence, Data mining, Fuzzy logic, Machine learning, Sequence Alignment, decision tree, neural network, logistic regression, naïve Bayesian, Bayesian network, metalearning, Genetic Programming etc., has evolved in detecting various credit card fraudulent transactions. A steady indulgent on all these approaches will positively lead to an efficient credit card fraud detection system. This paper presents a survey of various techniques used in credit card fraud detection mechanisms and Hidden Markov Model (HMM) in detail. HMM categorizes card holder's profile as low, medium and high spending based on their spending behavior in terms of amount. A set of probabilities for amount of transaction is being assigned to each cardholder. Amount of each incoming transaction is then matched with card owner's category, if it justifies a predefined threshold value then the transaction is decided to be legitimate else declared as fraudulent.

Keywords: Credit card, fraud detection, Hidden Markov Model, online shopping

References:

1. Credit card fraud detection using hidden Markov Model. Abhinav Srivastava, Amlan Kundu, Shamik Sural and Arun K. Majumdar. 2008, Vol. 5.
2. ONLINE CREDIT CARD FRAUD PREVENTION SYSTEM FOR DEVELOPING COUNTRIES. Rehab Anwer, Shiraz Baig, Dr. Malik Sikandar Hayat Khiyal, Aihab Khan & Memoona Khanum. 2009-2010.
3. HMM-based Integration of Multiple Models for Intrusion Detection. Chen Xiuqing, Zhang Y ongping, Tang Jiutao. 2010.
4. "CARDWATCH: A Neural Network Based Database Mining System for Credit Card Fraud Detection. E. Aleskerov, B. Freisleben, and B. Rao. 1997, pp. 220-226.
5. Minority Report in Fraud Detection: Classification of Skewed Data. C. Phua, D. Alahakoon, and V. Lee. 2004.
6. Distributed Data Mining in Credit Card Fraud Detection. W. Fan, A.L. Prodromidis, and S.J. Stolfo. 1999.
7. A Web Services-Based Collaborative Scheme for Credit Card Fraud Detection. Tsai, C. Chiu and C. 2004.
8. Association rules applied to credit card fraud detection. D. Sa´nchez, M.A. Vila, L. Cerda , J.M. Serrano. 2009.
9. Neural Data Mining for Credit Card Fraud Detection. R. Brause, T. Langsdorf, and M. Hepp. 1999.

49-52

10. Parallel Granular Networks for Fast Credit Card Fraud Detection. M. Syeda, Y.Q. Zhang, and Y. Pan. 2002.
11. Mining Information from Credit Card Time Series for Timelier Fraud Detection. Hashemi, Leila Seyedhossein and Mahmoud Reza. 2010.
12. Credit Card Fraud Detection Using Meta-Learning: Issues and Initial Results. S.J. Stolfo, D.W. Fan, W. Lee, A.L. Prodromidis, and P.K. Chan. 1997.
13. Cost-based Modeling and Evaluation for Data Mining With Application to Fraud and Intrusion Detection: Results from the JAM Project. Salvatore J. Stolfo, Wei Fan, Wenke Lee, Andreas Prodromidis and Philip K. Chan, 1999
14. A Neural Classifier with Fraud Density Map for Effective Credit Card Fraud Detection. Kim, M.J. Kim and T.S. 2002.
15. A Comprehensive Survey of Data Mining-Based Fraud Detection. C. Phua, V. Lee, K. Smith, and R. Gayler,. 2007.
16. Agent-Based Distributed Learning Applied to Fraud Detection. Prodromidis, S. Stolfo and A.L. 1999.
17. Improving a credit card fraud detection system using genetic algorithm. M. Hamdi ozcelik, Ekrem Duman, Mine Islk and tugba cevik. 2010.
18. Research on Credit Card Fraud Detection Model Based on Class Weighted Support Vector Machine. Ju, Qibei Lu and Chunhua. 2011.
19. Detecting credit card fraud by genetic algorithm and scatter search. Ozcelik, Ekrem Duman and M. Hamdi. 2011.
20. BOAT ADAPTIVE CREDIT CARD FRAUD DETECTION SYSTEM. Sherly K.K, R Nedunchezhian. 2010.
21. A Novel Hybrid Artificial Immune Inspired Approach for Online Break-in Fraud Detection. R. Huang, H. Tawfik, and A.K. Nagar. 2010.
22. Detection of Fraud Use of Credit Card by Extended VFDT. Tatsuya Minegishi, Ayahiko Niimi. 2011.
23. Multiple algorithms for fraud detection. R. Wheeler, S. Aitken. 2000.
24. Support vector machine based multiagent ensemble learning. Lean Yu a, Wuyi Yue , Shouyang Wang a, K.K. Lai. 2010.
25. Research on Credit Card Fraud Detection Model Based on Similar Coefficient Sum. Wang, Chun-Hua JU and Na. 2009.
26. BLAST-SSAHA Hybridization forCredit Card Fraud Detection. Amlan Kundu, Suvasini Panigrahi, Shamik Sural and Arun K. Majumdar. 2009.
27. Statistical Fraud Detection: A Review. Hand, Richard J. Bolton and David J. 2002.
28. A hybrid model for plastic card fraud detection systems. Krivko, M. 2010.

11.

Authors: **Rashmi Mishra, Baibaswata Mohapatra**

Paper Title: **Performance Evaluation of OFDM System**

Abstract: Orthogonal frequency division multiplexing (OFDM) is a special segment of multi carrier transmission system, which has found its application in numerous wire-less and wired systems. In an OFDM scheme, a large number of orthogonal, overlapping, narrow band sub-channels or subcarriers, transmitted in parallel, divide the available transmission bandwidth. The separation of the subcarriers is theoretically minimal, so that there is a very compact spectral utilization. This paper presents the overview and then the performance evaluation results of an OFDM system, in terms of BER. The results presented in the paper are based on computer simulations performed using MATLAB; a highly efficient tool for different applications.

Keywords: OFDM, BER

References:

1. A. N. Akansu, and L. Xueming, A comparative performance evaluation of DMT (OFDM) and DWMT (DSBMT) based DSL communications systems for single and multitone interference, in Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing, 1998.
2.] S. Baig, F. U. Rehman, and M. J. Mughal, Performance comparison of DFT, discrete wavelet packet and wavelet transforms, in an OFDM transceiver for multipath fading channel, in Proceedings of 9th International Multitopic Conference, INMIC'05, 2005, pp. 1-6.
3. F. Farrukh, S. Baig, and M. J. Mughal, Performance comparison of DFT-OFDM and wavelet-OFDM with zeroforcing equalizer for FIR channel equalization, in Proceedings of International Conference Electrical Engineering, ICEE'07, 2007, pp. 1-5.
4. U. S. Jha, and R. Prasad, OFDM towards Fixed and Mobile Broadband Wireless Access, Artechhouse, 2007.
5.] D. Karamehmedovic, M. K. Lakshmanan, and H. Nikookar, Performance of wavelet packet modulation and OFDM in the presence of carrier frequency and phase noise, in Proceedings of the 1st European Wireless Technology Conference, EuMA'08, Amsterdam, The Netherlands, 2008, pp. 166-169.
6. M. K. Lakshmananm, and H. Nikookar, A review of wavelets for digital wireless communication, Springer Journal on Wireless Personal Communication, vol. 37, no. 3-4, pp. 387-420, 2006.
7. R. S. Manzoor, R. Gani, V. Jeoti, N. Kamel, and M. Asif, Implementation of FFT using discrete wavelet packet transform (DWPT) and its application to SNR estimation in OFDM systems, IEEE International Symposium on Information Technology, Kuala Lumpur, Malaysia, 2008.
8. Michael Weeks, Digital Signal Processing Using MATLAB and Wavelets. Infinity Science Press LLC, 2007.
9. R. van Nee, and R. Prasad, OFDM for Wireless Multimedia Communications. London: Artech House Publishers,2000.
10. H. M. Newlin, Developments in the Use of Wavelets in Communication Systems. Sunnyvale, California: TRW Systems & Information Technology Group.
11. S. B. Weinstein, and P. M. Ebert, Data transmission by frequency division multiplexing using the discrete Fourier transform, IEEE Transactions on Communication Technology, vol. 19, no. 5, pp. 628-634, 1971.
12. H. Zhang, D. Yuan, M. Jiang, and D. Wu, Research of DFT-OFDM and DWT-OFDM on different transmission scenarios, in Proceedings of ICITA'04, 2004, pp. 31-33.

53-56

12.

Authors: **Sapna Sharma, Gajendra Singh Chandel**

Paper Title: **Implementation of P2P network for search algorithm**

Abstract: A peer-to-peer, commonly abbreviated to P2P, is any distributed network architecture composed of participants that make a portion of their resources (such as processing power, disk storage or network bandwidth) directly available to other network participants, without the need for central coordination instances (such as servers or stable hosts). Peers are both suppliers and consumers of resources, in contrast to the traditional client-server model where only servers supply, and clients consume.

In a P2P network which employs the use of a purely decentralized design, and where everyone participates equally in the network as both a client and a server. Machines were assumed to be always switched on, always connected and assigned permanent IP.

In this paper, we propose the Modified Search algorithm to improve the search efficiency of unstructured P2P networks by giving higher querying priority to peers with high querying reply capabilities which is based on bandwidth, locality, reliability and quantity of available data. We categorized all peers based on their performance in the network. Our experiment shows that the Modified Search algorithm can improve the search efficiency without resorting to index operations. Our simulation shows that the Modified Search algorithm increases the efficiency of

57-60

network from 20 to 89.28 percent.

Keywords: Unstructured P2P Network, Search Algorithm, Opnet Simulator

References:

1. Yu Jin Yan Liu Hongwu Zhao "Trust-based super node selection in peer-to-peer systems" Future Computer and Communication ICFCC), 2010 2nd International Conference on, Wuhan, 21-24 May 2010
2. Wang Ping Qiu Jing Qiu Yu Hui" A Search Algorithm Based on Referral Trust in Unstructured P2P Systems" Electronic Commerce and Security, 2009. ISECS' 09, Second International Symposium on, Nanchang, 22-24 May 2009
3. Fuyong Yuan Jian Liu Chunxia Yin" A Scalable Search Algorithm on Unstructured P2P Networks" Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing 2007, SNPD 2007, Eighth ACIS International Conference, Qingdao, July 30 2007-Aug. 1 2007
4. Chen Wang Li Xiao" An Effective P2P Search Scheme to Exploit File Sharing Heterogeneity", Parallel and Distributed Systems, IEEE Transactions on, Michigan, Feb. 2007
5. Qian Su Xuejie Zhang "A Peer-to-Peer Resources Search Algorithm Based on Small-World Model", Communications, Circuits and Systems Proceedings, 2006 International Conference, Guilin, 25-28 June 2006, pp: 1557 – 1561
6. L. A. Adamic, R. M. Lukose, and B. A. Huberman, "Local search in unstructured networks," Review chapter to appear in Handbook of Graphs and Networks: From the Genome to the Internet, S. Bornholdt and H.G. Schuster (eds.), Wiley-VCH, Berlin, 2004.
7. S. Androutsellis-Theotokis and D. Spinellis. "A survey of peer-to-peer content distribution technologies," ACM Computing Surveys, 36(4):335371, December 2003
8. D. S. Bernsteing, Z. Feng, B. N. Levine, and S. Zilberstein. "Adaptive Peer Selection," Proceedings of the 2nd International Workshop on Peer-to-Peer Systems (IPTPS), Berkeley, California, February 2003.
9. BitTorrent. http://www.bittorrent.com/.
10. E. Cohen and S. Shenker. "Replication Strategies in Unstructured Peer-to-Peer Networks." Proceedings of the 2002 conference on Applications, technologies, architectures, and protocols for computer communications (ACM Sigcomm 2002), pp. 61-72, 2002.
11. S. El-Ansary, L. O. Alima, P. Brand, and S. Haridi, "Efficient broadcast in structured P2P networks," 2nd International Workshop on Peer-to-Peer Systems (IPTPS '03), Berkeley, CA, February 2003.
12. A. C. Fuqua, T. Ngan, and D. S. Wallach. "Economic Behavior of Peer-to-Peer Storage Networks," Workshop on Economics of Peer-to-Peer Systems (Berkeley, California), June 2003.
13. M. Gupta, P. Judge, and M. Ammar. "A Reputation System for Peer-to-Peer Networks." In Proceedings of the NOSSDAV'03 Conference, Monterey, CA, June 1-3 2003. pp 67
14. D. Qiu and R. Srikant. "Modeling and Performance Analysis of BitTorrent- Like Peer-to-Peer Networks," Proceedings of ACM SIGCOMM, Portland, Oregon, September 2004.
15. Yamamoto, S., Nakao, A., "In-network P2P packet cache processing using scalable P2P network test platform", Peer-to-Peer Computing (P2P), 2011 IEEE International Conference on Aug. 31 2011-Sept. 2 2011 , pp 162-163
16. Dai Bin, Wang Furong and Tian Yun, "Improvement of Network Load and Fault-Tolerant of P2P DHT Systems", Information Technology: Research and Education, 2006, ITRE'06.International Conference on 16-19 Oct.2006, pp 187-190
17. Weimin Luo, Jingbo Liu and Jialiang Xu, "An analysis of propagation and capability to attack of active P2P worms", Computer Science and Information Technology (ICCSIT), 2010 3rd IEEE International Conference on 9-11 July 2010, pp 506-509
18. Cuihua Zuo, Hongcai Feng and Cao Yuan, "Key-peers based topology control for unstructured P2P networks", Future Computer and Communication (ICFCC), 2010 2nd International Conference on 21-24 May 2010, pp V3-114 -V3-118.
19. Peng Zeng, "A probability caching model in hybrid P2P information dissemination", Computer Science and Service System (CSSS), 2011 International Conference on 27-29 June 2011, pp 3818 - 3821.
20. Feldmann, A., "A possibility for ISP and P2P collaboration", Broadband Communications, Networks and Systems, 2008.BROADNETS 2008. 5th International Conference on 8-11 Sept. 2008, pp 239.

13.

Authors: **R. M. Potdar, Anup Mishra, Vinni Sharma, Tripti Roy**

Paper Title: **Performance Evaluation of Different Adaptive Filtering Algorithms for Reduction of Heart Sound from Lung Sound**

Abstract: Auscultation is the most important and effective clinical technique for evaluating a patient's respiratory function. Auscultation of the chest is a diagnostic method used by physicians, owing to its simplicity and noninvasiveness. Hence, there is interest in lung sound analysis using time and frequency domain techniques to increase its usefulness in diagnosis. This proposed work is focused on the application of adaptive filtering technique to separate heart sound signal from lung sound signal. Lung sound signal measurements are taken to aid in the diagnosis of various diseases. The aim of this proposed work is to filtering heart sounds from lung sounds. In medicine this separation is made by doctors individually. This may lead to some errors in listening the lung sounds. The method we will use during this separation process is adaptive filtering. We will use Matlab basically while doing mathematical calculations and filtering methods.

