Volume 3 Issue 5, April 2015

International Journal of Inventive Engineering and Sciences

ISSN: 2319-9598

website: www.ijies.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. Himani Sharma

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

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 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. Anuranian 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

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 Inventive Engineering and Sciences (IJIES)

Editorial Board

Dr. Vikas Maheshwari

Associate Professor, Department of Electrical Communication Engineering, Amity University Madhya-Pradesh Gwalior, M.P., India

Dr. Sudhakara A

Associate Professor, Department of Chemistry, Jain Institute of Technology Davanagere, Karnataka, India

Dr. Jammi Ashok

Associate Professor, Department of Electrical and Computer Engineering, Hawassa University, Hawassa. (East Africa)

Dr. Mohamed Ashabrawy

Associate Professor, Department of Computer Science, Salman bin Abdulaziz University Kingdom, Saudi Arabia

Dr. Omer Muhammad Ayoub

Associate Professor, Department of Computer Science, Punjab University Affected Center Abdullah Sulayman Road, Al-Fayyaz, Jeddah, KSA Saudi Arabia

Dr. M. Seenivasan

Associate Professor, Department of Mathematics, Annamalai University Annamalainagar, Tamil Nadu, India

Dr. S.V.G.V.A. Prasad

Associate Professor, Department of Physics, Ideal College of Arts & Sciences, Kakinada, A.P, India.

Dr. S. Omkumar

Associate Professor, Department of Electronics and Communication Engineering, SCSVMV University, Enathur, Kanchipuram -631 561. Tamilnadu, India.

Dr. Yousef FARHAOUI

Associate Professor, Department of Computer Science, Faculty of Sciences and Technic, Moulay Ismail University, B.P 509, Boutalamine, Errachidia, Morocco.

Dr. Gutta Sridevi

Associate Professor, Department of Computer Science & Engineering, K L University, Vaddeswaram, Guntur (DT) Andhra Pradesh. India.

Dr. Debmalya Bhattacharya

Associate Professor, Department of Electronics & Communication Engineering, University of Technology & Management, Bawri Mansion, Dhankheti, Shillong-793003, Meghalaya, India.

Dr. K. Harinadha Reddy

Associate Professor, Department of Electrical and Electronics Engineering, L B R College of Engineering, Mylavaram, Krishna District, Andhra Pradesh State - 5 21 230, India.

Dr. C. Gajendran

Associate Professor, Department of Civil Engineering, School of Civil Engineering, Karunya Nagar, Karunya University, Coimbatore – 641114, Tamil Nadu, India.

Dr. Dibya Prakash Rai

Assistant Professor, Department of Physics, College of Aizawl, Pachhunga University, Mizoram, India.

Dr. Sreenivasa Reddy

Associate Professor, Department of Chemistry, Sri Krishnadevaraya University, Anantapur-515003, A.P., India.

Dr. P. K. Dhal

Associate Professor, Department of Electrical and Electronics Engineering, Vel Tech, Dr. RR & Dr. SR Technical University, Chennai, India.

Dr. M. A. Ashabrawy

Associate Professor, Department of Computer Science, Atomic Energy Authority, Salman bin Abdulaziz University, Al Kharj Saudi Arabia.

Dr. K. Meenakshi Sundaram

Professor & Head, Department of Computer Science, Agnel Institute of Technology and Design, Assagao - Bardez, Goa. India.

Dr. Persis Voola

Associate Professor, Department of Computer Science and Engineering, Adikavi Nannaya University, Rajah Narendra Nagar, Rajahmundry-533296 Andhra Pradesh, India.

Dr. Abhijit Banerjee

Associate Professor, Department of Electronics and Instrumentation Engineering, Academy of Technology, Hooghly, Grand Trunk Rd, Adisaptagram, Aedconagar, West Bengal, India.

Dr. D. Amaranatha Reddy

Associate Professor, Department of Chemistry, Pusan National University, Busan, South Korea.

