





# 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: <u>www.blueeyesintelligence.org</u> Email: <u>director@blueeyesintelligence.org</u>, <u>blueeyes@gmail.com</u> 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

TENCE

# **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 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. 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, Mulllana, 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. 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, 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 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

144

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

INNOV

# 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

CING

# 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

V

# 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 Ptriya

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		<b>/olume-3 Issue-7, May 2015, ISSN: 2319–6378 (Online)</b> Dished By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.	Page No.	
	Authors:	Rohit C. Pingle, P. J. Salunke, N. G. Gore, V. G. Sayagavi		
	Paper Title: Comparative Study of Conventional Steel Structure and Pre-Engineered Steel Structure (PEB)			
1.	Abstract: The present investigation is aimed at comparison of conventional steel building with pre-engineered buildings. The present construction methodology for buildings calls for the best aesthetic look, high quality & fast construction, cost effective & innovative touch and as Steel is a preferred material for construction, due to its various advantages like quality, aesthetics, economy and environmental conditions. In this investigation the portal frame of ware house of different spanning like 30 m, 25 m, 20m, 15m with the different crane capacity like 5 tons, 10 tons, 15tons, 20 tons on each span is carried out using standard computer software like STAAD PRO V8i. And the design calculation is done with the help of IS800-2007. As well as for the cold formed sections IS801-1975 is used. The design is done for both conventional steel structure and Pre-engineered steel structure for the all spans with crane load.			
	Keywords: Conventional steel, Pre-engineered steel, crane load, Comparative Study.			
	<ul> <li>References: <ol> <li>Zamil Steel Technical Manual —Pre-Engineered Building Divisionl 1999, Saudi Arabia</li> <li>"Pre-Engineered metal Buildings the latest trend in building construction" by K.K.Mitra – Gen. Manager (marketing) Lloyd Insulations (India) Limited.</li> <li>Kirby Building Systems</li> <li>Books "Steel Structure Design &amp; Practice BY N. Subramanian.</li> <li>Metal Building Manufacturing Association (MBMA)</li> <li>IS: 875 (Part 1) – 1987 Code of Practice for design loads (other than earthquake) for buildings and structures (Dead load)</li> <li>IS: 875 (Part 2) – 1987 Code of Practice for design loads (other than earthquake) for buildings and structures (Imposed load)</li> <li>IS: 875 (Part 3) – 1987 Code of Practice for design loads (other than earthquake) for buildings and structures (Wind load)</li> </ol> </li> </ul>			
	Authors:	Haitham K.Ali, Jihan S. Abdaljabar, Sura M.Abdullah		
	Paper Title:	Design of Ultrasonic Radar		
	Abstract: Ultrasonic technology has been on the market for years and is still considered a trusted technology throughout the industry. The design of the Ultrasonic Radar is very useful for many applications like homes, shops, military and object detection. The aim of this work is to build an ultrasonic transceiver which is basically one kind of a radar system to get exact distance and angle for fixed objects placed around the device based on the speed of ultrasonic waves in open air. An Arduino microcontroller was used to transmit and receive the ultrasonic waves through 40 KHz in order to provide the flexibility of usage requirements. A delay occurred between the transmitted and the received waves govern the reflection of sound. Some tests were done using two kinds of alarms first: the visual alarm which done by a personal computer screen designed to be a radar screen. Second the audible beep alarm which done by an LCD digital screen.			
2.	Keywords: Arduino microcontroller, LCD digital screen, Ultrasonic Radar			
	<ul> <li>References:</li> <li>F L. Corp "Ultrasonic Transmitters vs. Guided Wave Radar for Level Measurement (White Paper) by FLO-CORP (Flow Line Options Corp.),2011,</li> <li>Dontabhaktuni Jayakumar, A. Pravalika, K. Purnachandra Rao ' Model Radar Implementation Using Ultrasonic Sensor', paper published in November 2014.</li> <li>S. D. Gupta, A.A. Haque, A. R. Sudip Majumder, "Design and Implementation of Water Depth Measurement and Object Detection Model Using Ultrasonic Signal ", paper published in October 2012.</li> <li>S.G.N. M urthy, B.Sangoju, H.Wiggenhauser, N.R.Iyer, "Application of Radar and Ultrasonic Pulse Echo for Testing Concrete Structures, paper, July 2009.</li> <li>Md. Shamsul Arefin, Tajrian Mollick, "Design of an Ultrasonic Distance Meter", paper , published in March 2013.</li> <li>L. Sambuelli, L. Valentina Socco, A. Godio," Ultrasonic Electric and radar measurements for livening trees assessment" paper , published in Desember 2006.</li> <li>A. Luciano, M.Vicente, T.Carlos, "Ultrasonic Sensors in Urban Traffic Driving-Aid Systems", paper published January 2011.</li> <li>Tech Support, Ultrasonic Ranging Module HC - SR04, http//www.services.elecfreaks.com.</li> </ul>		6-10	
	Authors:         Bhaveshkumar N. Pasi, Vaibhav Pawar, Ameya J. More			
	Paper Title:	Numerical Modeling of Inflatable Cylinder		
3.	Abstract: Inflatable materials find a wide range of applications in structural field as they are light, strong, anti- corrosive and can be moulded in any shape. Due to it's advantage of light weightiness and ease of transportability, inflatable has been the area of research since our past and more over it has been attracted even today's genesis toward itself in its commercial application, civilian applications as well as in defence too. This paper focuses on determination of deformation and stresses for inflatable cylinder under various conditions by using ANSYS 14.5. Keywords: Deflection, Inflatable Cylinder, Inflatable Material, Stresses.			
	<ul> <li>References:</li> <li>1. Jeffrey D. Suhey(2005), Numerical Modeling and Design of Inflatable Structures- application to open-ocean- aquaculture cages, Elsevier, Aquacultural engineering.</li> <li>2. The Effect of Flexibility on the Design and Performance of Inflatable Boats, plus Environmental Considerations P. Halswell – ph3e09@soton.ac.uk, P.A. Wilson, D.J. Taunton and S. Austen Nov 2013.</li> </ul>			

