Volume 1 Issue 9, July 2013

International Journal of Emerging Science and Engineering

ISSN: 2319-6378 (Online)

Website: www.ijese.org





Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.

Exploring Innovation: A Key for Dedicated Services

Address:

22, First Floor, ShivLoke Phase-IV,

Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India

Website: www.blueeyesintelligence.org

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

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

Skype #: beiesp, Twitter #: beiesp

Editor In Chief

Dr. Shiv K Sahu

Ph.D. (CSE), M.Tech. (IT, Honors), B.Tech. (IT)

Director, Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal(M.P.), India

Dr. Shachi Sahu

Ph.D. (Chemistry), M.Sc. (Organic Chemistry)

Additional Director, Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal(M.P.), India

Vice Editor In Chief

Dr. Vahid Nourani

Professor, Faculty of Civil Engineering, University of Tabriz, Iran

Prof.(Dr.) Anuranjan Misra

Professor & Head, Computer Science & Engineering and Information Technology & Engineering, Noida International University, Noida (U.P.), India

Chief Advisory Board

Prof. (Dr.) Hamid Saremi

Vice Chancellor of Islamic Azad University of Iran, Quchan Branch, Quchan-Iran

Dr. Uma Shanker

Professor & Head, Department of Mathematics, CEC, Bilaspur(C.G.), India

Dr. Rama Shanker

Professor & Head, Department of Statistics, Eritrea Institute of Technology, Asmara, Eritrea

Dr. Vinita Kumari

Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., India

Dr. Kapil Kumar Bansal

Head (Research and Publication), SRM University, Gaziabad (U.P.), India

Dr. Deepak Garg

Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India, Senior Member of IEEE, Secretary of IEEE Computer Society (Delhi Section), Life Member of Computer Society of India (CSI), Indian Society of Technical Education (ISTE), Indian Science Congress Association Kolkata.

Dr. Vijav Anant Athavale

Director of SVS Group of Institutions, Mawana, Meerut (U.P.) India/ U.P. Technical University, India

Dr. T.C. Manjunath

Principal & Professor, HKBK College of Engg, Nagawara, Arabic College Road, Bengaluru-560045, Karnataka, India

Dr. Kosta Yogeshwar Prasad

Director, Technical Campus, Marwadi Education Foundation's Group of Institutions, Rajkot-Morbi Highway, Gauridad, Rajkot, Gujarat, India

Dr. Dinesh Varshney

Director of College Development Counceling, Devi Ahilya University, Indore (M.P.), Professor, School of Physics, Devi Ahilya University, Indore (M.P.), and Regional Director, Madhya Pradesh Bhoj (Open) University, Indore (M.P.), India

Dr. P. Dananjayan

Professor, Department of Department of ECE, Pondicherry Engineering College, Pondicherry, India

Dr. Sadhana Vishwakarma

Associate Professor, Department of Engineering Chemistry, Technocrat Institute of Technology, Bhopal(M.P.), India

Dr. Kamal Mehta

Associate Professor, Deptment of Computer Engineering, Institute of Technology, NIRMA University, Ahmedabad (Gujarat), India

Dr. CheeFai Tan

Faculty of Mechanical Engineering, University Technical, Malaysia Melaka, Malaysia

Dr. Suresh Babu Perli

Professor & Head, Department of Electrical and Electronic Engineering, Narasaraopeta Engineering College, Guntur, A.P., India

Dr. Binod Kumar

Associate Professor, Schhool of Engineering and Computer Technology, Faculty of Integrative Sciences and Technology, Quest International University, Ipoh, Perak, Malaysia

Dr. Chiladze George

Professor, Faculty of Law, Akhaltsikhe State University, Tbilisi University, Georgia

Dr. Kavita Khare

Professor, Department of Electronics & Communication Engineering, MANIT, Bhopal (M.P.), INDIA

Dr. C. Saravanan

Associate Professor (System Manager) & Head, Computer Center, NIT, Durgapur, W.B. India

Dr. S. Sarayanan

Professor, Department of Electrical and Electronics Engineering, Muthayamal Engineering College, Resipuram, Tamilnadu, India

Dr. Amit Kumar Garg

Professor & Head, Department of Electronics and Communication Engineering, Maharishi Markandeshwar University, Mulllana, Ambala (Haryana), India

Dr. T.C.Manjunath

Principal & Professor, HKBK College of Engg, Nagawara, Arabic College Road, Bengaluru-560045, Karnataka, India

Dr. P. Dananjavan

Professor, Department of Department of ECE, Pondicherry Engineering College, Pondicherry, India

Dr. Kamal K Mehta

Associate Professor, Department of Computer Engineering, Institute of Technology, NIRMA University, Ahmedabad (Gujarat), India

Dr. Rajiv Srivastava

Director, Department of Computer Science & Engineering, Sagar Institute of Research & Technology, Bhopal (M.P.), India

Dr. Chakunta Venkata Guru Rao

Professor, Department of Computer Science & Engineering, SR Engineering College, Ananthasagar, Warangal, Andhra Pradesh, India

Dr. Anuranjan Misra

Professor, Department of Computer Science & Engineering, Bhagwant Institute of Technology, NH-24, Jindal Nagar, Ghaziabad, India

Dr. Robert Brian Smith

International Development Assistance Consultant, Department of AEC Consultants Pty Ltd, AEC Consultants Pty Ltd, Macquarie Centre, North Ryde, New South Wales, Australia

Dr. Saber Mohamed Abd-Allah

Associate Professor, Department of Biochemistry, Shanghai Institute of Biochemistry and Cell Biology, Yue Yang Road, Shanghai, China

Dr. Himani Sharma

Professor & Dean, Department of Electronics & Communication Engineering, MLR Institute of Technology, Laxman Reddy Avenue, Dundigal, Hyderabad, India

Dr. Sahab Singh

Associate Professor, Department of Management Studies, Dronacharya Group of Institutions, Knowledge Park-III, Greater Noida, India

Dr. Umesh Kumar

Principal: Govt Women Poly, Ranchi, India

Dr. Syed Zaheer Hasan

Scientist-G Petroleum Research Wing, Gujarat Energy Research and Management Institute, Energy Building, Pandit Deendayal Petroleum University Campus, Raisan, Gandhinagar-382007, Gujarat, India.

Dr. Jaswant Singh Bhomrah

Director, Department of Profit Oriented Technique, 1 – B Crystal Gold, Vijalpore Road, Navsari 396445, Gujarat. India

Technical Advisory Board

Dr. Mohd. Husain

Director MG Institute of Management & Technology, Banthara, Lucknow (U.P.), India

Dr. T. Jayanthy

Principal, Panimalar Institute of Technology, Chennai (TN), India

Dr. Umesh A.S.