Dr. A. Heidari

Associate Professor, Department of Chemistry, Postdoctoral Research Fellow, California South University (CSU), Irvine, California, USA

Dr. Ashwani Kumar Aggarwal

Assistant Professor, Department of Electrical and Instrumentation Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Punjab, India.

Dr. P. Srinivas

Assistant Professor, Department of Electrical Engineering, University College of Engineering Osmania University, Hyderabad-500007, Telangana, India.

Dr. Sandeep Chettri

DST-SERB, Young Scientist, Department of Physics, Mizoram University, Tanhril, Aizawl, Mizoram 796004, India.

Dr. Elsanosy M. Elamin

Assistant Professor, Department of Electrical and Electronic Engineering, Faculty of Engineering, University of Kordofan B.O.Box: 160 Elobeid, (Sudan). North Africa.

Dr. Porag Kalita

Professor & Head, Department of Automobile Engineering, Jorhat, Assam, India.

Dr. T. A. Ashok Kumar

Associate Professor, Department of Computer Science, Christ University, Bengaluru, Karnataka, India.

Dr. Malini M Patil

Associate Professor, Department of Information Science and Engineering, JSS Academy of Technical Education, JSS Campus, Bangalore-560060, Karnataka, India.

Dr. V. Selvar

Associate Professor, Department of Civil Engineering, Sri Ramakrishna Engineering College, Vattamalaipalayam, Coimbatore, Tamil Nadu, India.

Dr. Syed Umar

Associate Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah University, Vaddeswaram, Guntur, Andhra Pradesh, India.