		dvancement in Inflatable – "A review", International Journal of Engineering and Technology. ISSN 0974-3154 Volume 6, 113), pp. 477-482.			
		S., Pang, Z. Y., Ganapathisubramani, B., Palacios, R., (2011) Leading and trailing edge effects on theaerodynamic compliant aerofoils. In: 49th AIAA, No.1118, pp.1-16.			
	5. Bereznitski, A.,	2001) Slamming: The role of hydroelasticity. Int. shipbuilding progress 4, (48), pp. 333-351.			
		, Price, W. G., (1979) Hydroelasticity of ships. Cambridge University Press. 02) Resistance measurements with an RNLI D-class Lifeboat. Report by BMT Sea Tech; Doc No.3356.02.			
		sten, S., Barnes, (2008)The speed of fast Inflatable Lifeboats. Int. Journal of Small Craft TechnologyVol. 150 Part B2, pp.			
	<ol> <li>Faltinsen, O. M.</li> <li>Gordnier, R.,(20)</li> </ol>	,(2005) Hydrodynamics of high-speed marine vehicles. Cambridge University Press, ISBN; 0-521-84568-8. 009) High fidelity computational simulation of a membrane wing airfoil. Journal of Fluids and Structures25, (5), pp. 897-			
		Temarel, P., (2009) Hydroelasticity of ships: recent advances and future trends. Proceedings of the Institution of Mechanical			
	<ul> <li>Engineers, Part M: Journal of Engineering for the Maritime Environment 223, (3), pp. 305-330.</li> <li>Savitsky, D., Morabito, M., (2010) Origin and characteristics of the spray patterns generated by planning hulls. Davidson Lab Stevens institute of technology, Report No. 2882.</li> </ul>				
	13. Townsend, N. C	<i>C.</i> , Coe, T. E., Wilson, P. A., Shenoi, R. A.,(2010) On the mitigation of human motion exposure onboard high speed craft. hethods, includingflexible hull design. Private Communication.			
	14. L Puiga, A Bart	<ul> <li>(a) (a) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c</li></ul>			
	15. S Voisembert, A	A Riwan, N Mechbal and A Barraco(2011)," A novel inflatable robot with constant and continuous volume", Robotics and RA), 2011 IEEE International Conference on Digital Object Identifier, pp: 5843 – 5848			
	Authors:	Bhupander Singh			
	Paper Title:	Effect of Hall Current on Thermal Convection of Micro polar Fluid Layer in The Presence of Horizontal Magnetic Field Saturating a Porous Medium			
	Abstract: This pa	aper deals with the theoretical investigation of Hall current effect on micro polar fluid layer heated			
		cted to horizontal magnetic field in a porous medium. A dispersion relation is obtained for a flat			
		ed between two free boundaries using a linear stability analysis theory and normal mode analysis			
		method. In case of stationary convection, the effect of various parameters like medium permeability, coupling			
		parameter, micropolar coefficient, micro polar heat conduction parameter, magnetic field and Hall current parameter			
	has been analyzed and results are depicted graphically. The sufficient conditions for non-existence of over stability				
	are also obtained.				
	Keywords: Thermal convection, Micropolar fluid, Horizontal magnetic field, Hall current, Porous Medium				
	References:				