Keywords: Auscultation, lung sound, heart sound, adaptive filtering, different adaptive algorithms.

References:

1. F. Dalmay, M.T. Antonini, P. Marquet, R. Menier, "Acoustic properties of the normal chest", European Respiratory Journal, 8, pp. 1761–1769, 1995.
2. Thato Tsalaile and Saeid Sanei, " Separation of Heart Sound Signal From Lung Sound Signal by Adaptive Line Enhancement", 15th European Signal Processing Conference, Poznan, Poland, pp. 1231 – 1235, September 2007.
3. J. Gnitecki, Z. Moussavi, H. Pasterkamp, " Recursive Least Square Adaptive Noise Cancellation Filtering for Heart Sound Reduction in Lung Sounds Recordings", EMBC IEEE pp. 2416 – 2419, 2003.
4. Vijay K. Iyer, P. A. Ramamoorthy, Hong Fan, Yongyudh Ploysongsang, " Reduction of Heart Sounds from Lung Sounds by Adaptive Filtering", IEEE Transactions on Biomedical Engineering, Volume 33, No. 12, pp. 1141 – 1148, December 1986.
5. Yang- Sheng Lu, Wen- Hui Liu, Guang- Xia Qin, " Removal of The Heart Noise From The Breath Sound", IEEE Engineering in Medical & Biology Society 10th Annual International Conference, pp. 175 – 176, 1988.
6. M. Varanini, M. Emdin, F. Allegri, M. Raciti, F. Conforti, A. Macerata, A. Taddei, R. Francesconi, G. Kraft, A. L Abbate, C. Marchesi, " Adaptive Filtering of ECG Signal for Deriving Respiratory Activity", IEEE, 1991.
7. Mohamed A. Abdulmagid, Dean J. Krusienski, Siddharth Pal, and William K. Jenkins, " Principles of Adaptive Noise Canceling", Annual Research Journal, Volume II, 2004.
8. Ying He, Hong He, Li Li, Yi Wu, Hongyan Pan, " The Applications and Simulation of Adaptive Filter in Noise Canceling", International Conference on Computer Science and Software Engineering IEEE, 2008.

61-67

14. **Authors:** **Rubeena Mirza, Vinti Nanda**

	Paper Title:	**Paper Currency Verification System Based on Characteristic Extraction Using Image Processing**

Abstract: Over the past few years, as a result of the great technological advances in color printing, duplicating and scanning, counterfeiting problems have become more and more serious. In the past, only the printing house has the ability to make counterfeit paper currency, but today it is possible for any person to print counterfeit bank notes simply by using a computer and a laser printer at house. Therefore the issue of efficiently distinguishing counterfeit banknotes from genuine ones via automatic machines has become more and more important. Counterfeit notes are a problem of almost every country but India has been hit really hard and has become a very acute problem. There is a need to design a system that is helpful in recognition of paper currency notes with fast speed and in less time. This proposed system describes an approach for verification of Indian currency banknotes. The currency will be verified by using image processing techniques. The approach consists of a number of components including image processing, edge detection, image segmentation, characteristic extraction, comparing images. The image processing approach is discussed with MATLAB to detect the features of paper currency. Image processing involves changing the nature of an image in order to improve its pictorial information for human interpretation. The image processing software is a collection of functions that extends the capability of the MATLAB numeric computing environment. The result will be whether currency is genuine or counterfeit.

Keywords: Characteristic Extraction, Counterfeit Detection, Image Processing, Paper Currency Verification.

References:

1. G. Trupti Pathrabe, Mrs.Swapnili Karmore, "A Novel Approach of Embedded System forIndian Paper Currency Recognition", International Journal of Computer Trends and Technology- May to June Issue 2011, ISSN: 2231-2803.
2. M. Tanaka, F. Takeda, K. Ohkouchi, Y. Michiyuk "Recognition of Paper Currencies by Hybrid Neural Network", IEEE Transactions on Neural Networks", 0-7803-4859-1/98, 1998.
3. Ji Qian, Dongping Qian, Mengjie Zhang "A Digit Recognition System for Paper Currency Identification Based on Virtual Instruments" IEEE Transactions, 1-4244-0555-6/06,2006.
4. H. Hassanpour ,A. Yaseri, G. Ardeshiri "Feature Extraction for Paper Currency Recognition", IEEE Transactions, 1-4244-0779-6/07,2007.
5. Junfang Guo, Yanyun Zhao, Anni Cai, "A Reliable Method for Paper Currency Recognition Based on LBP",IEEE Transactions, Proceedings of IC-NIDC2010, 978-1-4244-6853-9/10.
6. Nadim Jahangir, Ahsan Raja Chowdhury, "Bangladeshi Banknote Recognition by Neural Network with Axis Symmetrical Masks", IEEE Transactions, 1-4244-1551-9/07.
7. Ms. Trupti Pathrabe, Dr. N.G Bawane "Feature Extraction Parameters for Genuine Paper Currency Recognition & Verification" International Journal of Advanced Engineering Sciences and Technologies", Vol No. 2, Issue No. 1, 085 – 089, 2011.
8. Fumiaki Takeda, Sigeru Omatu "High Speed Paper Currency Recognition by Neural Network" IEEE Transactions on Neural Networks, Vol. 6, No. 1, January 1995.
9. Chin-Chen Chang, Tai-Xing Yu, Hsuan-Yen Yen "Paper Currency Verification with Support Vector Machines", IEEE Computer Society, 978-0-7695-3122-9/08, 2008.
10. Sigeru Omatu,Michifumi Yoshioka,Yoshihisa Kosaka "Bank Note Classification Using Neural Networks", IEEE Transactions, 1-4244-0826-1/07,2007.
11. Rajesh Kannan Megalingam, Prasanth Krishna, Pratheesh somarajan, Vishnu A Pillai, Reswan Hakkim "Extraction of License Plate Region in Automatic License Plate Recognition", International Conference on Mechanical and Electrical Technology, IEEE Transactions, 978-1-4244-8102-6/10
12. Woods, Gonzalez and Eddins(2005), Digital Image Processing Using MATLAB (Low Price Edition).
13. Woods and Gonzalez (2008), Digital Image Processing (Third Edition), Pearson Education, New Delhi, 110092.

68-71

	Authors:	**Komal Shah, Amit Thakkar, Amit Ganatra**
	Paper Title:	**A Study on Association Rule Hiding Approaches**

Abstract: In recent years, data mining is a popular analysis tool to extract knowledge from collection of large amount of data. One of the great challenges of data mining is finding hidden patterns without revealing sensitive information. Privacy preservation data mining (PPDM) is answer to such challenges. It is a major research area for protecting sensitive data or knowledge while data mining techniques can still be applied efficiently. Association rule hiding is one of the techniques of PPDM to protect the association rules generated by association rule mining. In this paper, we provide a survey of association rule hiding methods for privacy preservation. Various algorithms have been designed for it in recent years. In this paper, we summarize them and survey current existing techniques for association rule hiding.

Keywords: Association Rule Hiding, Data Mining, Privacy Preservation Data Mining.

15. **References:**

1. Aris Gkoulalas–Divanis;Vassilios S. Verykios "Association Rule Hiding For Data Mining" Springer, DOI 10.1007/978-1-4419-6569-1, Springer Science + Business Media, LLC 2010
2. M. Atallah, E. Bertino, A. Elmagarmid, M. Ibrahim, and V. S. Verykios "Disclosure limitation of sensitive rules,".In Proc. of the 1999 IEEE Knowledge and Data Engineering Exchange Workshop (KDEX'99), pp. 45–52, 1999.
3. Vassilios S. Verykios, A.K. Elmagarmid, E. Bertino, Y. Saygin, and E. Dasseni, "Association Rule Hiding," IEEE Transactions on Knowledge and Data Engineering, vol. 16, no. 4, pp. 434-447, 2004.
4. Shyue-Liang Wang; Bhavesh Parikh,; Ayat Jafari, "Hiding informative association rule sets", ELSEVIER, Expert Systems with Applications 33 (2007) 316–323,2006
5. Shyue-LiangWang ;Dipen Patel ;Ayat Jafari ;Tzung-Pei Hong, "Hiding collaborative recommendation association rules", Published online: 30 January 2007, Springer Science+Business Media, LLC 2007
6. Shyue-Liang Wang; Rajeev Maskey; Ayat Jafari; Tzung-Pei Hong " Efficient sanitization of informative association rules" ACM , Expert Systems with Applications: An International Journal, Volume 35, Issue 1-2, July, 2008
7. Chih-Chia Weng; Shan-Tai Chen; Hung-Che Lo, "A Novel Algorithm for Completely Hiding Sensitive Association Rules", IEEE Intelligent Systems Design and Applications, 2008.,vol 3, pp.202-208, 2008
8. Modi, C.N.; Rao, U.P.; Patel, D.R., "Maintaining privacy and data quality in privacy preserving association rule mining", IEEE 2008 Seventh International Conference on Machine Learning and Applications, pp 1-6, 2010
9. Stanley R. M. Oliveira; Osmar R. Za¨ ane, "Privacy Preserving Frequent Itemset Mining", IEEE International Conference on Data Mining

72-76

Workshop on Privacy, Security, and Data Mining, Maebashi City, Japan. Conferences in Research and Practice in Information Technology, Vol. 14.2002
10. Y.Saygin, V. S. Verykios, and C. Clifton, "Using Unknowns to Prevent Discovery of Association Rules," ACM SIGMOD, vol.30(4), pp. 45–54, Dec. 2001.
11. Y. Saygin, V. S. Verykios, and A. K. Elmagarmid, "Privacy preserving association rule mining," In Proc. Int'l Workshop on Research Issues in Data Engineering (RIDE 2002), 2002,pp. 151–163.
12. E. Pontikakis, Y. Theodoridis, A. Tsitsonis, L. Chang, and V. S. Verykios. A quantitative and qualitative analysis of blocking in association rule hiding. In Proceedings of the 2004 ACM Workshop on Privacy in the Electronic Society (WPES), pages 29–30, 2004.
13. H. Mannila and H. Toivonen, "Levelwise search and borders of theories in knowledge discovery," Data Mining and Knowledge Discovery, vol.1(3), pp. 241–258, Sep. 1997.
14. X. Sun and P. S. Yu. A border–based approach for hiding sensitive frequent itemsets. In Proceedings of the 5th IEEE International Conference on Data Mining (ICDM), pages 426– 433, 2005.
15. X. Sun and P. S. Yu. Hiding sensitive frequent itemsets by a border–based approach. Computing science and engineering, 1(1):74–94, 2007.
16. G. V. Moustakides and V. S. Verykios. A max–min approach for hiding frequent itemsets. In Workshops Proceedings of the 6th IEEE International Conference on Data Mining (ICDM), pages 502–506, 2006.
17. G. V. Moustakides and V. S. Verykios. A maxmin approach for hiding frequent itemsets. Data and Knowledge Engineering, 65(1):75–89, 2008.
18. A. Gkoulalas-Divanis and V.S. Verykios, "An Integer Programming Approach for Frequent Itemset Hiding," In Proc. ACM Conf. Information and Knowledge Management (CIKM '06), Nov. 2006.
19. A. Gkoulalas-Divanis and V.S. Verykios, "Exact Knowledge Hiding through Database Extension," IEEE Transactions on Knowledge and Data Engineering, vol. 21(5), pp. 699–713, May 2009.

16.

Authors: **Shraddha Modi, Amit Thakkar, Amit Ganatra**

Paper Title: **A Survey on Approaches of Multirelational Classification Based On Relational Database**

Abstract: Classification is an important task in data mining and machine learning, in which a model is generated based on training dataset and that model is used to predict class label of unknown dataset. Today most real-world data are stored in relational databases. So to classify objects in one relation, other relations provide crucial information. Relational databases are the popular format for structured data which consist of tables connected via relations (primary key/ foreign key). So relational databases are simply too complex to analyse with a propositional algorithm of data mining. To classify data from relational database need of multi relational classification arise which is used to analyze relational database and used to predict behaviour and unknown pattern automatically which include credit card fraud detection, disease diagnosis system, financial decision making system, information extraction and face recognition applications. This paper presents survey of different approaches to classify data from multiple relations, which includes Flattening based approach, Upgrading approach and Multiple view based approach.

Keywords: Inductive logic programming, Multi relational classification, Multiple view, Multi-view, Relational database, Selection graph, Tuple id propagation.