S. [o		Volume-3 Issue-5, April 2015, ISSN: 2319-9598 (Online) ablished By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.	Page No.
	Authors:	N. Ranjith, C. Saravanan, M. R. Bibin	
	Paper Title:	Glaucoma Diagnosis by Optic Cup to Disc Ratio Estimation	
	Abstract: Glaucoma is a major global cause of blindness. An approach to automatically extract the main features in color fundus images is proposed in this paper. The optic cup-to-disc ratio (CDR) in retinal fundus images is one of the principle physiological characteristics in the diagnosis of glaucoma. The least square fitting algorithm aims to improve the accuracy of the boundary estimation. The technique used here is a core component of ARGALI (Automatic cup-to-disc Ratio measurement system for Glaucoma detection and AnaLysIs), a system for automated glaucoma risk assessment. The algorithm's effectiveness is demonstrated manually on segmented retina fundus images. By comparing the automatic cup height measurement to ground truth, we found that the method accurately detected neuro-retinal cup height. This work improves the efficiency of clinical interpretation of Glaucoma in fundus images of the eye. The tool utilized to accomplish the objective is MATLAB7.5.		
	Keywords: Cup to Disc Ratio; Optic Nerve Head; Heidelberg Retinal Tomography; Convex hull; Region of Interest.		
•	References: 1. J. Dammas and F. Dannheim, "Sensitivity And Specificity Of Optic Disc Parameters In Chronic Glaucoma", Invest ophth VisSci, vol.34.pp.2246-2250, June.1993.		1-5
	 Thylefors. B and Negrel, "The Global Impact Of Glaucoma", Bull World Health Organ, vol.72, no.3, pp 32-36, 1994. Quigley. H. A and A. T. Broman, "The Number Of People With Glaucoma Worldwide In 2010 And 2020" Br. J. Ophthalmol, vol.90, no.3, p.262-7,2006. 		
	 J. Xu, O. Chutatape, E. Sung, C. Zheng, P. C. T. Kuan. "Optic Disk Feature Extraction Via Modified Deformable Model Technique For Glaucoma Analysis" Pattern Recognition, vol.40, pp. 2063-2076, 2006. H. Li, O. Chutatape. "A model-based approach for automated feature extraction in fundus images". In Proc. Of the 9th IEEE International 		
	 Conference on Computer Vision, 2003. N. Inoue, K. Yanashima, K. Magatani, and T.A. K. T. Kurihara, "Development of a simple diagnostic method for the glaucoma using ocular Fundus pictures," 27th Annual International Conference of the Engineering in Medicine and Biology Society, 2005. M. D. Abramoff, W. L. M. Alward, E. C. Greenlee, L. Shuba, C. Y. Kim, J. H. Fingert, and Y. H. Kwon, "Automated Segmentation of the Optic Disc from Stereo Color Photographs Using Physiologically Plausible Features," Investigative Ophthalmology and Visual Science, vol. 		
	 48, pp. 1665, 2007. J. Liu, D.W.K. Wong, J.H. Lin, H. Li, N.M. Tan, Z.Zhang, T. Y Wong, R. Lavanya, "ARGALI: An Automatic Cup-To-Disc Ratio Measurement System For Glaucoma Analysis Using Level-Set Image Processing", International Conference on Biomedical Engineering (ICBME2008), 2008. 		
	9. Brown, K. Q. "Voronoi Diagrams From Convex Hulls". Information Processing Letters, vol. 9, no.5, pp. 223-228,1979. 10. Rafael C. Gonzalez, Richard E. Woods, "Digital Image Processing Using MATLAB", Second Edition, Pearson Education Asia Publications. 11. R.S.Khandpur, "Handbook of Biomedical Instrumentation", Second Edition, Tata McGraw-Hill Publications		
	Authors: Manal Abdul Ameer Qabazard		
	Paper Title: Resonance Circuits and Applications		
2.	Abstract: This paper presents and reviews the series and Parallel Resonance Circuits starting from the concept of circuit impedance and how does resonance occur then studying the circuits of each type and its characteristic, then finally some of important applications of each type.		
	Keywords: Circuit Impeadance, Resonance, Ideal inductor and Ideal Capacitor, Series Resonance Circuits Band Width, Parallel Resonance Circuits, Applications of series and parallel resonance circuits.		
	 R.W. Erickson and D. Maksimovic, "Fundamentals of Power Electronics," 2nd. Edition, Kluwer Academic Publishers, 2001 L. P. Huelsman and P. E. Allen, Introduction to the Theory and Design of Active Filters,"McGraw Hill, 1980, ISBN: 0-07-030854-3. A. I. Zverev and H. J. Blinchikoff, Filtering in the Time and Frequency Domain, John Wiley an1d Sons, 1976. D. Hart, "Introduction to Power Electronics," Prencice Hall, 1996. E. H. Watanabe, H. Akagi, M. Aredes, "The p-q Theory for Active Filter Control: Some Problems and Solutions", Trans. on Revista Control and Automation, Vol. 15 no. 1/Jan., Fev. e Maro 2004 A. I. Pressman, "Switching Power Supply Design," 2nd Edition, McGraw-Hill, H. Zumbahlen, Passive and Active Filtering," Analog Devices AN281. 		6-1
	 W. K. Chen, Linear Networks and Systems. Belmont, CA: Wadsworth, 1993. M. E. Van Valkenburg, Analog Filter Design, Holt, Rinehart & Winston, 1982 K. Likharev. Single-Electron Devices and Their Applications. Proceedings of the IEEE, April 1999. A. I. Zverev and H. J. Blinchikoff, Filtering in the Time and Frequency Domain, John Wiley an1d Sons, 1976. S. Franco, Design with Operational Amplifiers and Analog Integrated Circuits, McGraw-Hill 1988, ISBN: 0-07-021799-8. Aram Budak, Passive and Active Network Analysis and Synthesis, Houghton Mifflin Company,Boston, 1974. R. W. Daniels, Approximation Methods for Electronic Filter Design, McGraw-Hill, New York. J. R. Bainter, Active Filter Has Stable Notch and Response Can be Regulated, Electronics, Oct. 2 1975, pp.115-117. A. B. Williams, Electronic Filter Design Handbook, McGraw-Hill, 1981, ISBN: 0-07-070430-9. 		
	Authors:	P. Nammalvar, L. Mahalakshmi	
	Paper Title: Implementation of SHPF-TCR Suitable for Power Quality Issues at IT Parks		
	Abstract: A widespread use of Computer technology in IT park leads to increased presence of distortion current and therefore to increased harmonics in the power system. The harmonics results into a poor power quality and have great adverse economic impact on the utilities and customers. This paper proposes a combined system of a thyristor-controlled reactor (TCR) and a shunt hybrid power filter (SHPF) for mitigating these problems. The main objective of this paper is to develop a novel SHPF-TCR for harmonic elimination and reactive power compensation. The SHPF is		

