

Volume 2 Issue 10, August 2014

**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. Vijay 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 Counseling, 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, School 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. Saravanan

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, Mullana, Ambala (Haryana), India

Dr. T.C.Manjunath

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

Dr. P. Dananjayan

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. Jayanthi

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 Skills, 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 Informatics, 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 Coordinator, 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, Uttarakhand, 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, Chuncheon, Gangwondo, Korea

Dr. Sanjay M. Gulhane

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

Dr. K.K. Thyagarajan

Principal & Professor, Department of Information Technology, RMK College of Engineering & Technology, RSM Nagar, Thiruvallur, 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, Chowdavaram, 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 Cheshmeigaz

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

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, Iran

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 Forks, 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, Department 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, Akulj, Maharashtra, India

Dr. E. Mohan

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

Dr. M. Shanmuga Priya

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-2 Issue-10, August 2014, ISSN: 2319-6378 (Online) Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.		Page No.
1.	Authors:	Attrams Siaw Prince, Osei-Owusu Alexander, Yankey-Antwi Aaron	
	Paper Title:	Powerline Communication System for Controlling Appliances in Ghanaian Homes	
	<p>Abstract: The deployment of PLC systems have evolved rapidly over the years with the advent of soaring research and improvement, huge strides have been attained in this sector. The use of such technology especially in developing countries like Ghana require the design and implementation of basic systems that can form the basis for further improvements and subsequently meet the pace of modern systems and designs. The research is aimed at designing and constructing a power line communications system that will interface with a simple computer system to control the lightning system in a typical Ghanaian home. The system will allow a centralized point for controlling all the lightning systems within the household. This is in an effort to providing easy control of the lightning system in a household. The design and construction of the system is presented, with added interfacing functionalities such as voice recognition, text messaging, keyboard and the use of the internet via a network socket to send appropriate signals to the system's receiver.</p> <p>Keywords: PLC (Power Line Communication), FDM (Frequency Division Multiplexing), DTMF (Dual Tone Multi Frequency), Control.</p> <p>References:</p> <ol style="list-style-type: none"> 1. GridCo 2009, accessed on 13/ 10/2013 <http://www.gridcogh.com/site/ng.php>. 2. Australian Communication Authority, Document SP11/03, "Broadband Power Communication Systems", Australia, September, 2003. 3. Echelon Corporation 2013, accessed on 17/07/2014 < http://www.echelon.com/applications/> 4. Wicomb, L.P (2005), 'OFDM Modulation Techniques for Domestic Powerline Communication' Cape Peninsula University of Technology, MTech Thesis, accessed 15 July 2014, from the Cape Peninsula University of Technology Database. 5. Khan Et.al (2006), Communication System for Controlling Smart Appliances Using Powerline Communication Malaysia, IEEE, 2006. 6. Osama Bilal, Er Liu, Yangpo Gao and. Timo O. Korhonen. DESIGN OF BROADBAND COUPLING CIRCUITS FOR POWERLINE, Finland, Helsinki University of Technology, n.d. 7. Versolatto, Fabio. Analysis of the PLC Channel Statistics Using a Bottom-Up Random Simulator. Italy, IEEE, 2010. 8. SunPlus Technology 2013, accessed on 13/10/2013 <http://mcu.sunplusmcu.com/applications/DC_Inverter_Air_Condition.asp>. 9. John Jay Dernovsek, Deepak Shet Brett Bell. "Digital Control of Electronic Ballast Using AC Power Lines as Communication Medium." Patent. 2005. 10. Pooja Dave. "POWER LINE COMMUNICATION IN ENERGY MARKETS." Fernandes, Antonio De Lima. Cypress Semiconductor Corp, n.d. 		1-7
2.	Authors:	Prasad V. Bapat, S. Magbul Hussain	
	Paper Title:	Design of Special Purpose Machine Head to Improve the Production of Engine Block	
	<p>Abstract: Special purpose machine tools are designed and manufactured for specific jobs and such never produced in bulk such machines are finding increasing use in industries the techniques for designing such machine would obviously be quite different from those used for mass produced machine. A very keen judgment is essential for success of such machines. A special purpose machine was designed and manufactured at ABC Company which found beneficial in increasing production quantity & reducing manpower.</p> <p>Keywords: SPM, LOCUS CLEARANCE, MACHINE HEAD, CASTINGS BLOCKS</p> <p>References:</p> <p>Internet:</p> <ol style="list-style-type: none"> 1. Majid Tolouei-Rad School of Engineering, Edith Cowan University, Perth "Intelligent Analysis of Utilization of Special Purpose Machines for Drilling Operations" 2. www.skf.com/group/...units.../basic-load-ratings/index.html www.bearingworks.com/technical_data/load_ratings.php <p>Books</p> <ol style="list-style-type: none"> 5. Machine Tool Design Handbook: Central Machine Tool Institute, Bangalore. (Tata McGraw-Hill Publishing Company Ltd. Year 2002) 6. Design of Machine Elements: V. B. Bhandari (Tata McGraw-Hill Publishing Company Ltd. Year 2002) 7. Machine Design: R.S. Khurmi & J.K. Gupta 		8-11
3.	Authors:	Sambit Kumar Patra, Ishita Gupta, Gaurav Saini, Vinodkumar Poolothvalappil	
	Paper Title:	Data Visualization for Hybrid Application: The challenges in choosing an optimal library for Line Chart	
	<p>Abstract: Developing application using web-technology for cross-platform becomes trend these days. However representing data into a small space is more challenging. Digital convergence has led to a sudden dependence on the mobile devices. The data visualization on mobile devices needs to be in a very pristine manner. To achieve that, unique methods are looked upon that generally involve simple but effective presentation instruments such as tables, charts and graphs. So, the challenge comes in deciding and choosing the right charting library for the hybrid mobile application looking over the cost, functionality, performance, and user experience. This paper has illustrated the challenges faced in implementing line chart in hybrid application using Fusion, HighChart, Rickshaw and D3 chart and will help in deciding the best charting library for the same.</p> <p>Keywords: Cross-Platforms, Chart Libraries, Comparison, Data Visualization, Hybrid Application, Line Chart, Fusion, HighChart, D3</p> <p>References:</p>		12-15