References:

1. Dr. M. Thangaraj, C. R. Vijayalakshmi, "A Study on Classification Approaches across Multiple Database Relations", International Journal of Computer Applications (0975 – 8887), Volume 12– No.12, DOI: 10.5120/1740-2366, January 2011
2. Raymond J. Mooney, Prem Melville, Lappoon Rupert Tang, "Relational Data Mining with Inductive Logic Programming for Link Discovery", Appears in the Proceedings of the National Science Foundation Workshop on Next Generation Data Mining, Nov. 2002
3. Blockeel, H. , Top-down induction of first order logical decision trees, Artificial Intelligence Journal, vol.101,pp.285-297, 1998
4. Kramer S. , Widmer G. , "Inducing Classification and Regression Tress in First Order Logic", Relational Data Mining, pp.140-159, Springer, 2001
5. Lise Getoor, Nir Friedman, Daphne Koller, Avi Pfeffer, Ben Taskar, "Probabilistic Relational Models", In An Introduction to Statistical Relational Learning, August 2007
6. Getoor L. , "Multi-Relational Data Mining was using probabilistic Models Research Summary", In Proc. Of 1st workshop in MRDM, 2001
7. Stephen Muggleton, "Learning Stochastic Logic Programs", In Proceedings of the AAAI-2000 Workshop on Learning Statistical Models from Relational Data, Technical Report WS-00-06, pp. 36-41, 2000
8. Emde W. , Wettschereck D. , "Relational instance based learning", In Proceedings of the 13th Int. Conference on Machine Learning, Morgan Kaufmann, San Mateo, CA, 122-130, 1996
9. Cumby C. , Roth D. , "On kernel methods for relational learning", In Proceedings of 20th International Conf. On Machine Learning (ICML-2003,) Washington, 2003
10. Zhen Peng, Lifeng Wu, Xiaoju Wang, "Research on Multi-Relational Classification Approaches", International Conference on Computational Intelligence and Natural Computing, IEEE, 2009
11. Hector Ariel Leiva, Shashi Gadia, Drena Dobbs, "MRDTL: A multi-relational decision tree learning algorithm", Proceedings of the 13th International Conference on Inductive Logic Programming, 2002
12. Atramentov A. , Leiva H. , Honavar V. , "A Multirelational Decision Tree Learning Algorithm - Implementation and Experiments", ILP LNCS, Vol.2835, pp. 38-56, 2003
13. Yin X, Han J, Yu PS, "CrossMine: Efficient Classification across Multiple Database Relations". In Proceedings of 20th Int. Conf. on Data Engineering (ICDE'04), 2004
14. Liu H. , Yin X. ,Han J. , "A Efficient Multirelational Naïve Bayesian Classifier Based on Semantic Relationship Graph", In MRDM'05 Proceedings of 4th international workshop on MRDM, 2005
15. X. Yan, J. Han, "gSpan: Graph-based substructure pattern mining". In Proc. 2002 Int. Conf. on Data Mining (ICDM'02), Maebashi, Japan, Dec. 2002.
16. L. Dehaspe, H. Toivonen, "Discovery of Relational Association Rules", Springer-Verlag, 2000.
17. Dehaspe L. , Raedt D. , "Mining Association Rules in Multiple Relations", In Proceedings of the ILP, Springer- Verlang, London UK, pp.125-132, 1997
18. Yingqin Gu, Hongyan Liu, Jun He, Bo Hu, Xiaoyong Du, "MrCAR: A Multi-relational Classification Algorithm Based on Association Rules", IEEE, Web Information Systems and Mining, 2009. WISM 2009. International Conference, 31 December 2009
19. Hongyu Guo, Herna L. Viktor, "Multirelational Classification: A Multiple View Approach", ACM, KNOWLEDGE AND INFORMATION SYSTEMS, Volume 17, Number 3, 287-312, DOI: 10.1007/ s10115-008-0127-5, 2008
20. Hongyu Guo, Herna L. Viktor, "Mining relational databases with multi-view learning", ACM, DOI:10.1145/1090193.1090197, 2005
21. Sašo Džeroski, "Multi-relational data mining: an introduction", Published in ACM SIGKDD Explorations Newsletter Homepage archive, Volume 5 Issue 1, July 2003

1. Mi losz R. Kmieciak and Jerzy Stefanowski Stream Handling Sudden Concept Drift in Enron Messages Data Mat. III KNTPD Conf., Poznan 21-23 April 2010, WNT Press, 2010, 284-296
2. Jose´ del Campo-A´ vila, Gonzalo Ramos-Jime´nez, Jo.ao Gama, and Rafael Morales-Bueno Improving Prediction Accuracy of an Incremental Algorithm Driven by Error Margins Intelligent Data Analysis - Knowledge Discovery from Data Streams Volume 12 Issue 3, August 2008
3. Elena Ikonomovsk, Jo˜ao Gama, Sa˜so D˘zeroski1 and Jozef Stefan Incremental Option Trees for Handling Gradual Concept Drift European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2010).
4. Elena Ikonomovska • João Gama • Sašo Džeroski Learning model trees from evolving data streams Discovery Science: Data Mining and Knowledge Discovery Volume 23 Issue 1, July 2011, 52-63
5. Mohammad M. Masud, Jing Gao, Latifur Khan, Classification and Novel Class Detection in Concept-Drifting Data Streams under Time Constraints Knowledge and Data Engineering, IEEE Transactions on Volume: 23 Issue:6 On page(s): June 2011, 859-874
6. Cheng-Jung TSAI Chien-I LEE Wei-Pang YANG An Efficient and Sensitive Decision Tree Approach to Mining Concept-Drifting Data Streams INFORMATICA, 2008, Vol. 19, No. 1, 2008, 135–156
7. Elena Ikonomovska Jo˜ao Gama Bernard ˘Zenko Sa˘so D˘zeroski Speeding Up Hoeffding-Based Regression Trees with Options Appearing in Proceedings of the 28 th International Conference on Machine Learning ICML 2011: 537-544
8. Chunquan Liang Yang Zhang Qun Song Decision Tree for Dynamic and Uncertain Data Streams JMLR: Workshop and Conference Proceedings 13: 209-224 2nd Asian Conference on Machine Learning (ACML2010), 2010.
9. Induction of Decision Trees J.R. QUINLAN Mach. Learn. 1, 1 (Mar. 1986), 81-106
10. Jeffrey T. Byorick, Assesing Classification confidence using a weighted exponential based technique with the learn++ incremental learning algorithm, Lecture Notes in Computer Science Volume: 2714, 2002, pages 181-188
11. Albert Bifet. Adaptive learning and mining for data streams and frequent patterns. SIGKDD Explorations Newsletter, ACM, vol. 11, 2009, 55-56.
12. Sam Chao Fai Wong Yiping Li An Incremental and Interactive Decision Tree Learning Algorithm for a Practical Diagnostic Supporting Workbench Fourth International Conference on Networked Computing and Advanced Information Management IEEE, vol. 2, 2008 pages 202-207
13. Sattar Hashemi, Ying Yang, Zahra Mirzamomen, and Mohammadreza Kangavari Adapted One-versus-All Decision Trees for Data Stream Classification IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING,VOL. 21, MAY 2009 ,page No.. 5.
14. Jo˜ao Gama Pedro medas Learning Decision Trees from Dynamic Data Streams.2nd Asian Conference on Machine Learning (ACML2010),Journal of Universal Computer Science, ACM, vol. 11,2005, pages 1353-1366.
15. Dariusz Brzezinski MINING DATA STREAMS WITH CONCEPT DRIFT, master's thesis, Poznan, 2010
16. Chunquan Liang, Yang Zhang, Qun Song Decision Tree for Dynamic and Uncertain Data Streams JMLR: Workshop and Conference Proceedings 13: 209-224 2nd Asian Conference on Machine Learning (ACML2010), Tokyo, Japan, Nov. 8{10, 2010.
17. Cheng-Jung TSAI, Chien-I LEE, Wei-Pang YANG An Efficient and sensitive decision Tree Approach to mining concept drifting data streams INFORMATICA, 2008, Vol. 19, No. 1, 135–156
18. Bernhard Pfahringer, Geoffrey Holmes, and Richard Kirkby New Options for Hoeffding Trees Springer-Verlag Berlin Heidelberg M.A. Orgun and J. Thornton (Eds.): AI 2007, LNAI 4830,2007, pp. 90–99

20.	**Authors:**	**H. B. Kekre , Kavita Sonawane**
	Paper Title:	**Feature Extraction in the form of Statistical Moments Extracted to Bins formed using Partitioned Equalized Histogram for CBIR**

Abstract: This Paper introduces a new method of feature extraction in terms of statistical moments Mean, Standard deviation, Skewness and Kurtosis into three different bin sizes 8, 27 and 64 based on partitioned equalized histogram of the R, G, and B planes for content based image retrieval. Various feature vector databases are prepared and tested in this work to test response of the system through all small possibilities used in the feature extraction process based on invariant features. The system is designed to work with 2000 BMP images which include 20 different classes where each class has 100 images. Comparison process is core part of all CBIR systems; this system makes use of two similarity measures named Euclidean and Absolute distance for this purpose. System performance is evaluated using PRCP in addition to that LIRS, LSRR along with the newly introduced parameter 'LONEGST String' in the response of the given query for all the algorithms. Further the results obtained are refined and combined using the three criteria 1, 2 and 3.

Keywords: Absolute distance, Equalized Histogram, Euclidean distance, LISR, LSRR, 'Longest String', PRCP.

References:

1. C.-S. Fuh, S.-W. Cho, and K. Essig, ªHierarchical Color Image Region Segmentation for Content-Based Image Retrieval System,IEEE Trans. Image Processing, vol. 9, no. 1 pp. 156-163, 2000.
2. N.R. Howe and D.P. Huttenlocher, Integrating Color, Texture, and Geometry for Image Retrieval, Proc. Computer Vision and Pattern Recognition, pp. 239-247, 2000.
3. A.K. Jain and A. Vailaya, Image Retrieval Using Color and Shape, Pattern Recognition, vol. 29, no. 8, pp. 1,233-1,244, 1996.
4. D. Sharvit, J. Chan, H. Tek, and B.B. Kimia, ªSymmetry-Based indexing of Image Databases, J. Visual Comm. and Image, Representation, vol. 9, no. 4, pp. 366-380, 1998.
5. Content-Based Image Retrieval at the End of the Early Years, Arnold W.M. Smeulders, Senior Member, IEEE, Marcel Worring, Simone Santini, Member, IEEE, Amarnath Gupta, Member, IEEE, and Ramesh Jain, Fellow, IEEE
6. Survey of compressed-domain features used in audio-visual indexing and analysis, Hualu Wang,a,* Ajay Divakaran,b Anthony Vetro, Shih-Fu Chang,a and Huifang Sunb J. Vis.Commun. Image R. 14 (2003) 150–183, www.elsevier.com/locate/yjvci.
7. Zur Erlangung des Doktorgradesder Fakult, Angewandte Wissenschaften,Feature Histograms for Content-Based Image Retrieval 2002.
8. Content Based Image Retrieval Techniques, Shikha Nirmal, Proceedings of the 3rd Nat ional Conference; INDIA Com-2009 Comput ing For Nat ion Development , February26 – 27, 2009 Bh a rat i Vid ya pe eth.
9. An Efficient Histogram Algorithm for Retrieval from Lighting Changed-ImagesNam Yee Kim, Kang Soo You, Gi-Hyoung Yoo, Hoon Sung Kwak
10. Xia Wan, C C Jay kou , Multi resolution color clustering approach to image indexing and retrieval.
11. Image Retrieval Using BDIP and BVLC Moments, Young Deok Chun, Sang Yong Seo, and Nam Chul Kim, IEEE Transactions On Circuits And Systems For Video Technology, Vol. 13, No. 9, September 2003
12. Michael,Swain, Dana Ballard, Color indexing, JAN 22 1991.
13. An Efficient Color Representation for Image Retrieval Yining Deng, Member, IEEE, B. S. Manjunath, Member, IEEE, Charles Kenney,IEEE Transactions On Image Processing, Vol. 10, No. 1, January 2001
14. Constantin Vertan, Nozha Boujemaa, Using Fuzzy Histograms and Distances for Color Image Retrieval
15. Greg Pass Ramin Zabih, Histogram Refinement for Content-Based Image Retrieval, 0-8186-7620-5/96 $5.00 0 1996 IEEE.
16. Yong Rui and Thomas S. Huang, Image Retrieval: Current Techniques, Promising Directions, and Open Issues.
17. Ritendra Datta, Jia Li, and James Z. Wang, Content-Based Image Retrieval - Approaches and Trends of the New Age, MIR'05, November 11-12, Singapore, 2005. Copyright 2005 ACM 1-59593-244-5/05/0011.

18. Dr. B. S. Adiga, and N. Deepak, A Universal Model for Content-Based Image Retrieval S. Nandagopalan,
19. Improvements on colour histogram-based CBIR . Master Thesis 2002.
20. Jeff Berens. Image Indexing using Compressed Colour Histograms. Thesis submitted for the Degree of Doctor of Philosophy in the School of information Systems, University of East Anglia, Norwich
21. Dr. H.B.Kekre , Kavita Sonawane, Bins Approach To Image Retrieval Using Statistical Parameters Based On Histogram Partitioning Of R, G, B Planes, Jan 2012. ©IJAET ISSN: 2231-1963.
22. Dr. H.B.Kekre, Dhirendra Mishra, Sectorization of DCT-DST Plane for Column wise Transformed Color Images in CBIR, ICTSM-11, at MPSTME 25-27 February, 2011 on Springer Link.
23. Dr. H. B. Kekre, Dhirendra Mishra, Image Retrieval using DST and DST Wavelet Sectorization, (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 2, No. 6, 2011.
24. Samy Ait-Aoudia1, Ramdane Mahiou1, Billel Benzaid, Yet Another Content Based Image Retrieval system, 1550-6037/10 $26.00 © 2010 IEEE, DOI 10.1109/IV.2010.83
25. Subrahmanyam Murala, Anil Balaji Gonde, R. P. Maheshwari, Color and Texture Features for Image Indexing and Retrieval, 2009 IEEE International Advance Computing Conference (IACC 2009), Patiala, India, 6-7 March 2009
26. V. Vijaya Kumar, N. Gnaneswara Rao, A.L.Narsimha Rao, and V.Venkata Krishna, IHBM: Integrated Histogram Bin Matching For Similarity Measures of Color Image Retrieval.
27. P.S.Suhasini , Dr. K.Sri Rama Krishna, 3dr. I. V. Murali Krishna, CBIR Using Color Histogram Processing, Journal of Theoretical and Applied Information Technology© 2005 - 2009 JATIT. All rights reserved. 13 vol 6, No1.
28. H. B. Kekre , Kavita Sonawane, Query Based Image Retrieval Using kekre's, DCT and Hybrid wavelet Transform Over 1st and 2nd Moment, International Journal of Computer Applications (0975 – 8887), Volume 32– No.4, October 2011.
29. H. B. Kekre, Kavita Sonawane, Retrieval of Images Using DCT and DCT Wavelet Over Image Blocks. (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 2, No. 10, 2011.
30. H. B. Kekre , Kavita Sonawane , Feature Extraction in Bins Using Global and Local thresholding of Images for CBIR. International Journal Of Computer Applications In Applications In Engineering, Technology And Sciences, ISSN: 0974-3596 | October '09 – March '10, Volume 2 : Issue 2.

21.

Authors: **Purvi Prajapati, Amit Thakkar, Amit Ganatra**

Paper Title: **A Comprehensive and Comparative Study on Hierarchical Multi Label Classification**

Abstract: Multi label classification is variation of single label classification where each instance is associated with more than one class labels. Multi label classification is used in many applications like text classification, gene functionality, image processing etc. Hierarchical multi-label classification problems combine the characteristics of both hierarchical and multi-label classification problems. This paper introduced k binary classifier and one classifier approaches of hierarchical multi label classification. These approaches are explained with two algorithms to solve hierarchical multi label classification problems. One is the C4.5H algorithm (extension of multi label decision tree) and second is Predictive Clustering Tree (PCT) algorithm. From theoretical and experimental study on yeast data set shows that PCT algorithm is the best option for hierarchical multi label classification. PCT algorithm is implemented on Clus. This paper introduced three approaches of Clus: Single Classification (SC), Hierarchical Single Label Classification (HSC) and Hierarchical Multi label Classification (HMC). From theoretical and experimental study, HMC performs better compare to remaining two approaches.