Director, Technocrats Institute of Technology & Science, Bhopal(M.P.), India

Dr. B. Kanagasabapathi

Infosys Labs, Infosys Limited, Center for Advance Modeling and Simulation, Infosys Labs, Infosys Limited, Electronics City, Bangalore, India

Dr. C.B. Gupta

Professor, Department of Mathematics, Birla Institute of Technology & Sciences, Pilani (Rajasthan), India

Dr. Sunandan Bhunia

Associate Professor & Head,, Dept. of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Jaydeb Bhaumik

Associate Professor, Dept. of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Rajesh Das

Associate Professor, School of Applied Sciences, Haldia Institute of Technology, Haldia, West Bengal, India

Dr. Mrutyunjaya Panda

Professor & Head, Department of EEE, Gandhi Institute for Technological Development, Bhubaneswar, Odisha, India

Dr. Mohd. Nazri Ismail

Associate Professor, Department of System and Networking, University of Kuala (UniKL), Kuala Lumpur, Malaysia

Dr. Haw Su Cheng

Faculty of Information Technology, Multimedia University (MMU), Jalan Multimedia, 63100 Cyberjaya

Dr. Hossein Rajabalipour Cheshmehgaz

Industrial Modeling and Computing Department, Faculty of Computer Science and Information Systems, Universiti Teknologi Malaysia (UTM) 81310, Skudai, Malaysia

Dr. Sudhinder Singh Chowhan

Associate Professor, Institute of Management and Computer Science, NIMS University, Jaipur (Rajasthan), India

Dr. Neeta Sharma

Professor & Head, Department of Communication Skils, Technocrat Institute of Technology, Bhopal(M.P.), India

Dr. Ashish Rastogi

Associate Professor, Department of CSIT, Guru Ghansi Das University, Bilaspur (C.G.), India

Dr. Santosh Kumar Nanda

Professor, Department of Computer Science and Engineering, Eastern Academy of Science and Technology (EAST), Khurda (Orisa), India

Dr. Hai Shanker Hota

Associate Professor, Department of CSIT, Guru Ghansi Das University, Bilaspur (C.G.), India

Dr. Sunil Kumar Singla

Professor, Department of Electrical and Instrumentation Engineering, Thapar University, Patiala (Punjab), India

Dr. A. K. Verma

Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India

Dr. Durgesh Mishra

Chairman, IEEE Computer Society Chapter Bombay Section, Chairman IEEE MP Subsection, Professor & Dean (R&D), Acropolis Institute of Technology, Indore (M.P.), India

Dr. Xiaoguang Yue

Associate Professor, College of Computer and Information, Southwest Forestry University, Kunming (Yunnan), China

Dr. Veronica Mc Gowan

Associate Professor, Department of Computer and Business Information Systems, Delaware Valley College, Doylestown, PA, Allman China

Dr. Mohd. Ali Hussain

Professor, Department of Computer Science and Engineering, Sri Sai Madhavi Institute of Science & Technology, Rajahmundry (A.P.), India

Dr. Mohd. Nazri Ismail

Professor, System and Networking Department, Jalan Sultan Ismail, Kaula Lumpur, MALAYSIA

Dr. Sunil Mishra

Associate Professor, Department of Communication Skills (English), Dronacharya College of Engineering, Farrukhnagar, Gurgaon (Haryana), India

Dr. Labib Francis Gergis Rofaiel

Associate Professor, Department of Digital Communications and Electronics, Misr Academy for Engineering and Technology, Mansoura City, Egypt

Dr. Pavol Tanuska

Associate Professor, Department of Applied Informetics, Automation, and Mathematics, Trnava, Slovakia

Dr. VS Giridhar Akula

Professor, Avanthi's Research & Technological Academy, Gunthapally, Hyderabad, Andhra Pradesh, India

Dr. S. Satyanarayana

Associate Professor, Department of Computer Science and Engineering, KL University, Guntur, Andhra Pradesh, India

Dr. Bhupendra Kumar Sharma

Associate Professor, Department of Mathematics, KL University, BITS, Pilani, India

Dr. Praveen Agarwal

Associate Professor & Head, Department of Mathematics, Anand International College of Engineering, Jaipur (Rajasthan), India

Dr. Manoj Kumar

Professor, Department of Mathematics, Rashtriya Kishan Post Graduate Degree, College, Shamli, Prabudh Nagar, (U.P.), India

Dr. Shaikh Abdul Hannan

Associate Professor, Department of Computer Science, Vivekanand Arts Sardar Dalipsing Arts and Science College, Aurangabad (Maharashtra), India

Dr. K.M. Pandey

Professor, Department of Mechanical Engineering, National Institute of Technology, Silchar, India

Prof. Pranav Parashar

Technical Advisor, International Journal of Soft Computing and Engineering (IJSCE), Bhopal (M.P.), India

Dr. Biswajit Chakraborty

MECON Limited, Research and Development Division (A Govt. of India Enterprise), Ranchi-834002, Jharkhand, India

Dr. D.V. Ashoka

Professor & Head, Department of Information Science & Engineering, SJB Institute of Technology, Kengeri, Bangalore, India

Dr. Sasidhar Babu Suvanam

Professor & Academic Cordinator, Department of Computer Science & Engineering, Sree Narayana Gurukulam College of Engineering, Kadayiuruppu, Kolenchery, Kerala, India

Dr. C. Venkatesh

Professor & Dean, Faculty of Engineering, EBET Group of Institutions, Kangayam, Erode, Caimbatore (Tamil Nadu), India

Dr. Nilay Khare

Assoc. Professor & Head, Department of Computer Science, MANIT, Bhopal (M.P.), India

Dr. Sandra De Iaco

Professor, Dip.to Di Scienze Dell'Economia-Sez. Matematico-Statistica, Italy

Dr. Yaduvir Singh

Associate Professor, Department of Computer Science & Engineering, Ideal Institute of Technology, Govindpuram Ghaziabad, Lucknow (U.P.), India

Dr. Angela Amphawan

Head of Optical Technology, School of Computing, School Of Computing, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia

Dr. Ashwini Kumar Arya

Associate Professor, Department of Electronics & Communication Engineering, Faculty of Engineering and Technology, Graphic Era University, Dehradun (U.K.), India

Dr. Yash Pal Singh

Professor, Department of Electronics & Communication Engg, Director, KLS Institute Of Engg. & Technology, Director, KLSIET, Chandok, Bijnor, (U.P.), India

Dr. Ashish Jain

Associate Professor, Department of Computer Science & Engineering, Accurate Institute of Management & Technology, Gr. Noida (U.P.), India

Dr. Abhay Saxena

Associate Professor & Head, Department of Computer Science, Dev Sanskriti University, Haridwar, Uttrakhand, India

Dr. Judy. M.V

Associate Professor, Head of the Department CS &IT, Amrita School of Arts and Sciences, Amrita Vishwa Vidyapeetham, Brahmasthanam, Edapally, Cochin, Kerala, India

Dr. Sangkyun Kim

Professor, Department of Industrial Engineering, Kangwon National University, Hyoja 2 dong, ChuncheOnsi, Gangwondo, Korea