	1. A.S. Gupta, "Hyd	romagnetic flow past a porous plate with Hall effects", Actamechanica, 22, 281 (1975).			
		2. C. Perez-Garcia and J.M. Rubi, "On the possibility of overstable motions of micropolar fluids heated from below", Int. J. Engg. Sci., vol. 20, pp. 873-878, (1982).			
4.		J.M. Rubi and J. Casas-Vazques, J. Non-Equilib. Thermodyn, 6, (1981), 65 (1981). and E.M.E. Elbarby, "Hall current effect on magnetohydrodynamics free convection flow past a semi-infinite vertical plate			
4.	with mass transfe	r", Int. J. Engng. Sci. 39, 1641, (2001).			
		bility of micropolar fluid layer heated from below," Int. Engg. Sci., vol. 14, pp. 81-89, (1976). . Dash, and L.P. Singh, "Hall current effect with simultaneous flow near an accelerated vertical plate", Indian Journal of	15-24		
	Physics, 75B(1),	168 (2001).			
	<ol> <li>M.R. Raghavacha Astro. Fluid, Dyn</li> </ol>	ar and V.S. Gothandaraman, "Hydromagnetic convection in a rotating fluid layer in the presence of Hall current", Geophys. 45, 199 (1988).			
	8. R.C. Sharma and	P. Kumar, "On micropolar fluids heated from below in hydromagnetics", J. Non-Equilibrium Thermodynamics, vol. 20, pp.			
		U. Gupta, "Thermal instability of compressible fluids with Hall currents and suspended particles in porous medium", Int. J.			
	Engng. Sci., 31(7) 10 R C Sharma Sun	), 1053, (1993). iil and S. Chand, "Hall effect on thermal instability of Rivlin-Ericksen fluid", Indian J. Pure Appl. Math., 31(1), 49, (2000).			
	11. S. Chandrasekhar, "Hydrodynamic and Hydromagnetic Stability", Dover publications, New York, (1981).				
	12. Sunil, Y.D. Sharma, P.K. Bharti, and R.C. Sharma, "Thermosolutal instability of compressible Rivlin-Ericksen fluid with Hall currents", Int.				
	<ul><li>J. Applied Mechanics and Engineering, 10(2), 329 (2005).</li><li>13. Takhar, "Unsteady flow free convective flow over an infinite vertical porous plate due to combined effects of thermal and mass diffusion,</li></ul>				
		d Hall current", Journal of Heat and Mass Transfer, 39, 823 (2006). Aggarwal, "Thermal instability of compressible Walters' (Model B') fluid in the presence of Hall currents and suspended			
	particles", Therm	al Science, 15(2), 487 (2011).			
	15. U. Gupta. P. Agg Science 16(1), 17	arwal and R.K. Wanchoo, "Thermal convection of dusty compressible Rivlin-Ericksen fluid with Hall currents", Thermal			
	16. L.E. Payne, and E	B. Straughan, Int. J. Eng. Sci. 27, 827 (1989).			
		Kaloni, "A thermal instability problem in a rotating micropolar fluid", Int. J. Eng. Sci. 30, 1117 (1992).			
	Authors:	Kavitha C.R, Mahalekshmi T A Comparative Study of Classification Algorithms on Aliphatic Carboxylic Acids Data Set usi	ina		
	Paper Title:	WEKA	ung		
		ication is the process of arranging a number of items into groups in such a manner that the			
		oup have one or more characteristics in common. In this research paper, we present a comparative			
	study of five different classification algorithms using WEKA, a data mining tool. This article gives an overview				