	<ol style="list-style-type: none"> 1. B. Shneiderman, "The eye have it: A task by data type taxonomy for information visualizations," in Visual Languages, 1996. 2. A guide to choosing the right chart type, Szoka, Kathryn, Professional Communication, IEEE Transactions on Volume: PC-25 , Issue: 2 , Publication Year: 1982 , Page(s): 98 - 101 3. Daniel A. Keim, "Information Visualization and Visual Data Mining", IEEE TRANSACTIONS ON VISUALIZATION AND COMPUTER GRAPHICS, VOL. 7, NO. 1, JANUARY-MARCH 2002 4. "Use and Misuse of Graphical Representations" http://www.montereyinstitute.org/courses/DevelopmentalMath/COU 5. "Chart" http://en.wikipedia.org/wiki/Chart 6. Detecting and visualizing refactorings from software archives, Gorg, C. ; Weissgerber, P. Program Comprehension, 2005. IWPC 2005. Proceedings. 13th International Workshop on Publication Year: 2005 , Page(s): 205 - 214 7. "FusionCharts by Features" http://www.fusioncharts.com/explore/features/ 8. "Highcharts" www.highcharts.com/ 9. "Rickshaw is a JavaScript Toolkit for crating interactive time series graphs" http://code.shutterstock.com/rickshaw/ 10. "Data Driven Document" http://d3js.org/ 	
	Authors: Mohammad Vahid Naiemifard, Seied Ali Hosseini	
	Paper Title: High Performance Current-Mode Multiplier Circuit Based on Carbon Nanotube Transistors	
	<p>Abstract: Carbon Nanotube Field Effect Transistor (CNFET) is a promising new technology that overcomes several limitations of traditional silicon integrated circuit technology. In recent years, the potential of CNFET for analog circuit applications has been explored. This paper proposes a novel four quadrant analog multiplier design using CNFETs. The simulation based on CNFET technology shows that the proposed multiplier has better features than CMOS Multiplier. Multiplier-divider circuits is using in digital signal processing base on neural networks and communications (amplifiers with variable gain, modulators, detectors and,...).In Most of CMOS analog circuit, transistors are only in triode or saturate regions; till now both regions not used. In this one kind of current mode multiplier-divider circuits is intrudused.it is very simple, has low die area and wide range in low voltage. All tough this circuit has no sense to temperature variation and varying parameters.</p> <p>Keywords: CNT. Analog signal processing, current-mode operation, multiplier, reconfigurable circuits.</p> <p>References:</p> <ol style="list-style-type: none"> 1. R. Harjani, "A low-power CMOS VGA for 50 Mb/s disk drive read channels," IEEE Trans. Circuits Syst. II, Analog Digit. Signal Process., vol. 42, no. 6, pp. 370–376, Jun. 1995. 2. Motamed, C. Hwang, and M. Ismail, "A low-voltage low-power wide rang CMOS variable gain amplifier," IEEE Trans. Circuits Syst. II, Analog Digit. Signal Process., vol. 45, no. 7, pp. 800–811, Jul. 1998. 3. Popa, Synthesis of Computational Structures for Analog Signal Processing, New York, USA: Springer-Verlag, 2011. 4. Popa, Superior-Order Curvature-Correction Techniques for Voltage References, New York, USA: Springer-Verlag, 2009. 5. Popa, "Low-power CMOS bulk-driven weak-inversion accurate current-mode multiplier/divider circuits," in Proc. Int. Conf. Electr Electron. Eng., 2003, pp. 66–73. 6. C. Popa, "Computational circuits using bulk-driven MOS devices," in Proc. IEEE EUROCON Conf., May 2009, pp. 246–251. 7. C. Popa, "Logarithmic curvature-corrected weak inversion CMOS voltage reference with improved performances," presented at the 11th Int. Workshop on Thermal Investigations on ICs and Systems, Lake Maggiore, Italy, 2005. 