Dr. Sanjay M. Gulhane

Professor, Department of Electronics & Telecommunication Engineering, Jawaharlal Darda Institute of Engineering & Technology, Yavatmal, Maharastra, India

Dr. K.K. Thyagharajan

Principal & Professor, Department of Informational Technology, RMK College of Engineering & Technology, RSM Nagar, Thiruyallur, Tamil Nadu, India

Dr. P. Subashini

Assoc. Professor, Department of Computer Science, Coimbatore, India

Dr. G. Srinivasrao

Professor, Department of Mechanical Engineering, RVR & JC, College of Engineering, Chowdayaram, Guntur, India

Dr. Rajesh Verma

Professor, Department of Computer Science & Engg. and Deptt. of Information Technology, Kurukshetra Institute of Technology & Management, Bhor Sadian, Pehowa, Kurukshetra (Haryana), India

Dr. Pawan Kumar Shukla

Associate Professor, Satya College of Engineering & Technology, Haryana, India

Dr. U C Srivastava

Associate Professor, Department of Applied Physics, Amity Institute of Applied Sciences, Amity University, Noida, India

Dr. Reena Dadhich

Prof. & Head, Department of Computer Science and Informatics, MBS MArg, Near Kabir Circle, University of Kota, Rajasthan, India

Dr. Aashis. S. Roy

Department of Materials Engineering, Indian Institute of Science, Bangalore Karnataka, India

Dr. Sudhir Nigam

Professor Department of Civil Engineering, Principal, Lakshmi Narain College of Technology and Science, Raisen, Road, Bhopal, (M.P.), India

Dr. S. Senthil Kumar

Doctorate, Department of Center for Advanced Image and Information Technology, Division of Computer Science and Engineering, Graduate School of Electronics and Information Engineering, Chon Buk National University Deok Jin-Dong, Jeonju, Chon Buk, 561-756, South Korea Tamilnadu, India

Dr. Gufran Ahmad Ansari

Associate Professor, Department of Information Technology, College of Computer, Qassim University, Al-Qassim, Kingdom of Saudi Arabia (KSA)

Dr. R. Navaneetha krishnan

Associate Professor, Department of MCA, Bharathiyar College of Engg & Tech, Karaikal Puducherry, India

Dr. Hossein Rajabalipour Cheshmejgaz

Industrial Modeling and Computing Department, Faculty of Computer Science and Information Systems, Universiti Teknologi Skudai, Malaysia

Dr. Veronica McGowan

Associate Professor, Department of Computer and Business Information Systems, Delaware Valley College, Doylestown, PA, Allman China

Dr. Sanjay Sharma

Associate Professor, Department of Mathematics, Bhilai Institute of Technology, Durg, Chhattisgarh, India

Dr. Taghreed Hashim Al-Noor

Professor, Department of Chemistry, Ibn-Al-Haitham Education for pure Science College, University of Baghdad, Iraq

Dr. Madhumita Dash

Professor, Department of Electronics & Telecommunication, Orissa Engineering College, Bhubaneswar, Odisha, India

Dr. Anita Sagadevan Ethiraj

Associate Professor, Department of Centre for Nanotechnology Research (CNR), School of Electronics Engineering (Sense), Vellore Institute of Technology (VIT) University, Tamilnadu, India

Dr. Sibasis Acharya

Project Consultant, Department of Metallurgy & Mineral Processing, Midas Tech International, 30 Mukin Street, Jindalee-4074, Queensland, Australia

Dr. Neelam Ruhil

Professor, Department of Electronics & Computer Engineering, Dronacharya College of Engineering, Gurgaon, Haryana, India

Dr. Faizullah Mahar

Professor, Department of Electrical Engineering, Balochistan University of Engineering and Technology, Pakistan

TING

Dr. K. Selvaraju

Head, PG & Research, Department of Physics, Kandaswami Kandars College (Govt. Aided), Velur (PO), Namakkal DT. Tamil Nadu, India

Dr. M. K. Bhanarkar

Associate Professor, Department of Electronics, Shivaji University, Kolhapur, Maharashtra, India

Dr. Sanjay Hari Sawant

Professor, Department of Mechanical Engineering, Dr. J. J. Magdum College of Engineering, Jaysingpur, India

Dr. Arindam Ghosal

Professor, Department of Mechanical Engineering, Dronacharya Group of Institutions, B-27, Part-III, Knowledge Park, Greater Noida, India

Dr. M. Chithirai Pon Selvan

Associate Professor, Department of Mechanical Engineering, School of Engineering & Information Technology Manipal University, Dubai, UAE

Dr. S. Sambhu Prasad

Professor & Principal, Department of Mechanical Engineering, Pragati College of Engineering, Andhra Pradesh, India.

Dr. Muhammad Attique Khan Shahid

Professor of Physics & Chairman, Department of Physics, Advisor (SAAP) at Government Post Graduate College of Science, Faisalabad.

Dr. Kuldeep Pareta

Professor & Head, Department of Remote Sensing/GIS & NRM, B-30 Kailash Colony, New Delhi 110 048, India

Dr. Th. Kiranbala Devi

Associate Professor, Department of Civil Engineering, Manipur Institute of Technology, Takyelpat, Imphal, Manipur, India

Dr. Nirmala Mungamuru

Associate Professor, Department of Computing, School of Engineering, Adama Science and Technology University, Ethiopia

Dr. Srilalitha Girija Kumari Sagi

Associate Professor, Department of Management, Gandhi Institute of Technology and Management, India

Dr. Vishnu Narayan Mishra

Associate Professor, Department of Mathematics, Sardar Vallabhbhai National Institute of Technology, Ichchhanath Mahadev Dumas Road, Surat (Gujarat), India

Dr. Yash Pal Singh

Director/Principal, Somany (P.G.) Institute of Technology & Management, Garhi Bolni Road, Rewari Haryana, India.

Dr. Sripada Rama Sree

Vice Principal, Associate Professor, Department of Computer Science and Engineering, Aditya Engineering College, Surampalem, Andhra Pradesh, India.

Dr. Rustom Mamlook

Associate Professor, Department of Electrical and Computer Engineering, Dhofar University, Salalah, Oman. Middle East.