Keywords: Classification, Decision Tree, Hierarchical Classification, Multi Label Classification, Predictive clustering tree.

References:

1. C. Vens, J. Struyf, L. Schietgat, S. Dˇzeroski, and H. Blockeel. Decision trees for hierarchical multi-label classification. Machine Learning, 73(2):185–214,Springer 2008.
2. Fernando Esteban Barril Otero. Thesis on New AntColony Optimisation Algorithms for Hierarchical Classification of Protin Functions, January 2010.
3. Leander Schietgat, Hierarchical Multilabel Classification Trees for Gene Function Prediction, Department of Computer Science, Catholic University of Leuven. Feb. 25, 2007.
4. Leander Schietgat , Hendrik Blockeel, Jan Struyf. Decision trees for hierarchical multilabel classification: a case study in functional genomics.BNAIC Namur, Belgium, 5-6 October 2006.
5. Leander Schietgat, Hendrik Blockeel, Jan Struyf, Hierarchical Multi-Classification with Predictive Clustering Trees in Functional Genomics, Springer, 2005.
6. Clus : user manual www.cs.kuleuven.be/~dtai/clus/
7. G. Tsoumakas and I. Vlahavas. Random k-labelsets: An ensemble method for multilabel classification. In Proceedings of the 18th European Conference on Machine Learning (ECML 2007), 2007.
8. Hendrik Blockeel, Maurice Bruynooghe, Saso Dzerosk, Jan Ramon and Jan Struyf. Hierarchical multi- classification, CiteSeer 2002.
9. Andrew Mayne, Russell Perry. Hierarchically Classifying Documents with Multiple Labels. Computational Intelligence and Data Mining ,IEEE, 2009.
10. Jian-Wu Xu, Vartika Singh, Venu Govindaraju and Depankar Neogi. A Hierarchical Classification Model for Document Categorization. Appearing in Document Analysis and Recognition , ICDAR 2009.
11. Wei Bi, James T.Kwok. Multi-Label Classification on Tree and DAG Structured Hierarchies. Appearing in Proceedings of the 28th International Conference on Machine Learning , Bellevue, WA, USA, 2011.
12. Benhui Chen and Jinglu Hu. Hierarchical Multi-label Classification Incorporating Prior Information for Gene Function Prediction. Appearing in Intelligent Systems Design and Applications, 10th international conference, IEEE 2010.

110-116

22.

Authors: **A. Anusha, Ch.Veera Babu**

Paper Title: **EFFICIENT BANDWIDTH IN MOBILE AD HOC NETWORKS USING GENETIC ALGORITHAM**

Abstract: Most of the existing routing protocols are designed primarily to carry best effort traffic and only concerned with shortest path routing. Little attention is paid to the issues related to the quality of services (QoS) requirement of a route. In this paper, we will consider the problem of searching for a route satisfying the bandwidth requirement in a mobile ad-hoc network.

Unlike in a wired network, where the available bandwidth of a route is simply the minimum bandwidth of the links along the route, the calculation of the available bandwidth of a route in a mobile ad-hoc network has been proved to be complete. The Genetic Algorithm (GA) has successfully been applied to many famous Application problems in communication networks, such as the multicast routing problem. Recently, many researchers have attempted to adopt

117-125

genetic algorithms to solve various problems existing in mobile ad hoc networks. This Genetic Algorithm executed in a centralized manner for the bandwidth calculation problem in the TDMA channel model.
Extensive computer simulations are performed to compare the performance of our proposed GA method and that of other existing heuristic algorithms. Simulation results verify that our GA can produce larger bandwidth utilization than others.

Keywords: The Genetic Algorithm (GA) has successfully been applied to many famous

References:

1. Banerjee N, and Das, S.K., 2001, "MODERN: Multicast on-Demand QoS-based Routing in Wireless Networks" Proceedings of the IEEE VTS 53rd Vehicular Technology Conference.
2. Chen S. and Nahrstedt, K, "Distribted Quality of Service Routing in Adhoc Networks", Proceedings of the IEEE International Conference On Communications.
3. Gen M. and Cheng R., Genetic Algorithms and Engineering Design John Wiley and Sons.
4. Lin H.C. and Fung, P.C., "Finding Available Bandwidth in Multihop Mobile Wireless Networks" Proceedings of the IEEE VTS 51rd Vehicular Technology Conference.

23.

Authors: **Tonye K. Jack**

Paper Title: **A Method for the Stress and Fatigue Analysis of Bolted Joint Connections: together with Programmed Solution**

Abstract: Often the weakest link in integral engineering equipment, bolted joint connections require proper attention and detailed analysis at the design stage for a fail safe operation in service. The analysis is often lengthy with several variables under consideration. A step-by-step guide, together with all required equations for evaluating a typical bolted joint connection is given. A computer programmed solution in Microsoft Excel TM for such analysis is shown through a worked example.

Keywords: Bolt and nut connection, bolted joint analysis, bolt fatigue, joint stresses, bolt preload

References:

1. S. Aaronson, "Analyzing Critical Joints," Machine Design, January, 1982
2. Engineering Sciences Data Unit, Applying, Measuring and Maintaining Pre-tensioning in Steel Bolts, ESDU, Item No. 86014, 1987
3. Engineering Sciences Data Unit, Analysis of Pre-tensioned bolted joints subject to tensile (separating) forces, ESDU, Item No. 85021, 1985
4. Engineering Sciences Data Unit, "Fatigue Strength of Steel stud threads under axial and combined axial and bending loading," ESDU Item No. 85004
5. Engineering Sciences Data Unit, "Static strength of screwed fasteners," ESDU, Item No. 67019, SA 253, (Ammended September, 1988)
6. ASME Section VIII, Division I, General requirements for Pressure Vessels design, "Rules for Bolted Flange connections," 1995, Appendix II
7. A. D. Deutscman, W. J. Michels, C. E. Wilson, Machine design theory and practice, New York, Macmillan, 1975, pp. 815-829
8. J. E. Shigley, Mechanical engineering design, McGraw-Hill, 3rd. ed., 1977
9. . E. Shigley, C. Mischke, Mechanical engineering design, McGraw-Hill, 5th, ed., 1989
10. Baumann, T. R., Designing Safer Pre-stressed Joints, Machine Design, April 25, 1991
11. R. Parmley (ed.), H. S. Brenner, "Standard threaded fasteners," Standard handbook of fastening and joining, McGraw-Hill, 1989
12. W. C. Stewart, "What torque?", Fastener data book, 1950
13. Alignagraphics Co., "Projoint"-Bolted Joint Analysis Program, User Manual, London, 1998
14. R.E. Peterson, Stress concentration factors, New York, Wiley, 1974
15. T. K. Jack, "Mechanical integrity of sucker rods when used as line shafts in rotary down-hole pumps, M. Sc. Thesis, School of Mechanical engineering, Cranfield University, England, 1993
16. Fastener Institute, Machine Design, September 11, 1969
17. J. H. Bickford, An introduction to the design and behaviour of bolted joints, New York, M. Dekker, 1990
18. A. Blake, Practical stress analysis in design, New York, Marcel, , 1982
19. C. Crispell, "New Data on Fastener Fatigue," Machine Design, pp. 71-74, April 22, 1982
20. JA. C. Hood, "Corrosion in Threaded Fasteners – Causes & Cures," Machine Design, pp. 153-156, 1961
21. Machinery Handbook
22. N. Motosh, "Determination of Joint Stiffness in Bolted Connections," Trans. ASME, August, 1976
23. N. Motosh, "Development of Design Charts for Bolts Preloaded up to the Plastic Range," Trans. ASME., Aug. 1976
24. C. Osgood, "How Elasticity Influences Bolted Joints," Machine Design, Feb., 1972
25. 25. J. Tang, D. Zhaoyi, "Better Stress and Stiffness Estimates for Bolted Joints," Machine Design, November 24, 1988

126-130

24.

Authors: **Ming Cai, Jing Cai, Shouning Qu**

Paper Title: **The Design and Implementation of KDD System for Industrial Flow Object**

Abstract: KDD is an important research and application area. This paper is aimed at the application of flow object's association rules extraction and object modeling in the cement industry. We adopt the improved Apriori algorithm and the flexible neural tree model of the structure optimization algorithm, designing and implementing the KDD system for industrial flow object by J2EE. The whole system is mainly divided into two functions: one function module is association rules extraction, the other one is object modeling, and the original data were collected from the decomposing furnace production link, which is one of the most important processes of the cement industry.

Keywords: Association Rule, Flow Object, J2EE, KDD, Object Modeling

131-136

References:

1. Mitra S., Pal S., Data Mining in Soft Computing Framework: A Survey, IEEE Trans on NN,2002,13(1):3-13.
2. Johnson J., Liu M., Unification of knowledge discovery and data mining using rough sets approach in a real-world application. RSCTC 2002,LNAI 2005,2001:330-337.
3. R. K. Xu, J. m. Wang, Q. R. Jiang, Application Status of cement production automatization technology and equipment in China, China Building Material, no.05,1999,pp. 1-5.
4. J. L. Li, H. Q. Zhou, The Production of Cement, Wuhan University of Technology Press, Wuhan, 2008.
5. Agrawal R, Imielinski T, Swami A, Mining association rules between sets of items in large database, Proceedings of the ACM S IGMOD

Conference on Management of Data, Washington D. C, 1993. 207-216.
6. A. F. Fu, Study and Implementation of Process Object Modeling, M. S. Thesis, Department of Information Science and Engineering, University of Jinan, June 2010.
7. S. N. Qu, Study on the Knowledge Extraction Method for Flow Object and its Application in Flow Industrial Control, Ph. D. Thesis, Beijing Institute of Technology, Beijing, May 2010.
8. G. Q. Qiang, Analyzing and Optimizing of Industrial Parameters Based on Data Engineering, M. S. Thesis, Department of Information Science and Engineering, University of Jinan, May 2009.
9. Z. L. Liu, Analyzing and Optimizing of Decomposing Furnace Parameters Based on History Data M. S. Thesis, Department of Information Science and Engineering, University of Jinan, May 2009.
10. Y. H. Chen, B. Yang, J. W. Dong et al, Time-series Forecasting Using Flexible Neural Tree Model, Information Science, 2005, 174: 219-235.
11. R. P. Salustowicz, J. Schmidhuber, Probabilistic Incremental Program Evolution, Evol, Comput, 1997, 2 (5): 123–141
12. Y. H. Chen, S. Kawaji, System Identification and Control using Probabilistic Incremental Program Evolution Algorithm, Journal of Robotics and Mechatronics, 2000,12:(6), 657-681
13. X. Y. Cui, Y. H. Chen, K. F. Shi, B. Yang, Application of artificial neural networks-genetic algorithms to prediction of cement strength, Journal of Shandong Institute of Building Materials, 1998,(3),275-277
14. S. N. Qu, A. F. Fu, Z. L. Liu, etal.The Improvement and Application of Structure Optimization Algorithm Based on Flexible Neural Trees, In:2009 International Conference on Information Technology and Computer Science,2009
15. F. S. Wang. Basic knowledge about modern cement production, China building material industry press, Beijing, 2004.

25.

Authors: **Dhaval N Tailor, Bhavesh Bhalja, Vijay Makawana**

Paper Title: **Roll of PSS and SVC for improving the Transient Stability of Power System**

Abstract: This paper focus on the significant of PSS and SVC(static var compensator) to improve the transient stability of power system in various abnormal condition. This paper shows the simulation result of model for different fault condition with PSS and without PSS and show how the SVC help to improve the stability when PSS is fail to maintain the stability.

Keywords: PSS, static var compensator, simulation model, their result with PSS and without PSS, model with SVC.

137-140

References:

1. R., I. Kamwa, L. Soulieres, J. Potvin, and R. Champagne, Grondin, "An approach to PSS design for transient stability improvement through supplementary damping of the common low frequency," Augest 1993.
2. "IEEE recommended practice for excitation system models for power system stability studies," IEEE St. 421.5-2002(Section 9).,.
3. P Kundur,.: McGraw-Hill, 1994, ch. Section 12.5.
4. M.Klein, G.J.Rogers and M.S.Zywno., P.Kundur, IEEE Trans. PWRS4, May 1989, pp. 614-626.
5. M.Klein, G.J.Rogers and P.Kundur, "A Fundamental Study of Inter-Area Oscillations", IEEE Trans, Power Systems Volume- 6, Number-3, August 1991. pp 914-921.

26.

Authors: **Purvi Rekh, Amit Thakkar, Amit Ganatra**

Paper Title: **A Survey and Comparative analysis of Expectation Maximization based Semi-Supervised Text Classification**

Abstract: Semi-supervised learning (SSL) based on Naïve Bayesian (NB) and Expectation Maximization (EM) combines small limited numbers of labeled data with a large amount of unlabeled data to help train classifier and increase classification accuracy. The iterative process in the standard EM-based semi-supervised learning includes two steps: firstly, use the classifier constructed in previous iteration to classify all unlabeled samples; then, train a new classifier based on the reconstructed training set, which is composed of labeled samples and all unlabeled samples. There are limitations of standard EM-based semi-supervised learning like, problem in the process of reconstructing the training set - some unlabeled samples are misclassified by the current classifier, problem of over-training, problem of as the number of documents increases, the running time increases significantly. With the aim of improving the efficiency problem of the standard EM algorithm, many authors have proposed approaches. These approaches are described in this paper, also comparison of these approaches is done and limitations of these methods are described. Also some research challenges are given in this area.

Keywords: Expectation Maximization, Naïve Bayesian, Semi-supervised learning, Text Classification.