8. C. Popa, "A new curvature-corrected voltage reference based on the weight difference of gate-source voltages for subthreshold-operated MOS transistors," in Proc. Int. Symp. Circuits Syst., 2003, pp. 585–588. 9. C. C. Chang and S. I. Liu, "Weak inversion four-quadrant multiplier and two-quadrant divider," Electron. Lett., vol. 34, no. 22, pp. 2079–2080, Oct. 1998. 10. M. Gravati, M. Valle, G. Ferri, N. Guerrini, and N. Reyes, "A novel current-mode very low power analog CMOS four quadrant multiplier," in Proc. 31st Eur. Solid-State Circuits Conf., Sep. 2005, pp. 495–498. 11. C. Popa, "High accuracy CMOS multifunctional structure for analog signal processing," in Proc. Int. Semicond. Conf., 2009, pp. 427–430. 12. C. Popa, "CMOS multifunctional computational structure with improved performances," in Proc. 33th Ed. Annu. Semicond. Conf., vol. 2. 2010, pp. 471–474. 13. C. Popa, "Multiplier circuit with improved linearity using FG MOS transistors," in Proc. Int. Symp. ELMAR 2009, pp. 159–162. 14. Y. H. Kim and S. B. Park, "Four-quadrant CMOS analogue multiplier," Electron. Lett., vol. 28, no. 7, pp. 649–650, Mar. 1992. 15. Y. K. Seng and S. S. Rofail, "Design and analysis of a +-1 V CMOS four-quadrant analogue multiplier," IEEE Proc. Circuits, Devices Syst., vol. 145, no. 3, pp. 148–154, Jun. 1998. 16. C. Sawigun and J. Mahattanakul, "A 1.5V, wide-input range, high bandwidth CMOS four-quadrant analog multiplier," in Proc. IEEE Int. Symp. Circuits Syst., May 2008, pp. 2318–2321. 17. C. Sawigun, A. Demosthenous, and D. Pal, "A low-voltage, low-power, high-linearity cmos four-quadrant analog multiplier," in Proc. 18th Eur. Conf. Circuits Theory Design, Aug. 2007, pp. 751–754. 18. C. Popa, "Improved linearity active resistor with controllable negative resistance," in Proc. IEEE Int. Conf. Integr. Circuits Design Technol., Aug. 2006, pp. 1–4. 19. C. Popa and A. M. Manolescu, "CMOS Differential Structure with Improved Linearity and Increased Frequency Response," in Proc. Int. Semicond. Conf., vol. 2. Sep.–Oct. 2007, pp. 517–520. 20. C. Popa, "Programmable CMOS active resistor using computational circuits," in Proc. Int. Semicond. Conf., Oct. 2008, pp. 389–392. 21. C. Popa, "Improved linearity CMOS active resistor based on the mirroring of the ohm law," in Proc. IEEE 17th Int. Conf. Electron., Circuits, Syst., Dec. 2010, pp. 450–453. 22. Naderi, H. Mojarad, H. Ghasemzadeh, A. Khoei, and K. Hadidi, "Four-quadrant CMOS analog multiplier based on new current squarer circuit with high-speed," in Proc. IEEE EUROCON Conf., May 2009, pp. 282–287. 23. Naderi, A. Khoei, and K. Hadidi, "High speed, low power four quadrant CMOS current-mode multiplier," in Proc. IEEE Int. Conf. Electron., Circuits Syst., Dec. 2007, pp. 1308–1311. 24. M. Manolescu and C. Popa, "A 2.5GHz CMOS mixer with improved linearity," J. Circuits, Syst. Comput., vol. 20, no. 2, pp. 233–242, 2010. 25. S. I. Liu and Y. S. Hwang, "CMOS squarer and four-quadrant multiplier," IEEE Trans. Circuits Syst. I, Fundam. Theory Appl., vol. 42, no. 2, pp. 119–122, Feb. 1995. 26. S. A. Mahmoud, "Low voltage low power wide range fully differential CMOS four-quadrant analog multiplier," in Proc. 52nd IEEE Int. Midwest Symp. Circuits Syst., Aug. 2009, pp. 130–133. 27. C. Sawigun and W. A. Serdijn, "Ultra-low-power, class-AB, CMOS four quadrant current multiplier," Electron. Lett., vol. 45, no. 10, pp. 483–484, May 2009. 	16-19