Managing Editor

Mr. Jitendra Kumar Sen

International Journal of Emerging Science and Engineering (IJESE)

Editorial Board

Dr. Saeed Balochian

Associate Professor, Gonaabad Branch, Islamic Azad University, Gonabad, Iratan

Dr. Mongey Ram

Associate Professor, Department of Mathematics, Graphics Era University, Dehradun, India

Dr. Arupratan Santra

Sr. Project Manager, Infosys Technologies Ltd, Hyderabad (A.P.)-500005, India

Dr. Ashish Jolly

Dean, Department of Computer Applications, Guru Nanak Khalsa Institute & Management Studies, Yamuna Nagar (Haryana), India

Dr. Israel Gonzalez Carrasco

Associate Professor, Department of Computer Science, Universidad Carlos III de Madrid, Leganes, Madrid, Spain

Dr. Guoxiang Liu

Member of IEEE, University of North Dakota, Grand Froks, N.D., USA

Dr. Khushali Menaria

Associate Professor, Department of Bio-Informatics, Maulana Azad National Institute of Technology (MANIT), Bhopal (M.P.), India

Dr. R. Sukumar

Professor, Sethu Institute of Technology, Pulloor, Kariapatti, Virudhunagar, Tamilnadu, India

Dr. Cherouat Abel

Professor, University of Technology of Troyes, France

Dr. Rinkle Aggrawal

Associate Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India

Dr. Parteek Bhatia

Associate Professor, Deprtment of Computer Science & Engineering, Thapar University, Patiala (Punjab), India

Dr. Manish Srivastava

Professor & Head, Computer Science and Engineering, Guru Ghasidas Central University, Bilaspur (C.G.), India

Dr. B. P. Ladgaonkar

Assoc. Professor&Head, Department of Electronics, Shankarrao Mohite Mahavidyalaya, Akluj, Maharashtra, India

Dr. E. Mohan

Professor & Head, Department of Computer Science and Engineering, Pallavan College of Engineering, Kanchipuram, Tamilnadu, India

Dr. M. Shanmuga Ptriva

Assoc. Professor, Department of Biotechnology, MVJ College of Engineering, Bangalore Karnataka, India

Dr. Leena Jain

Assoc. Professor & Head, Dept. of Computer Applications, Global Institute of Management & Emerging Technologies, Amritsar, India

Dr. S.S.S.V Gopala Raju

Professor, Department of Civil Engineering, GITAM School of Technology, GITAM, University, Hyderabad, Andhra Pradesh, India

Dr. Ani Grubisic

Department of Computer Science, Teslina 12, 21000 split, Croatia

Dr. Ashish Paul

Associate Professor, Department of Basic Sciences (Mathematics), Assam Don Bosco University, Guwahati, India

Dr. Sivakumar Durairaj

Professor, Department of Civil Engineering, Vel Tech High Tech Dr.Rangarajan Dr.Sakunthala Engineering College, Avadi, Chennai Tamil Nadu, India

Dr. Rashmi Nigam

Associate Professor, Department of Applied Mathematics, UTI, RGPV, Airport Road, Bhopal, (M.P.), India

Dr. Mu-Song Chen

Associate Professor, Department of Electrical Engineering, Da-Yeh University, Rd., Dacun, Changhua 51591, Taiwan R.O.C., Taiwan, Republic of China

Dr. Ramesh S

Associate Professor, Department of Electronics & Communication Engineering, Dr. Ambedkar Institute of Technology, Bangalore, India

Dr. Nor Hayati Abdul Hamid

Associate Professor, Department of Civil Engineering, Universiti Teknologi Mara, Selangor, Malaysia

Dr. C.Nagarajan

Professor & Head, Department of Electrical & Electronic Engineering Muthayammal Engineering College, Rasipuram, Tamilnadu, India

Dr. Ilaria Cacciotti

Department of Industrial Engineering, University of Rome Tor Vergata Via del Politecnico Rome-Italy

Dr. V.Balaji

Principal Cum Professor, Department of EEE &E&I, Lord Ayyappa Institute of Engg & Tech,Uthukadu, Walajabad, Kanchipuram, Tamil Nadu, India

Dr. G. Anjan Babu

Assoc. Professor, Department of Computer Science, S V University, Tirupati, Andhra Pradesh, India

Dr. Damodar Reddy Edla

Assoc. Professor, Department of Computer Science & Engineering, National Institute of Technology, Goa, India

Dr. D.Arumuga Perumal

Professor, Department of Mechanical Engg, Noorul Islam University, Kanyakumari (Dist), Tamilnadu, India

Dr. Roshdy A. AbdelRassoul

Professor, Department of Electronics and Communications Engineering, Arab Academy for Science and Technology, Electronics and Communications Engineering Dept., POBox 1029, Abu-Qir, Alexandria, Egypt

Dr. Aniruddha Bhattacharya

Assoc. Professor & Head, Department of Computer Science & Engineering, Amrita School of Engineering, Bangalore, India

Dr. P Venkateswara Rao

Professor, Department of Mechanical Engineering, KITS, Warangal, Andhra Pradesh, India

Dr. V.Mahalakshmi M.L

Assoc. Professor & Head, Institute of Management Studies, Chennai CID Quarters, V.K.Iyer Road, Mandaveli, Chennai

S. No	Volume-1 Issue-9, July 2013, ISSN: 2319–6378 (Online) Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.		Page No.	
	Authors:	Pallavi Matkar, Lalit Dole		
=	Paper Title: Energy Aware Blind Data Aggregation for Data Intergrity in Wireless Sensor Network			
-	Abstract: Wireless sensor networks consist of sensor nodes with sensing and communication capabilities. This paper presents a new Energy aware routing protocol called SHHRP (Simple Homogenous Heterogeneous Routing Protocol) Simulation result shows that proposed protocol is energy efficient when compared to existing protocol. Though, the base station only fetches the aggregated result, which origin two problems. First, the usage of aggregation function is obliged. Second, the base station cannot confirm the data integrity and authenticity. This paper go to overcome the above two drawbacks. Besides, the design has been concluded and adopted on both homogeneous and heterogeneous wireless sensor networks. This paper also implements Elliptic curve cryptography for encryption and decryption of data in WSN.			
	Keywords: Blinnetwork.	nd data aggregation, data integrity, Elliptic Curve Cryptography, SHHRP protocol, wireless sensor		
1.	SURVEYS & 2. Huang Lu, J Transactions 3. Li Lan-ying, Security, Win Page(s):61 – 4. Jennifer Yick California, D 5. Nandini. S. P Intelligence a 6. R. Rajagopal no. 4, pp. 48- 7. K. Wu, D. D Ad Hoc Netw 8. S. Ozdemir, 2007 9. Chien-Ming of in Wireless S 2012 10. S. Vijayanar International Nadu, India, 11. Pardeep Mal Applied Stati July 1- 4-201 12. Sonali U. Nin	Chen, Kia Makki, Kang Yen, and Niki Pissinou," Sensor Network Security: A Survey," IEEE COMMUNICATIONS & TUTORIALS, VOL. 11, NO. 2, SECOND QUARTER 2009 lie Li, Mohsen Guizani, "Secure and Efficient Data Transmission for Cluster-Based Wireless Sensor Networks," IEEE on Parallel and Distributed Systems, 25 Feb. 2013. IEEE computer Society Digital Library. IEEE Computer Society. Jiang Xiu-li; Zhong, Shenghai, Hu Lei. Energy Balancing Clustering Algorithm for Wireless Sensor Network Networks reless Communications and Trusted Computing, 2009. NSWCTC '09. International Conference on Volume 1, 25-26 April 2009 64 c, Biswanath Mukherjee, Dipak Ghosal'" Wireless sensor network survey," Department of Computer Science, University of lavis, CA 95616, United States, J. Yick et al. / Computer Networks 52 (2008) 2292–2330 latil, Prof. P. R. Patil, "Data Aggregation in Wireless Sensor Network," Proc. IEEE International Conference on Computational and Computing Research, 2010. lan and P. Varshney, "Data-Aggregation Techniques in Sensor Networks: A Survey," IEEE Comm. Surveys Tutorials, vol. 8, 63, OctNov. 2006. reef, B. Sun, and Y. Xiao, "Secure data aggregation without persistent cryptographic operations in wireless sensor networks", vorks, vol. 5, no.1, pp. 100-111, 2007 "Secure and Reliable Data Aggregation for Wireless Sensor Networks", LNCS 4836, H. Ichikawa et al. (Eds.), pp. 102-109, Chen, Yue-Hsun Lin, Ya-Ching Lin, and Hung-Min Sun, "RCDA: Recoverable Concealed Data Aggregation for Data Integrity Sensor Networks", IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, VOL. 23, NO. 4, APRIL and, R.M. suresh, "AN OVERLOOK ON ROUTING TECHNIQUES IN WIRELESS SENSOR NETWORKS," IET-UK Conference on Information and Communication Technology in Electrical Sciences, Dr. M.G.R. University, Chennai, Tamil 2007, pp.557-998 like "Elliptic Curve Cryptography For Security Inwireless Networks" Statistics 2011 Canada: 5th Canadian Conference in 1stics/ 20th conference of the Forum for Interdisciplinary Mathematics - Interdisciplinary M	1	
=				
-	Paper Title: Abstract: This	Design of NDA Water Distribution Network Using EPANET study presents the use of EPANETsoftwarein the design of the N.D.A water distribution network.		
	EPANET is a c within pressuriz tanks or reservo	computer program that performs extended period simulation of hydraulic and water quality behavior and pipe networks. A network consists of pipes, nodes (pipe junctions), pumps, valves and storage pirs. EPANET tracks the flow of water in each pipe, the pressure at each node, the height of water in the concentration of a chemical species throughout the network, EPANET is designed to be a research ping our understanding of the movement and fate of dripking water constituents within distribution.		