the combination of a small-rating active power filter (APF) and a LC passive filter. The tuned LC passive filter and the TCR form a shunt passive filter (SPF) to compensate reactive power. SVPWM technique is simulated to generate switching signal to Shunt Active Filter. Conventional PI controllers were used to control the compensation system. SVPWM technique is used in the present work for better utilization of dc bus voltage with efficient manner. The effectiveness of the compensator is verified through MATLAB Simulink. The simulation results are found to be quite satisfactory to mitigate harmonic distortions and reactive power compensation.

14-20

Keywords: Harmonics, PI controller, Shunt Hybrid Power Filter, Thyristor Controlled Reactor, Space vector pwm, Point of common coupling.

References:

3.

- Salem Rahmani, Abdelhamid Hamadi, Kamal Al-Haddad, and Louis A. Dessaint, "A Combination of Shunt Hybrid Power Filter and Thyristor-Controlled Reactor for Power Quality" IEEE transactions on industrial electronics, vol. 61, no. 5, may 2014
- Hamadi, S. Rahmani, and K. Al-Haddad, "A hybrid passive filter configuration for VAR control and harmonic compensation," IEEE Trans. Ind. Electron., vol. 57, no. 7, pp. 2419–2434, Jul. 2010.
- P. Flores, J. Dixon, M. Ortuzar, R. Carmi, P. Barriuso, and L. Moran, "Static Var compensator and active power filter with power injection capability, using 27-level inverters and photovoltaic cells," IEEE Trans. Ind. Electron., vol. 56, no. 1, pp. 130-138, Jan. 2009.
- X. Du, L. Zhou, H. Lu, and H.-M. Tai, "DC link active power filter for three-phase diode rectifier," IEEE Trans. Ind. Electron., vol. 59, no. 4. 3, pp. 1430–1442, Mar. 2012
- X. Wang, F. Zhuo, J. Li, L. Wang, and S. Ni, "Modeling and control of dual-stage high-power multifunctional PV system in d-q-0 coordinate," IEEE Trans. Ind. Electron., vol. 60, no. 4, pp. 1556–1570, Apr. 2013.

 Z. Chen, Y. Luo, and M. Chen, "Control and performance of a cascaded shunt active power filter for aircraft electric power system," IEEE
- Trans. Ind. Electron., vol. 59, no. 9, pp. 3614-3623, Sep. 2012.
- M. Angulo, D. A. Ruiz-Caballero, J. Lago, M. L. Heldwein, and S. A. Mussa, "Active power filter control strategy with implicit closedloop current control and resonant controller," IEEE Trans. Ind. Electron. vol. 60, no. 7, pp. 2721–2730, Jul. 2013
- H.Akagi, Y.Kanazawa, A.Nabae, "Instantaneous Reactive Power Compensator contain Switching Devices without Energy Storage Components", IEEE Trans. Commerce Applic, vol. 20, May/June 1984.
- Dipen A. Mistry, Bhupelly Dheeraj, Ravit Gautam, Manmohan Singh Meena, Suresh Mikkili "Power Quality Improvement Using PI and Fuzzy Logic Controllers Based Shunt Active Filter" international Journal of Electrical, Computer, Electronics and Communication Engineering Vol:8, No:4, 2014
- E. H. Watanabe, R. M. Stephan, M. Aredes, "New concept of Instantaneous Active and Reactive Powers in Electrical Systems with Generic
- Loads", IEEE Trans. Power Delivery, vol. 8, no. 2, April 1993, pp. 697-703.