Richa Verma, Advancement in Inflatable - "A review", International Journal of Engineering and Technology. ISSN 0974-3154 Volume 6,

study of five different classification algorithms using WEKA, a data mining tool. This article gives an overview about the classification algorithms such as ZeroR, Naïve Bayes, J48, IBK and SMO. The dataset used for conducting the experiment is the toxicity dataset of aliphatic carboxylic acids. The main aim of this paper is to make a comparison of different classification algorithms and to find out the best algorithm out of the five chosen algorithm which gives the most accurate result.

Keywords: classification, ZeroR, Naïve Bayes, J48, IBK, SMO, WEKA

**References:** 

3.

	<ol> <li>Kavitha C.R, Dr. Mahalakshmi, "Chemical Databases: A Brief Walk", International Journal of Emerging Technology and Advanced Engineering (IJETAE), ISSN 2250-2459,ISO 9001:2008Certified Journal Volume 3 Issue 8 August 2013.</li> <li>'Aliphatic Carboxylic acids data set', Available at http://vincentarelb undock .github.io/Rdatasets/datasets.html</li> <li>Jiawei Han, Micheline Kamber, Jian Pei", Data Mining: Concepts and Techniques", third edition, Morgan Kauffman Publishers.</li> <li>'Classification', [Online] Available "http://infochemie, u-strasbg.fr /master/ tutochemo/tp8/classification.pdf".</li> <li>'ZeroR', [Online] Available at http://www.saedsayad.com/zeror.htm.</li> <li>Posterior probability', [Online] Available at" http://www.saedsayad.com/zeror.htm.</li> <li>Foruzan Kiamarzpour, Rouhollah Dianat, Mohammad bahrani, Mehdi Sadeghzadeh, "Improving the methods of email classification based on words ontology", [Online] Available http://arxiv.org/ftp/arxiv/papers/1310/1310.5963.pdf.</li> <li>Grigoris Antonion, George Potamias, Costas Spyropoulos, Dimitris Plexousakis,"Advances in Aritificial Intelligence", 4th Helenic Conference on AI, SETN 2006, Heraklion crete, Greece, May 2006 Proceedings, Springer.</li> <li>Olalekan S. Akinola, Adetoun C. Afolabi, "Evaluating classification effectiveness of sequential minimal optimization (smo) algorithm on chemical parametization of granitoids", IJRRAS 13 (2), November 2012, [Online] Available at http://www. arpapress.com/Volumes/ Vol13Issue2 /IJRRAS_13_2_30.pdf</li> <li>Performance measures', [Online] Available "http://cs.uiuc.edu/class/fa05/cs412 /chaps/6.pdf,</li> <li>'Confusion matrix', [Online] Available "http://cs.uiuc.edu/class/fa05/cs412 /chaps/6.pdf,</li> <li>'Confusion matrix', [Online] Available at http://www2.cs.uregina.ca/~dbd /cs831/notes/confusion_matrix/confusion_matrix.html".</li> <li>'WEKA', Available www.weka.net.nz/.</li> </ol>					
	<ol> <li>WERA , Available www.wkka.nec.hz).</li> <li>Kavitha C.R, Dr. Mahalekshmi," Chemical File Format Conversion Tools: A n Overview", International Journal of Engineering Research &amp; Technology (IJERT), ISSN: 2278-0181, Vol. 3 Issue 2, February – 2014.</li> </ol>					
	Authors:	Adel H A AIATIEH				
	Paper Title:	Using Logic Gates to Build Computer Component				
	Abstract: This pa	aper Shows and introduce how to build a computer component from the basic logic gates				
6.	<b>Keywords:</b> Introduction, Logic gates & Truth Table, Combinational and Sequential Circuits, Boolean algebra, Building complicated circuits Using Logic Gates					
	<ul> <li>References:</li> <li>R. Landauer, "Irreversibility and Heat Generation in the Computational Process", IBM Journal of Research and Development, 1961.</li> <li>D. P. Vasudevan, P.K. Lala , J. Di and J.P Parkerson, "Reversible–Logic Design with Online Testability", IEEE Trans. on Intrumentation and Measurement, April 2006.</li> <li>C. H. Bennett, "Logical Reversibility of Computation", IBM J. Research and Development, November 1973.</li> <li>R. Feynman, "Quantum Mechanical Computers", Optics News, 1985.</li> <li>T. Toffoli, "Reversible Computing", Tech memo MIT/LCS/ TM-151, MIT Lab for Computer Science, 1980.</li> <li>H. Thapliyal and N. Ranganathan, "Design of Reversible Sequential Circuits Optimizing Quantum Cost, Delay and Garbage Outputs," ACM Journal of Emerging Technologies in Computing Systems, Dec. 2010.</li> <li>Abu Sadat Md. Sayem and Masashi Ueda, "Optimization of Reversible Sequential Circuits," Journal of Computing, 2010.</li> <li>E. Fredkin and T. Toffoli, "Conservative Logic", Int"I J. Theoretical Physics, 1982.</li> <li>Peres, "Rversible Logic and Quantum Computers", Physical review A, 1985.</li> </ul>					