References:

141-146

1. Vishal Gupta, "A Survey of Text Mining Techniques and applications", Journal of Emerging Technologies, In Web Intelligence, Vol. 1, No. 1, August 2009.
2. Kamal Nigam, Andrew Kachites Mccallum, " Text classification from Labeled and Unlabeled Data using EM", Machine Learning, Kluwer Academic Publishers, Boston. Manufactured in The Netherlands, 2002 H. Poor, An Introduction to Signal Detection and Estimation. New York: Springer-Verlag, 1985, ch. 4.
3. Xinghua Fan, Zhiyi Guo, Houfeng Ma. "An improved EM-based Semi-supervised Learning Method" ,International Joint Conference on Bioinformatics, Systems Biology and Intelligent Computing, page(s): 529 - 532, August – 2009.
4. Xinghua Fan, Zhiyi Guo; "A semi-supervised Text Classification Method based on Incremental EM Algorithm", WASE International Conference on Information Engineering, Page(s): 211 - 214, 2010.
5. Wen Han, Xiao Nan-feng, "An Enhanced EM Method of Semi-supervised Classification Based on Naive Bayesian", Eighth International Conference on Fuzzy Systems and Knowledge Discovery (FSKD), 15- Sep- 2011.M. Young, The Techincal Writers Handbook. Mill Valley, CA: University Science, 1989.
6. YueHong Cai, Qian Zhu; "Semi-Supervised Short Text Categorization based on Random Subspace"- Computer Science and Information Technology (ICCSIT), 3rd IEEE International Conference on Page(s): 470 – 473 , 2010.J. Jones. (1991, May 10). Networks (2nd ed.) [Online]. Available: http://www.atm.com
7. Xiaojin Zhu, "Semi-Supervised Learning Literature Survey", Computer Sciences TR 1530, University of Wisconsin – Madison, 2005.E. H. Miller, "A note on reflector arrays (Periodical style—Accepted for publication)," IEEE Trans. Antennas Propagat., to be published.
8. Yutaka Sasaki, "Automatic Text Classification", NaCTeM, School of Computer Science.C. J. Kaufman, Rocky Mountain Research Lab., Boulder, CO, private communication, May 1995.
9. GuoQiang, "Research and Improvement for Feature Selection on Naïve Bayes Text Classifier", 2nd International Conference on Future Computer and Communication, Volume 2.
10. Bei Yu, "Evaluation of Text classification methods for literature survey", Literary and Linguistic Computing, Vol. 23, No. 3, 2008.

27.

Authors: Asha Gowda Karegowda , M.A. Jayaram, A.S. Manjunath

Paper Title: Cascading K-means Clustering and K-Nearest Neighbor Classifier for Categorization of Diabetic Patients

Abstract: Medical Data mining is the process of extracting hidden patterns from medical data. This paper presents the development of a hybrid model for classifying Pima Indian diabetic database (PIDD). The model consists of three stages. In the first stage, K-means clustering is used to identify and eliminate incorrectly classified instances. In the second stage Genetic algorithm (GA) and Correlation based feature selection (CFS) is used in a cascaded fashion for relevant feature extraction, where GA rendered global search of attributes with fitness evaluation effected by CFS. Finally in the third stage a fine tuned classification is done using K-nearest neighbor (KNN) by taking the correctly clustered instance of first stage and with feature subset identified in the second stage as inputs for the KNN. Experimental results signify the cascaded K-means clustering and KNN along with feature subset identified GA_CFS has enhanced classification accuracy of KNN. The proposed model obtained the classification accuracy of 96.68% for diabetic dataset.

Keywords: Genetic algorithm, Correlation based feature selection ,K-nearest neighbor, K-means clustering , Pima Indian Diabetics.

References:

1. J. Han, and M. Kamber, Data Mining: Concepts and Techniques, San Francisco, Morgan Kauffmann Publishers, (2001)
2. Editorial, Diagnosis and Classification of Diabetes Mellitus, American Diabetes Association, Diabetes Care, vol 27, Supplement 1, (Jan 2004).
3. The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus: Follow up report on the Diagnosis of Diabetes Mellitus. Diabetic Care 26,pp.3160- 3167, (2003).
4. Michie, D., Spiegelhalter, D. J., & Taylor, C. C., Machine learning, neural and statistical classification. Ellis Horwood, 1994
5. Humar, K., & Novruz, A. Design of a hybrid system for the diabetes and heart diseases. Expert Systems with Applications, 2008, 35, 82–89.
6. B.M Patil, R.C Joshi, Durga Tosniwal, Hybrid Prediction model for Type-2 Diabetic Patients, Expert System with Applications, 37, 2010, 8102-8108.
7. Polat, K., Gunes, S., & Aslan, A., A cascade learning system for classification of diabetes disease: Generalized discriminant analysis and least square support vector machine. Expert Systems with Applications, 2008,34(1), 214–221.
8. Asha Gowda Karegowda ,MA.Jayaram , "Integrating Decision Tree and ANN for Categorization of Diabetics Data ", International Conference on Computer Aided Engineering, December 13-15, 2007, IIT Madras, Chennai, India.
9. Asha Gowda Karegowda and M.A. Jayaram, "Cascading GA & CFS for Feature Subset Selection in Medical Data Mining" , International Conference on IEEE International Advance Computing Conference (IACC'09) on March 6-7, 2009, Thapar University, Patiala, Punjab India.
10. Asha Gowda Karegowda , A.S. Manjunath , M.A. Jayaram Application Of Genetic Algorithm Optimized Neural Network Connection Weights For Medical Diagnosis Of Pima Indians Diabetes, International Journal on Soft Computing (IJSC), Vol.2, No.2, May 2011.
11. Joseph L.Breault, Data Mining Diabetic Databases: Are rough Sets a Useful Addition?, http://www.galaxy.gmu.edu/interface/I01/I2001Proceedings/Jbreault
12. Mark A. Hall ,Correlation-based Feature Selection for Machine Learning, Dept of Computer science, University of Waikato . http://www.cs.waikato.ac.nz/~mhall/thesis.pdf
13. Asha Gowda Karegowda, M.A.Jayaram A.S .Manjunath, Feature Subset Selection using Cascaded GA & CFS: A Filter Approach in Supervised Learning.,International Journal on Computer Applications (IJCA) Volume 23, No 2,pp 2011 June.

147-151

28.

Authors: Ritu Pareek, P.K. Ghosh

Paper Title: Discrete Cosine Transformation based Image Watermarking for Authentication and Copyright Protection

Abstract: In this paper, a digital image watermarking algorithm based on DCT transformation is proposed. The imperceptibility and robustness is provided against different attacks. A binary image is embedded in the host image by two different techniques based on DCT. One is middle band coefficient exchange technique, it utilizes comparison of two middle-band DCT coefficients to encode a single bit into a DCT block. Coefficient locations are selected based on the recommended JPEG quantization table. Second is based on PN sequence, PN sequences of the watermark bits are embedded in the coefficients of the corresponding DCT middle frequencies. In extraction stages, the watermarked image, which may be attacked, is processed the same way as the embedding process.
Finally, correlation and PSNR values are calculated to determine the level of accuracy and imperceptibility. Experimental results show that the proposed method improved the performance of watermarking algorithm.

Keywords: Discrete Cosine Transform, Digital watermarking, PN Sequence, Middle band frequency, Copyright protection, CDMA.

References:

1. Barni, M., P´erez-Gonz´alez, F.: Special session: watermarking security. In Edward J. Delp III, Wong, P.W., eds.: Security, Steganography, and Watermarking of Multimedia Contents VII. Volume 5681., San Jose, California, USA, SPIE (2005) 685–768.
2. P´erez-Gonz´alez, F., Furon, T.: Special session on watermarking security. In Barni, M., Cox, I., Kalker, T., Kim, H.J., eds.: Fourth International Workshop on Digital Watermarking. Volume 3710., Siena, Italy, Springer (2005) 201–274.
3. Bassia P., Pitas I., and Nikolaidis 2001, "Robust Audio Watermarking in Time Domain", IEEE Trans. On Multimedia, Vol. 3, pp. 232-241.
4. R. B. Wolfgang and E. J. Delp, "Overview of image security techniques with applications in multimedia systems," Proceedings of the SPIE International Conference on Multimedia Networks: Security, Displays, Tenninals, and Gateways, November 4-5, 1997, Dallas, Texas, vol. 3228, pp. 297-308.
5. I. J. Cox and M. L. Miller, "A review of watermarking and the importance of perceptual modeling," Proceedings of the SPIE International Conference on Human Vision and Electronic Imaging II, Feb. 10-13, 1997, San Jose, CA, USA, pp. 92-99.
6. Darko Kirovski Henrique S. Malvar and Yacov Yacobi,(2002) "Multimedia Content Screening using a Dual Watermarking and Fingerprinting System", Proceedings of the tenth ACM international conference on Multimedia, pp.372-381.
7. Sung Jin Lim, Hae Moon, Seung-Hoon Chae, Sung Bum Pan, Yongwha Chung and Min Hyuk Chang,(2008), "Dual Watermarking Method for Integrity of Medical Images", Second International Conference on Future Generation Communication and Networking, IEEE computer

152-156

Society,pp. 70-73.
8. Mingyi Jiang. Giiopiiig Xo, Dongfeiig Yuan (2004) "A Novel Blind Watermarking Algorithm Based on Multiband Wavelet Transform", Proceedings of ICSP, pp. 857-860.
9. Barni, M., et al., Watermark embedding: hiding a signal within a cover image. Comm. Magazine, IEEE, 39(8): p. 102-108. 2001.
10. Shoemaker, C., "Hidden bits: A survey of techniques for digital watermarking", Independent study, EER 290, spring 2002.
11. I. Cox, J. Kilian, F. T. Leighton, and T. Shamoon, "Secure spread spectrum watermarking for multimedia," IEEE Transactions on Image Processing, vol. 6, no. 12, December, 1997, pp. 1673-1687. F. M. Boland, J. J. K. 6 Ruanaidh and C. Dautzenberg.
12. "Watermarking digital images for copyright protection," Proceedings of the International Conference on Image Processing and its Applications, Edinburgh, Scotland, July 1995, pp. 321-326.
13. N.F. Johnson, S.C. Katezenbeisser, "A Survey of Steganographic Techniques" in Information Techniques for Steganography and Digital Watermarking, S.C. Katzenbeisser et al., Eds. Northwood, MA: Artec House, Dec. 1999, pp 43-75.

29.

Authors: **Swati Anand Dwivedi**

Paper Title: **Low Power CMOS Design of an SRAM Cell with Sense Amplifier**

Abstract: Power dissipation and switching delay are the focusing point in any circuit used in memory. It is required to design a circuit having low power dissipation and high switching speed in order to meet the current requirements. Reduction in power can be done by several methods. Here low power current sensing scheme for CMOS SRAM is presented in this paper. Large bit-line capacitance is one of the main bottlenecks to the performance of on-chip caches. New sense amplifier techniques need to explicitly address this challenge. The current sense amplifier senses the cell current directly and shows a speed improvement of 17-20% for 128 memory cells as compared to the conventional voltage mode sense amplifier

Keywords: CMOS, SRAM, Sense Amplifier, Swithching delay, VLSI

References:
1. "Low power design an SRAM cell for portable devices". By Prashant Upadhyay, Mr. Rajesh Mehra, Niveditta Thakur. IEEE-2010
2. "High speed single ended pseudo differential circuit current sense amplifier for SRAM cell". IEEE 2008.
3. "A low power SRAM using hierarchical bit line and local sense amplifier." IEEE 2008
4. "A high performance sense amplifier for low power applications". IEEE 2004.
5. "A new current mode sense amplifier for low voltage low power SRAM". IEEE 1998.
6. " Current mode technique for high speed VLSI circuit with application of current sense amplifier for CMOS SRAM" IEEE 1991.

30.

Authors: **Anil Kumar Vajja, B.Bhaskar Rao**

Paper Title: **Design and analysis of 32-bit CPU based on MIPS**

Abstract: In this paper, we have studied Microcomputer with out interlocked pipeline stages instruction format instruction data path decoder module function and design theory basend on RISC CPUT instruction set. We have also designed instruction fetch(IF) module of 32-bit CPU based on RISC CPU instruction set. Function of IF module mainly includes fetch instruction and latch module address arithmetic module check validity of instruction module synchronous control module. Function of IF modules are implemented by pipeline and simulated successfully on Xilinx Spartan 3E fpga device..

Keywords: MIPS, Data Flow, Data Path, Pipeline

References:
1. Bai-ZhongYing, Computer Organization, Science Press, 2000.11.
2. Wang-AiYing, Organization and Structure of Computer, Tsinghua University Press, 2006.
3. Wang-YuanZhen, IBM-PC Macro Asm Program, Huazhong University of Science and Technology Press, 1996.9.
4. MIPS Technologies, Inc. MIPS32™ Architecture For Programmers Volume II: The MIPS32™ Instruction Set, June 9, 2003.
5. Zheng-WeiMin, Tang-ZhiZhong. Computer System Structure (The second edition), Tsinghua University Press,2006.
6. Pan-Song, Huang-JiYe, SOPC Technology Utility Tutorial, Tsinghua University Press,2006.
7. MIPS32 4KTMProcessor Core Family Software User's Manual, MIPS Technologies Inc.
8. Mo-JianKun, Gao-JianSheng,Computer Organization, Huazhong University of Science and Technology Press, 1996.
9. Zhang-XiuJuan, Chen-XinHua, EDA Design and emulation Practice [M]. BeiJing, Engine Industry Press. 2003.
10. "IEEE Standard of Binary Floating-Point Arithmetic" IEEE Standard754, IEEE Computer Society, 1985.
11. Yi-Kui, Ding-YueHua, Application of AMCCS5933 Controller in PCI BUS, DCABES2007, 2007.7.

31.

Authors: **Reena Dadhich, GeetikaNarang, D.M.Yadav**

Paper Title: **Analysis and Literature Review of IEEE 802.16e (Mobile WiMAX) Security**

Abstract: IEEE802.16e or Mobile WiMAX, where WiMAX stands on Worldwide Interoperability for Microwave Access, is one of the latest technologies in the Wire-Less World. The main goal of WiMAX is to deliver wireless communications with quality of service in a secured environment. IEEE 802.16e provides the ability for users to use the Broadband Wireless Communication even when the user is moving. Its Mobility feature makes it differ from the previous protocol IEEE 802.16d which was based on Static WiMAX and providedthe Wireless communication at fixed locations.This paper is related to the security issues for IEEE802.16e. Various Threats which occurs at Physical and MAC(Medium Access Control) layer in Mobile WiMAX,what solutions have been proposed in literature related to these threat and what are the shortcomings of these proposed solution. And also at last in proposed work we have proposed solution for one of the main threat called as DoS(Denial of Service)

Keywords: MIMO,Threats,Protocol Architecture, Security Frame Work.

References:
1. FudenTshering and Anjali Sardana Dept.of Electronics and Computer Engineering, Indian Institute of Technology Roorkee, " A Review of Privacy and Key Management Protocol in IEEE 802.16e", International Journal of Computer Applications (0975 – 8887) Volume 20– No.2, April 2011.