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

Keywords: Epanet, Analysis and Water Distribution Networks.

References

2.

- 1. U Tukur (2006) "Design of NDA water treatment sedimentation tank" submitted to department of civil engineering NDA Kaduna.
- AWWA (2005). M32- Computer Modeling of Water Distribution Systems. Denver, CO., 159 pp. Cesario, L. (1995). Modeling, Analysis, and Design of Water Distribution Systems, American Water Works Association

- Cross, H. (1936). "Analysis of flow in networks of conduits or Conductors." Engineering Experiment Station, University of Illinois, Bulletin No. 286
- 4. Mc Corale and denial (1960). pipeline network flow analysis J, Mer water works association 41, 422 428 1949
- 5. Martin, D.W. and Peters, G. (1963). "The application of Newton's method to network analysis by digital computer." Journal of the Institute of Water Engineers, 17, 115-129.
- Shamir, U. and Howard, C.D.D. (1968). "Water distribution systems analysis." Journal of the Hydraulic division, ASCE, 94, Proc. Paper 5758, 219-234.
- 7. Epp R., and A.G. Fowler, Efficient code for steady-state flows in networks, J. Hydraulics Di v., Proc. Amer. Soc Civil Engineers, 96

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

Authors: Aparna D. Deshmukh, Archana Nikose Paper Title: Resource Allocation Based on Agreement with Data Security in Cloud Computing

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

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

References:

C.S. Yeo, and R. Buyya,"Service level agreement based allo-cation of cluster resources: Handling penalty to enhance utility". In Proceedings of the 7th IEEE International Conference on Cluster Computing Bostan, MA, USA, (Cluster 2005).
 Y.C. Lee, C. Wang, A.Y. Zomaya and B.B. Zhou, "Profit-driven Service Request Scheduling in Clouds". In Proceedings of the

Y.C. Lee, C. Wang, A.Y. Zomaya and B.B. Zhou, "Profit-driven Service Request Scheduling in Clouds". In Proceedings of the International Symposium on Cluster and Grid Computing, (CCGrid 2010), Melbourne, Australia.

 R. Buyya, J. Broberg, and A. Goscinski (eds). Cloud Computing: Principles and Paradigms. ISBN-13: 978-0470887998, Wiley Press, USA. February.

- R. Buyya, C. S. Yeo, S. Venugopal, J. Broberg, and I. Brandic, "Cloud Computing and Emerging IT Platforms: Vision, Hype, and Reality for Delivering Computing as the 5th Utility, Future Generation Computer Systems", 25(6), (pp. 599-616), Elsevier Science, Amsterdam, The Netherlands.
- 5. J. Broberg, S. Venugopal, and R Buyya, Market-oriented Grids and Utility Computing: The state-of-the-art and future directions, Journal of Grid Computing, 3(6), (pp.255-276).
- 6. I. Popovici, and J. Wiles, "Proitable services in an uncertain world". In Proceeding of the 18th Conference on Supercomputing (SC 2005), Seattle, WA.
- 7. D. Parkhill, "The challenge of the computer utility", 1966, Addision-Wesley Educational Publishers Inc., USA.
- Y. Song, Y. Li, H. Wang, Y. Zhang, B. Feng, H. Zang, Y. Sun, "A Service-Oriented Priority-Based Resource Scheduling Scheme for Virtualized Utility Computing", High Performance Computing-HiPC 2008.
- 9. S.K. Garg, R.Buyya, and H. J. Siegel, "Time and Cost Trade-off Management for Scheduling Parellel Application on Utility Gride", Future Generation Computer System. 26(8). (pp. 1344-1355).
- Rodrigo N. Calheiros, Rajiv Ranjan, Anton Beloglazov, Cesar A. F. De Rose, and Rajkumar Buyya, CloudSim: A Toolkit for Modeling and Simulation of Cloud Computing Environments and Evaluation of Resource Provisioning Algorithms, Software: Practice and Experience (SPE), Volume 41, Number 1, Pages: 23-50, ISSN: 0038-0644, Wiley Press, New York, USA, January, 2011.
- 11. A. Juels and J. Burton S. Kaliski, "PORs: Proofs of Retrieva-bility for Large Files," Proc. of CCS '07, pp. 584–597, 2007.
- 12. K. D. Bowers, A. Juels, and A. Oprea, "Proofs of Retrievabil-ity: Theory and Implementation," Cryptology ePrint Archive, Report 2008/175, 2008, http://eprint.iacr.org/.
- 13. G. Ateniese, R. D. Pietro, L. V. Mancini, and G. Tsudik, "Scalable and Efficient Provable Data Possession," Proc. of SecureComm '08, pp. 1–10, 2008.

Authors:	Mairembam Birjit Singh, Vasudeva Banninthaya K, AtulSrivastava
Paper Title:	Implementation of Power Management IC for Ultrabook Platform

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

10-14

3.