	<ol> <li>M.P. Frank, "Introduction to Reversible Computing: Motivation, Progress and Challenges", Proceedings of the 2nd Conference on Computing Frontiers, 2005.</li> <li>Diganta Sengupta, Mahamuda Sultana, Atal Chaudhuri, "Realization of a Novel Reversible SCG Gate and its Application for Designing Parallel Adder/Subtractor and Match Logic", International Journal of Computer Applications (0975-8887), October 2011.</li> <li>B. Raghu kanth, B. Murali Krishna, M. Sridhar, V. G. Santhi Swaroop, "A Distinguish between Reversible and Conventional Logic Gates", International Journal of Engineering Research and Applications (IJERA), Mar-Apr 2012.</li> <li>H. P. Sinha, Nidhi Syal, "Design of Fault Tolerant Reversible Multiplier", International Journal of Soft Computing and Engineering (IJSCE), January 2012.</li> </ol>					
	Authors:	Rashmi P. Sonar, M. S. Ali				
	Paper Title:	XML Parsing: A Review				
7.	<ul> <li>Abstract: A well formed and valid XML document is always a standard of efficient transmission of data for internet. To increase the performance of XML document, right choice of parser is always an important issue. In this paper we try to review some parsing techniques for XML documents so that researches related to XML can get new possibility of the parsing methods.</li> <li>Keywords: XML parsing, DOM, SAX</li> <li>References: <ol> <li>H.M.Deitel, P.J.Deitel, T.R.Nieto, T.M.Lin, and P.Sadhu, XML How to Program, 2nd ed, LPE, Pearson Education,2009.</li> <li>[online] http://www.fdi.ucm.es/profesor/jlsierra/e-learning/segunda-sesion/XMLParsingModels.pdf.</li> </ol> </li> <li>Esther Minguez Collado, M. Angeles Cavia Soto, Jose A. Perez Garc´a,Ivan M.Delamer, and Jose L.Martinez Lastra, "Embedded XML DOM Parser: An Approach for XML DataProcessing on Networked Embedded Systems with Real-Time," EURASIP Journal on Embedded Systems Volume 2008, 6 pages 2008.</li> <li>Chia-Hsin Huang and Tyng-Ruey Chuang, "Prefiltering Techniques for Efficient XML Document Processing," in Proc. DocEng'05, 2005.</li> <li>Robert A. van Engelen, "Constructing Finite State Automata for High Performance Web Services," in Proc. IEEE International Conference on Web Services, 2004</li> <li>Wei Zhang ad Robert van Engelen, "High-Performance XML Parsing and Validation with Permutation Phrase Grammar Parsers," in Proc. ICWS'0,2006</li> <li>W. Lu, K. Chiu, Y. Pan, "A Parallel Approach to XML Parsing," in Proc. Grid06, 2006</li> <li>Michael R. Madhusudhan Govindaraju, "Parallel Processing of Large-Scale XML-Based Application Documents on Multi-core Architectures with PiXiMaL," in Proc. Science '08, 2008, p. 261 - 268</li> <li>Bhavik Shah, Praveen R. Rao, and Bongki Moon and Mohan Rajagopalan, A Data Parallel Algorithm for XML DOM Parsing Lecture Notes in Computer Science, Springer Berlin Heidelberg 2009, Volume 5679.</li> <li>Yinfei Pan, Ying Zhang, Kenneth Chiu, "High Performance of DOM Technique in XML for Data Retrieval," in Proc. ICIMT '</li></ul>		40-42			

Page(s). 505 – 505.
 Dong Zhou, "Exploiting Structure Recurrence in XML Processing," in Proc.ICWE '08 ,Pages: 311-324.

14.	Johannes Helander, "Deeply Embedded XML Communication -Towards an Interoperable and Seamless World", in Proc EMSOFT'05,	
	September 19–22, 2005, Jersey City, New Jersey, USA.	
15.	Fadi El-Hassan, and Dan Ionescu, "SCBXP: An Efficient CAM-Based XML Parsing Technique in Hardware Environments," IEEE	
	Transaction on Parallel and Distributed Systems, vol. 22, pp.1879-1887, Nov 2011	

 Jie Tang, Shaoshan Liu, Chen Liu, Zhimin Gu, and Jean-Luc Gaudiot, "Acceleration of XMLParsing through Prefetching," IEEE TRANSACTIONS ON COMPUTERS, VOL. 62, NO. 8, AUGUST 2013