2. Bart Sikkens,Faculty of Electrical Engineering, Mathematics and Computer Science University of Twente, the Netherlands ,sikkensb@cs.utwente.nl ," Security issues and (IEEE 802.16e)" proposed solutions concerning authentication and authorization for WiMAX8thTwente Student Conference on IT, Enschede, January 25 , 2008 Copyright 2008, University of Twente, Faculty of Electrical Engineering, Mathematics and Computer Science.
3. Dr. Jacob Sharony,Director, Network Technologies Division. Centre of Excellence in Wireless & IT Stony Brook University," Introduction to Wireless MIMO – Theory and Applications" IEEE LI, November 15, 2006.
4. Fuqiang Liu, Lei Lu ,School of Electronics and Information Engineering,TongjiUniversity,Shanghai,P.R. China,fuqiangliu@163.com,leilu.cn@gmail.com,"A WPKI-based Security Mechanism for IEEE 802.16e "IEEE Communications Society, Wuhan University, China".
5. Jeremy Brown,Department of Computer Science,North Dakota State University Fargo, ND 58108,Xiaojiang Du Department of Computer and Information Sciences Temple University Philadelphia, PA 19122, USA Email: dux@temple.edu"Towards Efficient and Secure Rekeying for IEEE 802.16e WiMAX Networks"publish in the IEEE "GLOBECOM" 2009 proceedings.
6. AyeshaAltaf, College of Signals, NUST, ayeshaaltaf@mcs.edu.pk, M.YounusJaved College 0f E&ME, NUST,myjaved@ceme.edu.pk,AttiqAhmed,College of Signals, NUSTattiq-mcs@nust.edu.pk" Security Enhancements for Privacy and Key Management Protocol in IEEE 802.16e-2005".
7. Leonardo Maccari, Matteo Paoli, Romano Fantacci,Department of Electronics and Telecommunications - University of Florence Telecommunication Network Lab tel. : +390554796467 - fax : +390554796485 Florence, Italy Email:{maccari,paoli,fantacci}@lart.det.unifi.it" Security analysis of IEEE 802.16 ".
8. MasoodHabib, Masood Ahmad,Department of Computer Science & IT ShaheedZulfikar Ali Bhutto Institute of Science and Technology Islamabad, Pakistan masoodshalmani@gmail.com Department of Computer Science,National University of Computer & Emerging Sciences Peshawar, Pakistan,masood.ahmadpk@yahoo.com". A Review of Some Security Aspects of WiMAX& Converged Network".
9. Georgios Kambourakis, lisavet Konstantinou, Stefanos Gritzalis, Laboratory of Information and Communication Systems Security, Department of Information and Communication Systems Engineering, University of the Aegean,83200 Karlovassi, Samos, Greece-2010, _journal homepage: www.elsevier.com/locate/camwa" Revisiting WiMAX MBS security ".
10. Wen-an ZHOU1, Bing XIE1, Jun-de SONG1'School ofElectronic Engineering, Beijing University ofPosts and Telecommunications, Beijing, P R. China" Link-level Simulation and Performance Estimation of WiMAX IEEE802.16e".
11. Frank, AIbikunle, Security Issues in Mobile WiMAX (IEEE 802.16e), 2009 IEEE MobileWiMAX Symposium.
12. GauravSoni, Assistant Professor, Department of Electronics and Communication Engineering, SandeepKaushal Amritsar College of Engineering ,India, SandeepKaushal "Analysis of security issues of mobile WiMAX 802.16e and their solutions" volume 1 issue 3 manuscript 3 November 2011. International journal of Computing and Corporate Research.ISSN 2245 054X.
13. Tao Han, Ning Zhang, Kaiming Liu, Bihua Tang, Yuan'an Liu Key Lab. OfUniversal Wireless Communications, Ministry of Education (Beijing University of Posts and Telecommunications)" Analysis of Mobile WiMAX Security: Vulnerabilities and Solutions"1-4244-2575-4/08/$20.00 © 2008 IEEE.
14. A.K.M. NazmusSakib, Dr. Muhammad Ibrahim Khan, Mir Md. Saki Kowsar, "IEEE 802.16e Security Vulnerability: Analysis and Solution", Global Journal of Computer Science and Technology Vol. 10 Issue 13 (Ver. 1.0), October 2010.
15. Prof. Pranita K. Gandhewar Computer Science & Engineering Department NYSS College of Engineering & Research Nagpur, India E-mail: pranita.gandhewar@gmail.com,Prof. Prasad P. Lokulwar Computer Science & Engineering Department, J.D Institute of Engineering and Technology Yavatmal, India.E-mail: prasadengg16@gmail.com". Improving Security in Initial network entry process of IEEE 802.16 e".
16. Muhammad SakiburRahman,Mir Md.Saki kowsar, Dept. of Computer Science and Engineering,Chittagong University of Engineering and Technology "WiMAX Security Analysis and Enhancement" Proceedings of 2009 12th International Conference on Computer and Information Technology (ICCIT 2009),Dhaka,Bangladesh.
17. Guide to Securing WiMAX Wireless Communications, Recommendations of the National Institute ofStandards and Technology, Karen Scarfone,Cyrus Tibbs,Matthew Sexton, NIST(National Institute of Standard and Technology),US Department of Commerce.
18. Federal Information Processing Standards Publication November 26, 2001" Announcing the Advanced encryption standard (AES)."
19. Dr. Brian Gladman, v3.1, 3rd March 2001 "A Specification for Rijndael, the AES Algorithm,"

32.

Authors: **L.Savadamuthu, S.Muthu, S.Gunasekharan**

Paper Title: **Study on Equipment Failure and Loss Estimation through Taguchi Method with Risk Management**

Abstract: In the highly competitive business environment, manufacturing organizations are seeking new strategies to improve the quality of product reduce product cost, eliminate loss producing events and reduce wastage arising out of manufacturing system, and the cited subjects are aggressively discussed in the present days. Processing equipments are playing important role in achieving the high quality product and productivity in manufacturing organizations. The equipment failures may occur on various accounts during the manufacturing process. The cost of special and sophisticated manufacturing equipment are high and their idle time or down time becomes more expensive. Hence the effective maintenance system is most important for better utilization of resources. A case study has been taken up from preventive maintenance department at M/s Premier Instruments and Control Limited (PRICOL) to develop effective maintenance system. One of the risk management techniques has been used to predict the probability of occurrence and severity of failure events for prioritizing the risk. In identifying the root causes of the failure, the common tools like fault tree analysis is made use of. The losses due to risks are computed using Tauguchi method. Further evaluated and risk control measures like reduction, risk avoidance, risk transfer and risk retention are effected on critical failure events.

Keywords: Failures, FTA, Risk Management,Taguchi Loss Function

174-182

References:

1. Genichi Tauguchi Elsayed A. Elsayed & Thomas C. Hsiang, "Quality Engineering and Production System", Mcgraw hill book company, pp 148-155, 1989.
2. Lindley R. Higgins, P.E and R.Keith Mobley "Maintenance Engineering Handbook", McGraw Hill Bool Company, pp 2.03-2.20, 1976.
3. Robert L.C. Crockford, G.N., and Neil A, Doherty, "Hand bool of risk management part 1&2", NSC, London, 1982.
4. Faisel I Khan & Abbasi S. A, "Techniques and methodologies for risk analysis in chemical process industries", Journal of Loss Prevention in the Process Industries, 11, pp261-277, 1998.
5. Faisel I Khan, Abbasi S A, "Risk Analysis of a typical chemical industry using ORA procedure", Journal of Loss Prevention in the Process Industries, 14, 99 43-59, 2001.
6. Joanna C. Bennett, George A. Bohoris, Elaine M. Aspinwall, Rishcrd C. Hall, "Risk analysis techniques and their application to software development", European Journal of Operational Research, 95, pp 467-475, 1996.
7. Lynne P. Cooper, "A research agenda to reduce risk in new product development through knowledge management, a practitioner perspective". Journal of Engineering and Technology Management, 1136, pp 1-24, 2003.
8. Neil Thomas, "Effective Maintenance Management", Hallmarks for success Journal of Maintenance & Assest Management, 1986.
9. Sudararaj.G., Aravindan.P & Sivanandan.S.N, "Bayesian approach for risk analysis of shot blasting machine in casting industries",

I.E.Journal Volume XXVII. No.10,1998.
10. Sharratt P N & Choong P M, "A life cycle framework to analyze business risk in process industries projects", Journal of cleaner Production, 10, pp 479-493, 2002.

33.	**Authors:**	**Ram Kishan Dewangan, Tripti Sharma**
	Paper Title:	**Various Image Segmentation Techniques through clustering and Markovian Model: A Survey**

Abstract: Image segmentation is the identification and separation of homogeneous regions in the image, has been the subject of considerable research activity. Many algorithms have been elaborated for gray scale images. This paper is a survey on different clustering techniques to achieve image segmentation. Clustering can be termed here as a grouping of similar images in the database. Clustering is done based on different attributes of an image such as size, color, texture etc. The purpose of clustering is to get meaningful result, effective storage and fast retrieval in various areas.

Keywords: Clustering, image segmentation, markovian model, relevance feedback

References:

1. Kearney,Colm and Patton, J. Andrew, "Survey on the image segmentation", Financial Review, 41: 29-48 (2000).
2. H. D. Cheng, X. H. Jiang, Y. Sun, and J. Wang, "Color image segmentation: advances and prospects," Pattern Recognition, 34: 2259–2281, (2001).
3. W. K. Pratt, "Chapter 17: Image Segmentation," in Digital Image Processing, 3rd Edition New York: John Wiley and Sons, 2001, pp. 551-588.
4. R. M. Haralick and L. G. Shapiro, "Image segmentation techniques," Computer. Vision Graphics, Image Processing, vol. 29, pp. 100-132, 1985.
5. R. C. Gonzales and R. E. Woods, "Chapter 10: Image Segmentation," in Digital Image Processing, 2nd ed Upper Saddle River, N.J.: Prentice Hall, 2002, pp. 567-642.
6. K. S. Fu and J. K. Mui, "A survey of image segmentation," Pattern Recognition, vol. 13, pp. 3-16, 1981.
7. N. R. Pal and S. K. Pal, "A review on image segmentation techniques," Pattern Recognition, vol. 26, pp. 1277-1294, 1993.
8. Zhou XS, Huang TS. Relevance feedback in image retrieval: A comprehensive review. Multimedia Syst;8:536-544, 2003.
9. Shirakawa, S., and Nagao, T., "Evolutionary Image Segmentation Based on Multiobjective Clustering".Congress on Evolutionary Computation (CEC '09),Trondheim,Norway,2466-2473,2009.
10. S. Bhattacharya, "A Brief Survey of Color Image Preprocessing and Segmentation Techniques" Journal of Pattern Recognition Research 1 (2011) 120-129.
11. Thrasyvoulos N. Pappas, An Adaptive Clustering Algorithm for Image Segmentation, IEEE Transactions on Signal Processing Vol 40 no 4 April 1992.
12. Hoel Le Capitaine, Carl Fr´elicot, "On selecting an optimal number of clusters for color image segmentation", International Conference on Pattern Recognition,2010.
13. Irani, A.A.Z. Belaton, "A K-means Based Generic Segmentation System" B.Dept. of Comput. Sci., Univ. Sains Malaysia, Nibong Tebal, Malaysia Print ISBN: 978-0-7695-3789-4 On page(s): 300 – 307, 2009.
14. Li Wenchao Zhou Yong Xia Shixiong China Univ. of Min. & Technol., Xuzhou, "A Novel Clustering Algorithm Based on Hierarchical and K-means Clustering" Print ISBN: 978-7-81124-055-9, On page(s): 605, 2009.
15. Huiyu Zhou, Abdul H. Sadka, Mohammad R. Swash, Jawid Azizi and Abubakar S. Umar., "Content Based Image Retrieval and Clustering: A Brief Survey" school of Engineering and Design, Brunel University, Uxbridge, UB8 3PH, UK
16. Huang Min,Sun bo,Xi Jianqing "An Optimized image retrieval method based on Hierarchical clustering and genetic algorithm" forum on Information technology and applications, 978-0-7695-3600-2/09-IEEE,2009.
17. Zhuowen Tu, Song-Chun Zhu, "Image Segmentation by Data Driven Markov Chain Monte Carlo", IEEE Transaction on Pattern Analysis and Machine Intelligence, Vol. 24, No. 5, May 2002, pp 657-673.
18. H. Choi, R.G. Baraniuk, "Multiscale Image Segmentation Using Wavelet-Domain Hidden Markov Models" IEEE Transactions on Image Processing, Vol. 10, No. 9, Sept 2001, pp 1309-1321.

34.	**Authors:**	**K. Kalyan raj, E. Swati, Ch. Ravindra**
	Paper Title:	**Voltage Stability of Isolated Self Excited Induction Generator (SEIG) for Variable Speed Applications using Matlab/Simulink**

Abstract: Three phase induction generators (SEIG) play a major role in renewable energy like wind energy and hydraulic energy generating systems. In this paper an attempt has been made to give the detailed approach about the analysis and control of SEIG for variable wind speed applications. The main disadvantage of SEIG is poor voltage regulation, here different strategies adopted for voltage regulation are discussed and its scope of research is evolved.

Keywords: Wind, SEIG, Excitation, Capacitor bank, VSI, Universal bridge

References:

1. R. C. Bansal, "Three-Phase Self-Excited Induction Generator: An Overview," IEEE Transactions on Energy Conversion, vol. 20, no. 2, pp. 292-299, June 2005.
2. O. Ojo, "Minimum Airgap Flux Linkage Requirement for Self-Excitation in Stand-alone Induction Generators," IEEE Transactions on Energy Conversion, vol. 10, no. 3, pp. 484-492, September 1995.
3. C. Grantham, D. Sutanto, and B. Bismail, "Steady-state and Analysis of Self-Excited Induction Generators," IEE Proceedings on Electric Power Applications, vol. 136, no. 2, pp. 61-68, March 1989.
4. D. Seyoum, C. Grantham, and M. F. Rahman, "The Dynamic Characteristics of an Isolated Self-Excited Induction Generator Driven by a Wind Turbine," IEEE Transactions on Industry Applications, vol. 39, no. 4, pp. 936-944, July/August 2003.
5. G. V. Jayaramaiah and B. G. Fernandes, "Novel Voltage Controller for Stand-alone Induction Generator using PWM-VSI," IEEE Conference on Industry Applications, vol. 1, pp. 204-208, October 2006.
6. T. Ahmed, O. Noro, E. Hiraki, and M. Nakaoka, "Terminal Voltage Regulation Characteristics by Static Var Compensator for a Three-Phase Self-Excited Induction Generator," IEEE Transactions on Industry Applications, vol. 40, no. 4, pp. 978-988, July/August 2005.
7. R. Bonetrt and S. Rajakaruna, "Self-excited induction generator with excellent voltage and frequency control," in Proc. Inst. Electr. Eng. Trans. Distrib., Jan. 1998, vol. 145, no. 1, pp. 33–39.
8. J. K. Chatterjee, P. K. S. Khan, A. Anand, and A. Jindal, "Performance evaluation of an electronic lead-lag VAR compensator and its application in brushless generation," in Proc. IEEE Power Electron. Drive Syst. Conf., May 1997, vol. 1, pp. 59–64.
9. T. Ahmed, E. Hiraki, M. Nakaoka, and O. Noro, "Three-phase self-excited induction generator driven by variable-speed primemover for clean renewable energy utilizations and its terminal voltage regulation characteristics by static VAR compensator," in Proc. IEEE Ind. Appl. Conf., Oct. 2003, vol. 2, pp. 693–700.