 P.Nammalvar and S.Annapoorani, "Three phase high power Quality two stage boost rectifier," International Journal of Engineering Science and Technology, Vol. 4, no. 4, pp-1702-1712, April 2012.
- H. Akagi, Y. Kanazawa, A. Nabae, "Generalized Theory of the instant Reactive Power in Three- Phase Circuits", IPEC'83 Int. Power Electronics IEEE., Tokyo, Japan, 1983, pp. 1375-1386.
- P. Nammalvar and P. Meganathan, "A Novel Three Phase Hybrid Unidirectional Rectifier for High Power Factor Applications", International Journal of Electrical, Computer, Electronics and Communications Engineering, WASET, Vol.8, No.9, 2014 pp 1400-1408.

Authors: Yousef A. Kareri, Elham Kariri

Paper Title: Asthma Watch

Abstract: The Asthma WatchTM device is designed to detect and treat pending asthma attacks in sleeping children without any human assistance. The symptom detection points will include blood pressure, heart rate, body temperature (wrist band), sound sensor and exhaled breath temperature (thermal camera). The intelligent wrist band will deliver a controlled dose of medication to the patient via an absorption / iontophoresis method which is instructed by the software in the mainframe computer. Asthma WatchTM allows effective dose control and ensures a good night sleep for everybody.

Keywords: Asthma Watch™, (thermal camera), (wrist band), intelligent.

4. **References:**

Australian Centre for Asthma Monitoring, 2005. Health care expenditure and the burden of disease due to asthma in Australia. Australian Institute of Health and Welfare Canberra

- AIHW cat. no. ACM 5.
- Iontophoresis Perimed 2012, viewed 20th July 2012 http://www.perimed-instruments.com/brochures/Iontophoresis_Perimed.pdf
- National Asthma Council Australia, 2012 viewed 20th July 2012 < http://kidswithasthma.com.au/>
- Nursing Standards, 2012 viewed 20th July 2012
- Primary Health Care, 2012 viewed 20th July 2012 http://primaryhealthcare.rcnpublishing.co.uk/archive/article-asthma-update- recommendations-for-diagnosis-treatment-and-management>
- The American Academy of Allergy, Asthma & Immunology. (n.d.). Asthma statistics. Retrieved from http://www.aaaai.org/about-theaaaai/newsroom/asthma-statistics.aspx

Authors: Nagwa Albehery, Tonghui Wang

Paper Title: **Estimating Poverty Measures using Truncated Distributions and its Applications**

Abstract: Poverty measures are used to measure poverty levels or degrees of poverty in a population. In this paper, we investigate the estimation of poverty measures using truncated log-normal, truncated gamma, and truncated epsilon-skew-normal distributions. For comparisons and illustrations, our results are applied to the real data sets collected in Egypt between 1995/1996 and 2008/2009.

Keywords: Poverty measures, Parametric estimation, Income distributions, Truncated distributions.

References:

- Aban, I.B, Meerschaert, M.M and Panorska, A.K. Parameter estimation for the truncated Pareto distribution, American Statistical Association, 2006, Vol. 101, No. 473, pp. 270--277.
- Bandourian, R, McDonald, J.B and Turely, R.S. Income distributions: A comparison across countries and time, Discussion paper 2002,

21-27

Brigham Young University, USA.

5.