Module (VRM) used for notebook like laptop. This paper will also highlight how the communication is done between the Embedded Controller (EC) and the PMIC in co-ordination with the multi-chip-package (MCP).

4. Keywords: Power Management Integrated Circuit (PMIC), Voltage Regulator Module (VRM), Voltage Regulator (VR), Embedded Controller (EC), Inter-Integrated Circuit (I2C).

15-18

References:

- 1. Mario Manninger, "Power Management for Portable Devices", IEEE Solid State Circuits Conference, 33rd European, Munich, 11-13 Sept 2007, pp.167 173.
- 2. Hewlett-Packard Corporation, Intel Corporation, Microsoft Corporation, Phoenix Technologies Ltd. and Toshiba Corporation, "Advanced Configuration and Power Interface Specification", Revision 5.0, December 6, 2011.
- 3. NXP Semiconductors, "I2C-bus specification and user manual", Rev.5, 9thOctober 2012.
- Chuan Ni and Tateishi Tetsuo, "Adaptive Constant onTime (D-CAPTM) Control Study inNotebook Applications", Texas instrument Application ReportSLVA281B-July 2007-Revised December 2007.
- 5. Jatan Naik, "Performing Accurate PFM Mode Efficiency Measurements", Application Report SLVA236-April 2006.
- 6. Microsoft, "Introduction to Connected Standby", October 5, 2012.

Authors: Anju Jain, Yogesh Chaba

Paper Title: Design of Efficient and Reliable MAC Protocol for Wireless Technologies

Abstract: In this paper, the performance of IEEE 802.11 MAC protocol is analysed in terms of efficiency and reliability in wireless networks. In the IEEE 802.11, an exponential backoff has been adopted, which means whenever a collision occurs, the contention window (CW) of the station is doubled until it reaches the maximum value. The purpose of increasing CW is to reduce the collision probability by distributing the traffic into a larger time space. In this paper, fixed contention window scheme is used and then correlate the CW size and network size. The interaction of TCP with the MAC protocol is also analysed. For static multi hop network that uses IEEE 802.11 protocol for access, TCP performance is mainly determined by hidden terminal effects (and not by drop probabilities at buffers) which limits the number of packets that can be transmitted simultaneously in the network. TCP throughput is improved by decreasing the ACKs flows, using delayed ACK, with d=2. Simulation results shows when choosing large maximum window, the delayed ACK considerably outperform standard TCP.

Keywords: MAC protocols, contention window size, TCP, maximum window size, spatial reuse.

5. References:

19-23

- 1. IEEE Standard for Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specification, P802.11, November 1999.
- Y. Chen, Q-A Zeng, and D. P. Agrawal, "Performance Analysis of IEEE 802.11e Enhanced Distributed Coordination Function," Proceedings of IEEE International Conference on Networking, ISBN: 0-7803-7788-5, pp.573-578, August 2003.
- 3. M. Kaynia, N. Jindal, and G. Oien, "Improving the performance of wireless ad hoc networks through MAC layer design," IEEE Trans Wireless Commun, vol. 10 ,no. 1, pp 240-252, jan 2011.
- 4. W. Hu, H. Zadeh, X. Li, "Load Adaptive MAC: A Hybrid MAC protocol for MIMO SDR MANETs,",IEEE,Trans Wireless Commun., vol. 10, no. 11, pp.3924-3933,,Nov 2011
- 5. Z. Fu, P. Zerfos, H. Luo, S. Lu, L. Zhang, M. Gerla, "The impact of multihop wireless channel on TCP throughput and loss", Proc. IEEE INFOCOM, DOI:10.1109, vol. 3 Jan 2003.
- 6. P. Garg, R. Doshi, R. Greene, M. Baker, M. Malek, and X. Cheng, "Using IEEE 802.11e MAC for QoS over Wireless," Proceedings of IEEE International Performance, Computing, and Communications Conference, ISSN :1097-2641, pp. 537 -542, April 2003.
- Y. Xiao, "Enhanced DCF of IEEE 802.11e to Support QoS," Proceedings of IEEE Wireless Communications and Networking Conference, ISBN: 0-7803-7700-1, pp.1291-1296, vol.2, April 2003.
- 8. Y. Chen, Q-A Zeng and D. P. Agrawal. "Performance Analysis and Enhancement of IEEE 802.11 MAC Protocol," Proceedings of IEEE International Conference on Telecommunications, ISBN: 0-7803-7661-7, pp.860 867, vol.1, 2003.

O. "The network simulator - ns-2", http://www.isi.edu/nsnam/ns/

Authors: P. P. Kamble, N. K. Chhapkhane

Paper Title: Experimental and FEA Determination of Stress Values for Glass Fiber Composite Plate

Abstract: This paper deals with an experimental and FEA determination of stress values for glass fiber composite plate. Composite materials are their high strength and stiffness, low density, as compared with bulk materials, allowing for a weight reduction in the finished part. The use of composite materials for aircraft primary structures can result in significant benefits on aircraft structural cost and performance. Such applications of composite materials are expected to result in a 30–40% weight savings and a 10–30% cost reduction compared to conventional metallic structures.

Keywords: Composite plate, FEA, Reflection Polariscope, Abaqus software, Stress values.

6. References:

- Ambur D. R., Jaunky N., Hilburger M. W. Progressive failure studies of stiffened panels subjected to shear loading, composite structures 65 (2004) 129-142
- Basu S., Waas A. M., Ambur D. R. Compressive failure of fiber composites under multi-axial loading. Journal of the Mechanics and Physics of Solids 54 (2006) 611–634
- 3. Shukla A., Jain N. Dynamic damage growth in particle reinforced graded materials. International Journal of Impact Engineering 30 (2004) 777–803
- 4. Wang J. T., Poe Jr. C.C., Ambur D. R., Sleight D. W. Residual strength prediction of damaged composite fuselage panel with R-curve method. Composites Science and Technology 66 (2006) 2557–2565
- 5. Nowak T. P., Jankowski L. J., Jasienko J. Application of photoelastic coating technique in tests of solid wooden beams reinforced with CFRP strips. Wroclaw University of Technology, Wybrzeze Wyspianskiego 27, 50-370 Wroclaw, Poland
- 6. Weijia Zhang, The Notched Strength of Angle-Ply Laminates, A thesis submitted in conformity with the requirements for the degree of Master of Applied Science Department of Chemical Engineering and Applied Chemistry University of Toronto. Toronto. Ontario. Canada

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

Authors:

Paper Title:

Towards Improving Quality of Education in Chemistry: An Investigation into Chemistry Teachers' Knowledge of Chemistry Curriculum

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

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

References:

7.

 S. O. Adeyegbe, The Importance of signs symbols and formulae in communicating and understanding of chemical concepts. 39thAnnual Conference Proceeding of Science Teachers Association of Nigeria, 1998, pp. 162-166.

 F, A, Bettelheim and J. March, Introduction to General Organic and Biochemistry (3rd ed.. New York: Saunders College Publishing, 1991.

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

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

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

35-40

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

References:

8

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

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

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

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

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

9.