10. S.Wekhande and V. Agarwal, “Simple control for a wind driven induction generator,” IEEE Ind. Appl. Mag., vol. 7, no. 2, pp. 44–53.
11. S. C. Kuo and L. Wang, “Analysis of voltage control for a self-excited induction generator using a current-controlled voltage course inverter (CCVSI),” in Proc. Inst. Electr. Eng. Trans. Distrib., Sep. 2001, vol. 148, no. 5, pp. 431–438.

35.

Authors: **Kranti Kumar Jain, Tripti Sharma**

Paper Title: **A Comparative Study of Image Scaling Algorithms**

Abstract: In this paper, we propose comparative study of image scale retrieval scheme. To the best of our knowledge, there is less comprehensive study on large-scale evaluation. Our empirical results show that our proposed solution is able to scale for hundreds of thousands of images, which is promising for building scale systems. A comparison of various techniques for Image scaling one digital image in to another is made. We will compare various image scaling techniques such as Gaussian scale mixtures in the wavelet domain, Local Wiener estimate, Multi-scale image scaling, Bayes least squares estimator, Thin Plate Spline based image scaling based on different attributes such as Computational Time, Visual Quality of image scaling obtained and Complexity involved in selection of features.

Keywords: Bayes least squares (BLS), Gaussian scale mixture (GSM), Local Wiener estimate, Multi-scale image scaling, Thin Plate Spline,.

References:

1. M J Wainwright and E P Simoncelli, “Scale mixtures of Gaussians and the statistics of natural images,” in Adv. Neural Information Processing Systems, S. A. Solla, T. K. Leen, and K.-R.M¨uller, Eds., Cambridge, MA, May 2000, vol. 12, pp. 855–861, MIT Press.
2. M Wainwright, E Simoncelli, and A Willsky, “Random cascades on wavelet trees and their use in modeling and analyzing natural imagery,” Applied and Computational Harmonic Analysis, 2000.
3. D Andrews and C Mallows, “Scale mixtures of normal distributions,” J. Royal Stat. Soc., vol. 36, pp. 99–, 1974.
4. M S Crouse, R D Nowak, and R G Baraniuk, “Waveletbased statistical signal processing using hidden Markov models,” IEEE Trans. Signal Proc., vol. 46, pp. 886–902, April 1998.
5. M K Mihcak, I Kozintsev, K Ramchandran, and P Moulin, “Low-complexity image denoising based on statistical modeling of wavelet coefficients,” IEEE Trans. Sig. Proc., vol. 6, no. 12, pp. 300–303, December 1999.
6. C Spence and L Parra, “Hierarchical image probability (HIP) model,” in Adv. Neural Information Processing Systems, S. A. Solla, T. K. Leen, and K.-R. M¨uller, Eds., Cambridge, MA, May 2000, vol. 12, MIT Press.
7. J Portilla, V Strela, M Wainwright, and E Simoncelli, “Adaptive Wiener denoising using a Gaussian scale mixture model in the wavelet domain,” in Proc 8th IEEE Int’l Confon Image Proc, Thessaloniki, Greece, 2001, pp. 37–40
8. J Portilla, V Strela, M Wainwright, and E P Simoncelli, “Image denoising using scale mixtures of Gaussians in the wavelet domain,” IEEE Trans. Image Proc., In Press. 2003.
9. E P Simoncelli,WT Freeman, E H Adelson, and D J Heeger, “Shiftable multi-scale transforms,” IEEE Trans Information Theory, vol. 38, no. 2, pp. 587–607, March 1992.
10. R R Coifman and D L Donoho, “Translation–invariant denoising,” in Wavelets and statistics, A Antoniadis and G Oppenheim, Springer-Verlag lecture notes, San Diego, 1995.
11. J Starck, E J Candes, and D L Donoho, “The curvelet transform for image denoising,” IEEE Trans. Image Proc., vol. 11, no. 6, pp. 670–684, June 2002.
12. M. R. Teaque, "Image Analysis via the General Theory of Moments," Journal of the Optical Society of America, vol. 70, pp. 920-930, 1980.
13. Y. S. Abu-Mostafa and D. Psaltis, "Recognitive Aspects of Moment Invariants," Pattern Analysis and Machine Intelligence, IEEE Transactions on, vol. PAMI-6, pp. 698-706, 1984.
14. M. Schlemmer, M. Heringer, F. Morr, I. Hotz, M. H. Bertram, C. Garth, W. Kollmann, B. Hamann, and H. Hagen, "Moment Invariants for the Analysis of 2D Flow Fields," Visualization and Computer Graphics, IEEE Transactions on, vol. 13, pp. 1743-1750, 2007.

191-193

36.

Authors: **Samir Shihada, Mohammed Arafa**

Paper Title: **Mechanical Properties of RC Beams with Polypropylene Fibers under High Temperature**

Abstract: The objective of this study is to examine the impact of polypropylene fibers on fire resistance of steel reinforced concrete beams. In order to achieve this, concrete mixtures are prepared by using different contents of polypropylene; 0, 0.45 and 0.67 kg/m3. Simply supported beams are heated in an electric furnace to a temperature of 400° for exposure up to 4.5 hours and tested under a static point load on a universal loading frame. Based on the results of this study, it is concluded that the ultimate residual strengths of RC beams containing polypropylene fibers are higher than those without polypropylene fibers. Furthermore, the researchers find out that RC beams which are prepared using 0.67 kg/m3 of polypropylene fibers can significantly promote the residual ultimate strengths during heating.

Keywords: Reinforced Concrete, Polypropylene Fibers, Beams, Fire resistance, Flexural strength.

References:

1. Chang Y., Chen Y., Sheu M. and Yao GC., 2006, Residual Stress–Strain Relationship for Concrete after Exposure to High Temperatures, Cement and Concrete Research, Vol. 36, No. 10, pp: 1999–2005. doi:10.1016/j.cemconres.2006.05.029
2. Komonen, J., and Penttala, V., 2003, Effects of High Temperature on the Pore Structure and Strength of Plain and Polypropylene Fiber Reinforced Cement Pastes, Fire Technology, Vol. 39, No. 1, p: 23–34. DOI: 10.1023/A:1021723126005
3. Shihada, S., 2011- Effect of Polypropylene Fibers on Concrete Fire Resistance, Journal of Civil Engineering and Management, Accepted for Publication.
4. Ünlüoğlu E., Topçu İ. and Yalaman B., 2007- Concrete Cover Effect on Reinforced Concrete Bars Exposed to High Temperatures, Construction and Building Materials, Vol. 21, p: 1155–1160. doi:10.1016/j.conbuildmat.2006.11.019
5. Topçu İ. and IşIkdağ B., 2008, The Effect of Cover Thickness on Rebars Exposed to Elevated Temperatures, Construction and Building Materials, Vol. 22, pp. 2053-2058. doi:10.1016/j.conbuildmat.2007.07.026
6. Shihada, S., 2010- Impact of High Temperatures on Column's Longitudinal Reinforcement, Journal of Al Azhar University Engineering Sector, Vol. 5, No. 16, pp. 1059-1066.
7. Xiao, J. and König, G., 2004- Study on Concrete at High Temperature in China—An Overview, Fire Safety Journal, Vol. 39 (1), pp. 89–103. doi:10.1016/S0379-7112(03)00093-6
8. Suji, D., Natesan, S. and Murugesan, R., 2007, Experimental Study on Behaviors of Polypropylene Fibrous Concrete Beams, Journal of Zhejiang University SCIENCE A, Vol. 8, No. 7, pp. 1101-1109. DOI: 10.1631/jzus.2007.A1101
9. Kumar, V., 2011- Behaviour of RCC Beams after Exposure to Elevated Temperatures, Inst. Eng.J, India, Vol. 84, pp. 165-170.

194-199

DOI:10.1260/2040-2317.2.2.123
10. Rao, M., Murthy, N. and Kumar, V., 2011, Behaviour of Polypropylene Fibre Reinforced Fly Ash Concrete Deep Beams in Flexure and Shear, Asian Journal of Civil Engineering, Vol. 12, No. 2, pp. 143-154. Link
11. Wu, Y., 2002, Flexural Strength and Behavior of Polypropylene Fiber Reinforced Concrete Beams, Journal of Wuhan University of Technology, Vol. 17, No. 2, pp. 54-57. DOI: 10.1007/BF02832623
12. El-Hawary, M., Ragab, A., Abd El-Azim, A. and Elibiari, S., 1996- Effect of Fire on Flexural Behaviour of RC beams, Construction and Building Materials, Vol. 10, No. 2, pp. 147-150. doi:10.1016/0950-0618(95)00041-0
13. El-Hawary, M., Ragab, A., Abd El-Azim, A. and Elibiari, S., 1997- Effect of Fire on Shear Behaviour of RC Beams, Computers and Structures, Vol. 65, No. 2, pp. 281-287. doi:10.1016/S0045-7949(95)00356-8
14. Alhozaimy, A., Soroushian, P. and Mirza, F., 1996- Mechanical Properties of Polypropylene Fiber Reinforced Concrete and the Effect of Pozzolanic Materials, Cement and Concrete Composites, Vol. 18, No. 2, pp. 85-92. doi:10.1016/0958-9465(95)00003-8
15. Shi, X. and Guo, Z., 2004, Influence of Concrete Cover on Fire Resistance of Reinforced Concrete Flexural Members, Journal of Structural Engineering, Vol. 130, No. 8, pp. 1225-1232. doi:10.1061/(ASCE)0733-9445(2004)130:8(1225)
16. ASTM C150, 2009- Standard Specification for Portland Cement, American Society for Testing and Materials, Philadelphia, Pennsylvania.
17. ASTM C127, 2009- Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate, American Society for Testing and Materials, Philadelphia, Pennsylvania.
18. ASTM C128, 2007- Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate, American Society for Testing and Materials, Philadelphia, Pennsylvania.
19. ACI Committee 211.1, 2003- Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete, ACI Manual of Concrete Practice Part 1.
20. American Concrete Institute, 2008- Building Code Requirements for Structural Concrete (ACI 318M-08), Farmington Hills, Michigan.

37.

Authors: **H.S. Behera, Brajendra Kumar Swain, Anmol Kumar Parida, Gangadhar Sahu**

Paper Title: **A New Proposed Round Robin with Highest Response Ratio Next (RRHRRN) Scheduling Algorithm for Soft Real Time Systems**

Abstract: The efficiency and performance of multitasking operating systems mainly depend upon the use of CPU scheduling algorithms. Round Robin (RR) performs optimally in timeshared system but it is not suitable for real time system because it gives more number of context switches, larger waiting and turnaround time. In this paper, we have proposed a new Round Robin with Highest Response Ratio Next (RRHRRN) scheduling algorithm, which uses Highest Response Ratio (HRR) criteria for selecting processes from Ready Queue. Our experimental result shows that our proposed algorithm performs better than algorithm in DQRRR [1] in terms of reducing the number of context switches, average waiting time and average turnaround time.

Keywords: Context Switch, Highest Response Ratio Next Algorithm, Real Time Operating System, Response Ratio, Round Robin Algorithm, Scheduling, Turnaround Time, Waiting Time.

References:

1. H.S.Behera, R.Mohanty, Debashree Nayak " A New Proposed Dynamic Quantum With Re-Adjusted Round Robin Scheduling Algorithm & its Performance ",International Journal of Computer Applications(0975-8887),Vol 05-No.5, August 2010.
2. Yaashuwanth.C & R.Ramesh "Intelligent Time Slice For Round Robin In Real Time Operating Systems" Ijrras 2 (2) - February 2010.
3. Samih M. Mostafa, S. Z. Rida, Safwat H. Hamad, "Finding Time Quantum Of Round Robin Cpu Scheduling Algorithm In General Computing Systems Using Integer Programming", International Journal of Research and Reviews in AppliedSciences (IJRRAS), Vol 5, Issue 1, 2010.
4. Rami Abielmona, Scheduling Algorithmic Research,Department of Electrical and Computer Engineering Ottawa-Carleton Institute, 2000.
5. TarekHelmy, Abdelkader, Dekdouk, "Burst Round Robin: As a Proportional-Share Scheduling Algorithm", IEEE Proceedings of the fourth IEEE-GCC Conference on towardsTechno-Industrial Innovations, pp. 424-428, 11- 14 November,2007.
6. Rakesh Mohanty, H. S. Behera, Khusbu Patwari, Monisha Dash, "Design and Performance Evaluation of a New Proposed Shortest Remaining Burst Round Robin (SRBRR) Scheduling Algorithm", In Proceedings of International Symposium on Computer Engineering & Technology (ISCET), Vol 17, 2010.
7. Weiming Tong, Jing Zhao, "Quantum Varying Deficit Round Robin Scheduling Over Priority Queues", International Conference on Computational Intelligence and Security. pp. 252- 256, China, 2007.
8. Silberschatz, Galvin and Gagne, Operating systems concepts, 8th edition, Wiley, 2009.
9. Lingyun Yang, Jennifer M. Schopf and Ian Foster, "Conservative Scheduling: Using predictive variance to improve scheduling decisions in Dynamic Environments", Super Computing 2003, November 15-21, Phoenix, AZ, USA.
10. Abbas Noon, Ali Kalakech, Seifedine Kadry, "A New Round Robin Based Scheduling Algorithm for Operating Systems: Dynamic Quantum Using the Mean Average", IJCSI International Journal of Computer Science Issues, Vol. 8, Issue 3, No. 1, May 2011,ISSN (Online): 1694-0814,
11. Rakesh Mohanty, H. S. Behera, Khusbu Patwari, Monisha Dash, M. Lakshmi Prasanna, "Priority Based Dynamic Round Robin (PBDRR) Algorithm With Intelligent Time Slice For Soft Real Time Systems" , (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 2, No.2, February 2011

200-206

38.