- 3. Berger, R.L and Sinclair, D.F. Testing hypotheses concerning unions of linear subspaces, Journal of the American Statistical Association 1984, vol. 79, pp. 158-163.
- Chapman, D.G. Estimating the parameters of a truncated Gamma distribution, The Annals of Mathematical Statistics, 1956, vol. 27, No. 2, pp. 498--506.
- 5. Chang, C.H, Lin, J.L, Pan, N and Chiang, M.C. A note on improved approximation of the Binomial distribution by the Skew-Normal distribution, The American Statistician, 2008, vol. 62, No. 2, pp. 167-170.
- 6. Davidson, R and Duclos, J. Statistical inference for stochastic dominance and for the measurement of poverty and inequality, {\it Econometrica}, 2000, vol. 68, pp. 1435--1464.
- Duclos, J and Arrar, A. Poverty and Equity: Measurement, Policy and Estimation with DAD, Springer Science+Business Media, New York, 2006.
- Egyptian Central Agency of Statistics. (1996). Income, Consumption and Expenditure Research (1995/1996), Egyptian Central Agency of Statistics, Cairo, Egypt.
- Egyptian Central Agency of Statistics. (2000). Income, Consumption and Expenditure Research (1999/2000), Egyptian Central Agency of Statistics, Cairo, Egypt.
- Egyptian Central Agency of Statistics. (2005). Income, Consumption and Expenditure Research (2004/2005), Egyptian Central Agency of Statistics, Cairo, Egypt.
- 11. Egyptian Central Agency of Statistics. (2009). Income, Consumption and Expenditure Research (2008/2009), Egyptian Central Agency of Statistics, Cairo, Egypt.
- 12. Foster, J.E, Greer, J and Thorbecke, E.A. A class of decomposable poverty measures, Econometrica, 1984, Vol. 52, pp. 761--766.
- 13. Gustafsson, B and Nivorozhkina, L. Relative poverty in two egalitarian societies: A comparison between Taganrog, Russia during the Soviet era and Sweden, The review of Income and Wealth, 1996, Series. 42, pp. 321--334.
- 14. Harrison, A. Earning by size: A tale of two distributions, The Review of Economic Studies, 1981, vol. 48, pp. 621--631.
- 15. Kakwani, N. Statistical inference in the measurement of poverty, The Review of Economics and Statistics, 1993, vol. 75, N. 4, pp. 632--639.
- 16. McDonald, J.B. Some generalized functions for the size distribution of income, A generalization of the beta distribution with applications, Econometrica, 1984, vol. 52, pp. 647--663.
- 17. McDonald, J.B and Xu, Y.J. A generalization of the beta distribution with applications, Journal of Econometics, 1995, vol. 69, pp. 427--428.
- 18. Mudholkar, G.S and Huston, A.D. The epsilon-skew-normal distribution for analyzing near-normal data, Journal of Statistical Planning and Inference, 2000, vol. 83, pp. 291--309.
- 19. Oti, E.B, Kanbur, R and Mckay, A. A poverty profile for Ghana, Working paper, 1990, World Bank, Washington. D.C. USA.
- Salem, A.B.Z and Mount, T.D. A convenient descriptive model of income distribution: the gamma density, Econometrica, 1974, Vol. 42, pp. 1115--1127.
- Sahn, D.E and Stifel, D.C. Poverty comparisons over time and across countries in Africa, World Development, 2000, Vol. 28, pp. 2123--2155.
- 22. Shorrocks, A.F. Notes and comments: Revisiting the Sen poverty index, Econometica, 1995, vol. 63, pp. 1225--1230.
- 23. Sen, A.K. Poverty: An ordinal approach to measurement, Econometrica, 1976, Vol. 44, pp. 219--231.
- 24. Singh, S.K and Maddala, G.S. A function for size distribution of incomes, Econometrica, 1976, Vol. 44, pp. 963--970.
- 25. Shao, J. Mathematical Statistics (2nd ed), Springer Science+Business Media, New York, 2003.
- 26. Slocomb, J, Stauffer, B and Dickson, K.L. On fitting the truncated Lognormal distribution to soecies-abundance data using maximum likelihood estimation, Ecological Society of America, 1977, Vol. 58, No. 3, pp. 693--696.
- 27. Zheng, B. Statistical inference for poverty measures with relative poverty lines, Journal of Econometrics, 2001, vol. 101, pp.337--356.

28-32