Abrahim Law and Gay Heit Lavi, Ocean thermal energy conversion (OTEC): social and environmental issues, Energy, (4), 833-840, 1979

Ayoub Kazim, Hydrogen production through an ocean thermal energy conversion system operating at an optimum temperature drop, Applied Thermal Engineering, (25), 2005, 2236–2246.

Chakwat A.F. and Ridgway S.L., The mist-lift OTEC cycle, Energy, (5), 1980, 511-524.

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

R. Subalakshmi, M. Shiva Kumar, K. Krishnamoorthy **Authors:**

Paper Title: Effective Role of Mobile Agents based IPS (MAIPS) in Distributed Environment

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

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

References:

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

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

Authors: Manalisha Hazarika, Mirzanur Rahman Paper Title: A Compendium on Data Mining Algorithms and Future Comprehensive

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

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

References:

11.

10.

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

51-56

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

Authors: Savita Gahlot, Rakesh Gill

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

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

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

References:

12.

1. Asad A. Abildi and Robert G. Meyer. Noise in Relaxation Oscillators. IEEE, 1983.

- 2. Larry K. Baxter. Capacitive Sensors Design and Applications. Wiley- Blackwell, 1997.
- 3. Jens Borch, M. Bruce Lyne, Richard E. Mark, and Charles Habeger. Handbook of Physical Testing of Paper. CRC Press, 2001.
- 4. Maxim Integrated Circuits. MAX921-MAX924 Datasheet.
- 5. A. McPherson and Y. Kim. Design and applications of a multi-touch musical keyboard. In Proc. SMC, 2011.
- 6. Massoud Pedram and Jan M. Rabaey. Power Aware Design Methodologies. Kluwer Academic Publishers, 2002.
- 7. Microchip Technology Inc. Tom Perme. Introduction to Capacitive Sensing
- 8. Microchip Technology Inc. Tom Perme. Layout and Physical Design Guidelines for Capacitive Sensing.
- 9. G. Moore, BNo exponential is forever: But Fforever_ can be delayed!" in Proc. IEEE Int. Solid-State Circuits Conf., 2003, Keynote address.
- 10. X. Huang, W.-C. Lee, C. Kuo, D. Hisamoto, L. Chang, J. Kedzierski, E. Anderson, H. Takeuchi, Y.-K. Choi, K. Asano, V. Subramanian, T.-J. King, J. Bokor, and C. Hu, BSub 50-nm p-channel FinFET, [IEEE]
- 11. 1United State Patent Application 2006/0097991.
- 12. Keith Curtis Tom Perme Microchip Technology Inc. DS01104 (2007).
- Andrew McPherson Centre for Digital Music, School of EECS Queen Mary University of London Mile End Road, London E1 4NS, United Kingdom Capacitive Multi-Touch Sensing on a Physical Keyboard 2008.
- 14. Capacitive Touch Sensors Application Fields, technology overview and implementation Fujitsu Microelectronics Europe GmbH Pittlerstrasse 47 63225 Langen, Germany

Authors: P. Nagasekhara Reddy

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

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

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

61-65

References:

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

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

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

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

14. References:

1. V. I. Utkin, "Variable structure system with sliding modes", IEEE Trans. on Industrial Electronics, Vol. 22, 1977, pp. 212-222.

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

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

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

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

References:

15.

1. Balanis, C.A. (1997). "Antenna Theory: Analysis and Design." 2nd ed.New York: John Wiley and Sons, Inc.

 Muhammad Mahfuzul Alam, Md. Musta zur Rahman Sonchoy and Md. Osman Goni," Design and Performance Analysis of Microstrip Array Antenna", Progress In Electromagnetics Research Symposium Proceedings, Moscow, Russia, August 18-21, 2009.

3. Yahya S. H. Khraisat, Al-Balqa," Design of 4 Elements Rectangular Microstrip Patch Antenna with High Gain for 2.4 GHz Applications," Modern Applied Science Vol. 6, No. 1; January 2012.

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

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

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

66-69

codes are written in color. Text Editing can be efficiently done both in static as well as dynamic environment using a efficient Text Editor.

Keywords: Text, Editor, Word Processors, Syntax Highlighting, Repertoire, Dynamic Text Editor, Static Text Editor.

76-78

References:

- http://www.text-editor.org/
- Proceedings of ACM Conference on Computer Human Interaction 2003, pp. 914–915.
- http://en.wikipedia.org/wiki/Comparison_of_text_editors
- Dix, A., Finlay, J., Abowd, G., Beale, R., 2004. Human-Computer Interaction, third ed. Prentice Hall, pp. 71-78.
- http://www.shlomifish.org/open-source/resources/editors-and-IDEs

Authors: Viresh. N. Vanarote, P. M. Kamde

Paper Title: **Semantic-Based File Annotation on Mobile Device**

Abstract: The mobile technology improved in the development of mobile operating system and storage capacity it also brings new challeges for user to find the files on the mobile device effectively because of large number of files are stored on mobile device. The file annotation and retrieval framework (FARM) proposed in the paper automatically annotate the files with their basic file attributes by extracting them from the underlying operating system of the device. A file is searched by matching the search query with the stored meta-data which means that any of the exact field from metadata is required to get the search successful.

Keywords: File Annotation, J2ME, kXML Mobile Devices.

References:

17.

Cathro,"Metadata: An Overview," in Standards Australia Seminar: Matching Discovery Recovery, http://www.nla.gov.au/nla/cathro3.html,last accessed May (2011).

- A. Sen, "Metadata management: past, present and future", Decision Support Systems 37 (1), pp. 151-173. (2004).
- S. Handschuh, St. Staab, F. Ciravegna, "S-CREAMsemi-automatic creation of metadata", in: A. Gomez-Perez (Ed.), The 13th International Conference on Knowledge Engineering and Management (EKAW-2002), Springer Verlag, (2002).
- M. Tuffield, S. Harris, D. Duplaw, A. Chakravarthy, C. Brewster, N. Gibbins, K. O'Hara, F. Ciravegna, D. Sleeman, N. Snadbolt, Y. Wilks, "Image Annotation with Photocopain" in the Proceedings of the fifteenth world wide web conference (www06), Edinburgh, May (2006).
- J. Tang, X.-S. Hua, G.-J. Qi, Y. Song, and X. Wu,"Video Annotation Based on Kernel Linear Neighborhood Propagation," IEEE Transactions on Multimedia, vol. 10, no. 4, pp.620-628, (2008)

 V. Lanfranchi, F. Ciravegna, D. Petrelli, "Semantic Webbased Document: Editing and Browsing in AktiveDoc", Proceedings of the 2nd
- European Semantic Web Conference, Heraklion, Greece, May 29-June 1,(2005)
- F. Amardeilh, "Semantic Annotation and Ontology Population". Semantic Web Engineering in the Knowledge Society, ISI Global, (2008).
- J. Vincent, "Emotional Attachment and Mobile Phones", Knowledge, Technology, Policy, Vol. 19,No. 1, pp. 39-44, (2006).
- Extensible Markup Language, http://www.w3.org/XML(2011).
- Parsing XML in J2ME, by Jonathan Knudsen.