Authors: **Sweta Ghosh, Priyanka Pingle, Shweta Mendhe, Priyanka Ganvir, Amita Meshram**

Paper Title: **Quick Bid Online Server**

Abstract: This project is basically intended at developing software providing features of auctioning of products and players of various fields."Online Auctioning Server" is a server which is an online auction web site aimed at taking the auction to the finger tips of aspiring bidders there by opening up the doors of the "OPEN Auction House' to a wider cross section of Art Lovers and Antique Collectors. This site also acts as an open forum where buyers and sellers can come together and exchange their products. The site makes sure that the sellers get a genuine price and bidders get a genuine product.

Keywords: virtual auctioning, auction systems, bid security, quality of service (QoS), query certificate management (QCM)

References:

1. BOOK FOR ASP.NET BY SCOTT MITCHELL
2. INTERNET SEARCH WIKIPEDIA AND GOOGLE.
3. http://www.designelementsusa.com/services/web-design/web-development-life-cycle
4. AUCTION THEORY: A GUIDE TO THE

207-212

5. Literature Survey:-LITER
6. Paul Klemperer
7. Nuffield College, Oxford University
8. http://www.auction.indiatimes.com
9. http://www.ebay.com
10. http://www.msdn.com

39.

Authors: **Jitender kumar, Manoj Arora, R. S. Chauhan**

Paper Title: **Performance Analysis of Wdm Pon At 10 GB/S**

Abstract: In this paper we have studied the Wave length division multiplexing in Passive Optical network using software OPTSIM. We transmit the signal at 10gb/s in MAN Optical network With long Distance(50 km) also minimize the bit error rate. The main aim of the proposed design is to build a MAN optical network using ten-gigabit Ethernet technique, and what are the necessary requirements to build these networks. As a case study, all states center are connected as Star – Bus topology using layer2 and layer3 optical switches. In addition, in this paper one-gigabit optical transmitter and receiver are designed to work as a node in the network topology. Furthermore, the benefits of using L- Band wavelength for transmission take in consider the linear and non-linear effects on fiber optic is presented.

Keywords: Wave length division multiplexing, Passive Optical network, OPTSIM

References:

1. R. Ramaswami et al. "optical Networks, a practical perspective", second edition, Elsevier Science and Technology books, November 2001.
2. G.P. Agrawal et al.,"Fibre-optic communication systems," third edition, John Wiley and Sons, May 2002.
3. Diptish Dey et al.,"Theory towards an all optical WDM slotted ring MAN with support for optical multicasting", Ph.D. Thesis, University of Twenty, June 2003.
4. Chanclou et al., E. 2006"Overview of the optical broad band access evolution: a joint paper of operators of the IST network of excellence" e-Photon/One. IEEE Communications Magazine. Vol. 44, issue 8, pp. 29-35.
5. FTTH Council Europe. 2009. "Fibre to the home continues its global march". Press release. [Online]. 12 February. documents/press release/GlobalRankingPressRelease-FINAL-12.02.09.pdf. [Accessed 2 November2009].
6. FTTH Council Europe. 2009. Ranking of European FTTH penetration shows Scandinavia and smaller economies still ahead. Press release. [Online]. 8 September. [Accessed 2 November 2009].
7. Chanclou, et al., , "A hybrid optical network architecture consisting of optical cross connects and Optical burst switches", Faculty Of Informatics, University Of Wollongong, October 2003 [8] Scalable Advanced Ring-based passive Dense Access Network Architecture ,11 November 2009.
8. Slavisa Aleksic et al., "Design Considerations for a High-Speed Metro Network Using All-Optical Packet Processing", Tu A3.3, pp. 82-86, ICTON 2006
9. G. Barish et al., "World Wide Web caching: Trends and techniques". IEEE Communications Magazinel, Vol. 1, pp. 178–185, May 2000.

213-216

40.

Authors: **Ashish Kumar Dewangan, Majid Ahmed Siddhiqui**

Paper Title: **Iris Recognition - An Efficient Biometric for Human Identification and Verification**

Abstract: A biometric system provides automatic identification of an individual based on a unique feature or characteristic possessed by the individual. Iris recognition is regarded as the most reliable and accurate biometric identification system available. Most commercial iris recognition systems use patented algorithms developed by Daugman, and these algorithms are able to produce perfect recognition rates. However, published results have usually been produced under favorable conditions, and there have been no independent trials of the technology. The work presented in this paper involved developing an 'open-source' iris recognition system in order to verify both the uniqueness of the human iris and also its performance as a biometric. For determining the recognition performance of the system one databases of digitized grayscale eye images were used. The iris recognition system consists of an automatic segmentation system that is based on the Hough transform, and is able to localize the circular iris and pupil region, occluding eyelids and eyelashes, and reflections. The extracted iris region was then normalized into a rectangular block with constant dimensions to account for imaging inconsistencies. Finally, the phase data from 1D Log-Gabor filters was extracted and quantized to four levels to encode the unique pattern of the iris into a bit-wise biometric template. The Hamming distance was employed for classification of iris templates, and two templates were found to match if a test of statistical independence was failed. The system performed with perfect recognition on a set of 756 eye images; however, tests on another set of 624 images resulted in false accept and false reject rates of 0.005% and 0.238% respectively. Therefore, iris recognition is shown to be a reliable and accurate biometric technology.

Keywords: Automatic segmentation, Biometric identification, Iris recognition, Pattern recognition, etc.

References:

1. S. Sanderson, J. Erbetta. Authentication for secure environments based on iris scanning technology. IEEE Colloquium on Visual Biometrics, 2000.
2. J. Daugman. How iris recognition works. Proceedings of 2002 International Conference on Image Processing, Vol. 1, 2002.
3. R. Wildes, J. Asmuth, G. Green, S. Hsu, R. Kolczynski, J. Matey, S. McBride. A system for automated iris recognition. Proceedings IEEE Workshop on Applications of Computer Vision, Sarasota, FL, pp. 121-128, 1994.
4. W. Boles, B. Boashash. A human identification technique using images of the iris and wavelet transform. IEEE Transactions on Signal Processing, Vol. 46, No. 4, 1998.
5. C. Tisse, L. Martin, L. Torres, M. Robert. Person identification technique using human iris recognition. International Conference on Vision Interface, Canada, 2002.
6. Chinese Academy of Sciences – Institute of Automation. Database of 756 Greyscale Eye Images. http://www.sinobiometrics.com Version 1.0, 2003.
7. W. Kong, D. Zhang. Accurate iris segmentation based on novel reflection and eyelash detection model. Proceedings of 2001 International Symposium on Intelligent Multimedia, Video and Speech Processing, Hong Kong, 2001.
8. L. Ma, Y. Wang, T. Tan. Iris recognition using circular symmetric filters. National Laboratory of Pattern Recognition, Institute of

217-221

Automation, Chinese Academy of Sciences, 2002.
9. D. Field. Relations between the statistics of natural images and the response properties of cortical cells. Journal of the Optical Society of America, 1987.
10. P. Kovesi. MATLAB Functions for Computer Vision and Image Analys is. Available at: http://www.cs.uwa.edu.au/~pk/Research/MatlabFns/index.html

41.

Authors: **Vineet Shekher, Pankaj Rai, Om Prakash**

Paper Title: **Comparison between classic PID, Integer Order PID and Fuzzy Logic Controller for Ceramic Infrared Heater: Analysis using MATLAB/Simulink**

Abstract: This paper discusses the design, simulation and performance of ceramic infrared heater controller. This heater is energy saving potential, efficient heat transfer, uniform heating, efficient and instant heat. Many industries are increasibily making use of infrared technology as a means of improving their process. This type of heating often requires a large area of floor space. This study successfully developed a controller to achieve an effective and robust control of the infrared heating process. This paper consists three main tuning methods for IR heating system controller. Firstly, it presents design of PID controller using Zeigler Nichols (ZN) technique for first order plus time delay system using open loop step response method. Secondly, it presents the design of PID controller based on gain margin and phase margin (IOPID) for the same system. Thirdly, a fuzzy logic controller used for the same system for good stability and robust performance. Performance analysis shows the effectiveness of the ZN-PID, IOPID and fuzzy logic controller.

Keywords: Zeigler Nichols, PID, IOPID, Gain margin, Phase margin, Fuzzy Logic

References:

1. Adonis, M and Khan, MTE. 2001. Infrared heating profile controller. Proceedings of the 3rd International Conference on Control Theory and Applications, Dec., 445-449.
2. Adonis, M and Khan ,MTE," PID control of infrared radiative power profile for ceramic emitters" , 2003 IFAC
3. Astrom, K.J., and Hagglund, T.: 'Automatic tuning of PID controllers' (ISA, 1988)
4. Ziegler, J.G., and Nichols, N.B.: 'Optimum settings for automatic controllers', Trans. ASME 1942, 64, pp. 759-768
5. Ho, W.K., Hang, C.C,, and Cao, L.S.: 'Tuning of PID controllers based on gain and phase margin specifications', Automatica, 1995, 31, (3), pp. 497-502
6. Astrom, K.J., and Hagglund, T.: 'PID controllers: theory, design, and tuning' (Instrument Society of America, 1995, 2nd edn.)
7. R. S. Barbosa, J. A. Tenerio, Machado and Isabel. M. Ferreira, "Tuning of PID controllers based Bode's Ideal transfer function, Nonlinear Daynamics, vol. 38, pp.305- 321, 2004.
8. D. Xue, Y.Q. Chen, D. P. Atherton "Linear Feedback Control Analysis and Design with MATLAB", Advances in Design and Control, Siam, 2007.
9. Cvejn, J., 2009. Sub-optimal PID controller settings for FOPDT systems with long dead time. Journal of process control 19.
10. Ho, W.K., Hang, C.C., Zhou, J.H., 1995. Performance and gain and phase margins of well-known PI tuning formulas.IEEE Transactions on Control Systems Technology 3.
11. PID Controllers for Time-Delay Systems Guillermo J. Silva, Aniruddha Datta, S.R Bhattacharyya ,springer 2005
12. C.H. Lee and C.C. Teng, "Tuning of PID Controllers for Stable and Unstable Processes based on gain and phase margin specifications", International Journal of Fuzzy Systems, Vol. 3, No. 1, pp. 346-355. 2001.
13. Q. Yang, G. Li, X. Kang, Application of fuzzy PID control in the Heating System,Chinese Control and Descision Conference (CCDC2008).
14. J. Wang, D. An, C. Lou, Application of fuzzy-PID controller in heating ventilating and air conditioning system, in: Proceedings of the IEEE International Conference on Mechatronics and Automation, China, 2006, pp. 2217–2222.
15. Z.W. Woo, H.Y. Chung, J.J. Lin, A PID type fuzzy controller with self-tuning scaling factors, Fuzzy Sets and Systems 115 (2000) 321-326.
16. E. H. Mamdani and S. Assilian, "An experiment in linguistic synthesis with a fuzzy logic controller," Int. J. Man-Math. Stud., Vol. 7, pp. 1-13, 1975.
17. G. K. I. Mann, B. G. Hu and R. G. Gosine, "Analysis of direct action fuzzy PID controller structures," IEEE Trans. SMC. – Pt. B, Vol. 29, pp. 371-388,Jun. 1999.
18. Z.Y. Zhao, M. Tomizuka and S. Isaka, "Fuzzy gain scheduling of PID controllers," IEEE Trans. Syst., Man, Cybern., Vol. 23, pp. 1392-1398,1993.
19. S. G. Tzafestas, N. P. Papanikolopoulos, "Incremental fuzzy expert PID control," IEEE Trans. Ind. Electron., Vol. 37, No. 5, pp. 365-371, 1990.
20. S. N. Sivanandam, S. Sumathi and S. N. Deepa,Introduction to Fuzzy Logic using MATLAB, Springer Berlin Heidelberg New York,2007.

222-227

42.

Authors: **S. Sridevi, V. R.Vijayakumar, R. Anuja**

Paper Title: **A Survey On Medical Image Compression Techniques**

Abstract: Lossy compression schemes are not used in medical image compression due to possible loss of useful clinical information and as operations like enhancement may lead to further degradations in the lossy compression. Medical imaging poses the great challenge of having compression algorithms that reduce the loss of fidelity as much as possible so as not to contribute to diagnostic errors and yet have high compression rates for reduced storage and transmission time. This paper outlines the comparison of compression methods such as Shape-Adaptive Wavelet Transform and Scaling Based ROI, JPEG2000 Max-Shift ROI Coding, JPEG2000 Scaling-Based ROI Coding, Discrete Wavelet Transform and Subband Block Hierarchical Partitioning on the basis of compression ratio and compression quality.

Keywords: Lossy Compression Ratio, Shape - Adaptive Wavelet Transform, Scaling based ROI, JPEG2000 Max – Shift ROI Coding, JPEG2000, DCT

References:

1. I.Ueno and W.Pearlman, "Region of interest coding in volumetric images with shape-adaptive wavelet transform", in Proc. SPIE, 2003, vol.5022.
2. C.Doukas and I.Maglogiannis, "Region of interest coding techniques for medical image compression", IEEE Eng. Med. Biol. Mag.,vol.25, no.5, Sep-Oct.2007.
3. K.Krishnan, M.Marcellin, A.Bilgin, and M.Nadar, "Efficient transmission of comressed data for remote volume visualization", IEEE Trans. Med. Imag., vol.25, no.9, Sep.2006.
4. R. Srikanth and A. G. Ramakrishnan, "Contextual encoding in uniform and adaptive mesh-based lossless compression of MR images," IEEE

228-227

Trans. Med. Imag., vol. 24, no. 9, Sep. 2005.
5. Y.Liu and W.A.Pearlman," Resolution Scalable Coding and Region of Interest Access with Three-Dimensional SBHP Algorithm", Third International symposium on 3D Data Processing, Jun 2006.
6. Ram Singh, Ramesh Verma and Sushil Kumar "JPEG2000: Wavelet Based Image Compression" EE678 wavelets application assignment 1.
7. P. Schelkens, A. Munteanu, J. Barbarien, M. Galca, X. Giro-Nieto, and J. Cornelis, "Wavelet coding of volumetric medical datasets," IEEE Trans. Med. Imag., vol. 22, no. 3, pp. 441–458, Mar. 2003.