Manita Rajput, Sadhana Pai, Umesh Mhapankar Authors:

Paper Title: Wireless Transmission of Biomedical Parameters Using GSM Technology

Abstract: Patient tele-monitoring is remotely monitoring the vital parameters of a patient and providing them to the doctor at a remote location, thus ensuring mobility of both patient and the doctor. In the present paper the physiological parameters such as Electrocardiogram, Heart rate, SpO2 and temperature are obtained, processed and displayed in a graphical user interface. If anyone of the vital parameter go out of normal range than an alert message is generated and sent by the system via a GSM/GPRS modem to the authorized doctor. This work aims at enhancing the existing patient monitoring by facilitating wireless transmission and reception of the patient's data using GSM technology. Thus an expert -based health care can be provided to understaffed remote sites at crucial circumstances. This project is a part of improvements in the field of telemedicine using LabVIEW for Virtual Instrumentation.

Keywords: LabVIEW, Patient telemonitoring, SPO2, electrocardiogram, GSM modem, JPG image.

References:

18.

www.pharmatutor.org

- 2. Article on 'India's top cardiologists' by Malathy Iyer, February 12, 2012. Hindustan Times
- 3. Editorial, BMJ Volume 321 19-26 August 2008
- "Development of PC based ECG monitoring system", Yin Fen Low (SCOReD 2006), Malasia.
- Transferring ECG signal using GSM technology" Ahmed Khayamese, Palestine
- "GSM based ECG tele alert system", R. sukanesh, International journal of Computer Science and Application Issue 2010 6.
- 7. "Transmission of real time Clinical Diagnostic signals over the GSM network" tasneem Ibrahim Abdullah. 2011 IEEE Student of Conference of Research and development.
- "Wireless Biomedical System Design based on Zigbee technology for autonomous healthcare"
- Nabil Hamza, INTERNATIONAL CONFERENCE ON COMMUNICATION, COMPUTER AND POWER (ICCCP'09), MUSCAT,
- "Wireless ECG using Bluetooth" a thesis report in the Masters of Engineering, Mumbai University.
- "Real-time Heart rate Variability Detection on Sensor node", kinging Wong, Department of Electrical and Electronic Engineering, Curtin University of technology ,Miri,Malasia,IEEE Sensors Applications Symposium New Orleans, LA, USA-February, 2009
- 12. "A Smart ECG Measurement System Based on Web Service Oriented Architecture for Telemedicine Applications" Cladio De Capua, Member, IEEE, Antonella Meduri, Student Member, IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, VOL.59, NO. 10, OCTOBER 2010
- "Direct Digital Capture Of Pulse Oxymetry waveforms", John E. Scharf, Stephan Anthan, University of South Florida Department of

79-82

Authors:	Renu Singh, Alka Bani Agrawal
Paper Title:	Performance Analysis of Water (R718) As a Refrigerant in Medium Range Temperature

Abstract: Water as a refrigerant (R718) is compared with itself for sub-cooling and superheating conditions regarding various performance parameters in medium range temperature (50C to 350C). These performance parameters i.e. COPs, Pressure ratios, outlet temperature of refrigerants from the compressor and evaporator temperature, are simulated with the help of computer program in language C++. "In this paper study of sub-cooling and superheating effect of water (R718) as a refrigerant is compared. In case of superheating evaporator temperature is changed in which throttling valve exit temperature, evaporator temperature, and compressor outlet is kept constant, while condenser temperature varies (5oC to 35oC)". It is found that for small range of degree of superheat COP is highest, and decreases with increase in degree of superheat. Assuming exactly the same cycle parameters, with increase in degree of sub-cooling, it increases again.

Keywords: Comparison, compressor, cycle, refrigeration, refrigerants, water, sub-cooling, superheating.

86-89

References:

19.

- 1. Ali KilicarsIn1 and Nobert Muller2, A comparative study of water as a refrigerant with some current refrigerants, Int. J. Energy Res. (2005).
- 2. S.E. Wight T.Yoshinaka B.A.Le Drew N.C. D'orsi', The efficiency limits of water vapor compressors, Report for Air-Conditioning and Refrigeration technology institute (2000).
- 3. S.Devotta, A.S. Padalkar, S.N. Joshi N.N., Sawant N.K. Sane, Comparitive assessment of CO2 for window air-conditioner, in proceeding of the fourth IIR-Gustav lorentren Conference on Natural Working Fluids, Purdue, IN, (2000).
- 4. J.A. Duffie , W.A. Beekman, Solar Engineering of Thermal Processes, second ed. John Wiley & Sons, New York. NY(1991)
- 5. F.de Rossi, R Mastrullo, Working Fluids, Thermodynamics Behavior for vapor Compression Cycles, Applied Energy 38.163-180 (1991)
- 6. A. Kilicarslan1 and N. Muller2, COPs Of R718 In Comparison With Other Modern Refrigerants, (2004)
- 7. Ali KILICARSLAN, Irfan KURTBAS, Comparison of superheating effect of water as a refrigerant with the other refrigerants, thermal science and technology, ISSN 1300-3615, (2010).

science and technology, 1551 (1500 5015, (2010).			
	Authors:	Rohit Chandrashekar, Jayashree Shinde, Dashrath Mane	
	Paper Title:	Importance and Analysis of RFID in Attendance System	

Abstract: Short for radio frequency identification, a technology similar in theory to bar code identification. With RFID, the electromagnetic or electrostatic coupling in the RF portion of the electromagnetic spectrum is used to transmit signals. An RFID system consists of an antenna and a transceiver, which read the radio frequency and transfer the information to a processing device, and a transponder, or tag, which is an integrated circuit containing the RF circuitry and information to be transmitted. The proposed system consists of a mobileRFID solution in a logical context. This paper proposes architecture and a prototype of a system that uses RFID and a demonstration on how to automate an entire student'sattendance registration system by using RFID in an educational institution environment. Although the use of RFID systems ineducational institutions is not new, it is intended to show how the use of it came to solve daily problems in our institution. The main objective of this paper is to enhance the school's monitoring system taking into account factors such as reliability, time saving, and easy control also advantages and disadvantages of the proposed RFID over barcode system will be presented.

90-92

Keywords: Analysis of Attendance Management using RFID, RFID.

References:

- Nambiar A.N, (2009), "A supply chain perspective of RFID Systems", World Academy of Science, Engineering and Technology Journal, Volume 6, pp1-5.
- 2. Intermec Technologies Corp., "RFID Overview: Introduction to Radio Frequency Identification", RFID Journal, 2006.
- 3. Longe O.O.(2009),"Implementation of Student Attendance System using RFID Technology", B. Tech Project Report,LadokeAkintola University of Technology, Ogbomoso, Niger.
- 4. DNA technology, http://www.dnatechindia.com/

20.