

**Volume 3 Issue 3, February 2015**

**International Journal of Inventive  
Engineering and Sciences**

**ISSN : 2319-9598**

**website: [www.ijies.org](http://www.ijies.org)**



**Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.**  
**Exploring Innovation: A Key for Dedicated Services**

**Address:**

# 22, First Floor, ShivLoka Phase-IV,  
Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India

**Website:** [www.blueeyesintelligence.org](http://www.blueeyesintelligence.org)

**Email:** [director@blueeyesintelligence.org](mailto:director@blueeyesintelligence.org), [blueeyes@gmail.com](mailto: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, Gauridada, 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, Kuala 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, Utrakhand, 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, Chunche0nsi, Gangwondo, Korea

**Dr. Sanjay M. Gulhane**

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

**Dr. K.K. Thyagarajan**

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 Cheshmejjaz**

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 Giriya 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 Annamalaiagar, 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. Selvan**

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. No	<b>Volume-3 Issue-3, February 2015, ISSN: 2319-9598 (Online)</b> <b>Published By: Blue Eyes Intelligence Engineering &amp; Sciences Publication Pvt. Ltd.</b>		Page No.
1.	<b>Authors:</b>	<b>Surve Pranjali, Ubale V. S</b>	
	<b>Paper Title:</b>	<b>Hand Gesture Recognition Systems: A Survey</b>	
	<p><b>Abstract:</b> The first mode of communication in the early ages was gesture. Later on the verbal communication was developed very well. But still non-verbal communication has its importance. Non – verbal communication is used for the physically challenged people, for different applications. For e.g. aviation, surveying, music direction etc. It is the method to interact with other peripheral devices, such as keyboard, mouse. The important steps involved in HGR systems are data acquisition, gesture modelling, feature extraction and hand gesture recognition. Different algorithm are followed by different researchers or sometimes used their own algorithm. This paper studies different methods of HGR and finally the desired characteristics of a robust and efficient hand gesture recognition system have been described.</p>		1-5
	<p><b>Keywords:</b> Hand gesture recognition, Principal component analysis (PCA), Rotation invariant.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>RafiqulZaman Khan &amp; Noor Adnan Ibraheem (2012), omparative study of hand gesture recognition system” Department of Computer Science, A.M.U., Aligarh, India.</li> <li>SushmitaMitra, Senior Member, IEEE, and Tinku Acharya, Senior Member, IEEE (2007), “Gesture Recognition: A Survey”</li> <li>PrateemChakraborty, PrashantSarawgi, AnkitMehrotra, Gaurav Agarwal, Ratika Pradhan (2008), “Hand Gesture Recognition: A Comparative study”IMECS 2008, 19-21 March, 2008, Hong Kong.</li> <li>Sudheesh.P, Gireesh Kumar T. July 2012, “Vision based Robot Navigation for Disaster Scenarios”AmritaVishwa Vidyapeetham Coimbatore, India.</li> <li>Kwang-HoSeok, Chang-Mug Lee, Oh-Young Kwon, Yoon Sang Kim (2009),”A Robot Motion Authoring using Finger robot interaction” Korea University of Technology and Education Cheonan, Korea.</li> </ol>		
2.	<b>Authors:</b>	<b>Ahmed Mudassar Ali, M. Ramakrishnan</b>	
	<b>Paper Title:</b>	<b>Web Personalized Index Based N-GRAM Extraction</b>	
	<p><b>Abstract:</b> Web mining is the analysis step of the "Knowledge Discovery in Web Databases" process which is an intersection of computer science and statistics. In this process results are produced from pattern matching and clustering which may not be relevant to the actual search. For example result for tree may be apple tree, mango tree whereas the user is searching for binary tree. N-grams are applied in applications like searching in text documents, where one must work with phrases. Eg: plagiarism detection. Thus relevancy becomes major part in searching. We can achieve relevancy using n-gram algorithm. We show an index based method to discover patterns in large data sets. It utilizes methods at the conjunction of AI, machine learning and statistics. We also induce a method of personalization where the search engine is used for indexing purposes in addition to the current n-gram techniques. A collaborative web search method is used for user’s personalization in the web search engine to extract the required accurate data.</p>		6-9
	<p><b>Keywords:</b> Web Mining, Knowledge Discovery, N-Gram, Stemming.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>“Language Identification of Web Pages on Improved N-gram Algorithm”- Yew Choong Chew, Yoshiki Mikami, Robin Lee Nagano , IJCSI International Journal of Computer Science Issues, Vol. 8, Issue 3, No. 1, May 2011, ISSN (Online): 1694-0814.</li> <li>“Automatically building a stop word list for an information retrieval system”- Masoud Makrehchi Mohamed S. Kamel, ECIR 2008, LNCS 4956, pp. 222-233, 2008.</li> <li>“Advanced database indexing”- Y.Manolopoulos , Y.Theodoeidis and V.J.Tsotras, Springer 2000.</li> <li>“Probabilistic Latent Semantic Indexing”- Thomas Hofmann, SIGIR '99 Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval, Pages 50-57,1999.</li> <li>SRCluster: Web Clustering Engine based on Wikipedia : Yuvarani Meiyappan, N. Ch. S. Narayana Iyengar and A. Kannan , International Journal of Advanced Science and Technology Vol. 39, February, 2012.</li> <li>XML with Cluster Feature Extraction For Efficient Search : D. Divya, Dr. A. Muthukumaravel, Dr. P. Mayilvahanan , International Journal of Emerging Technology and Advanced Engineering Website: www.ijetae.com (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 3, Issue 8, August 2013).</li> <li>A Model for XML Schema Integration : Kalpdram Passi, Louise Lane, Sanjay Madria, Bipin C. Sakamuri, Mukesh Mohania, and Sourav Bhowmick , EC-Web 2002, LNCS 2455, pp. 193–202, 2002.</li> <li>Learning to Cluster Web Search Results : Hua-Jun Zeng Qi-Cai He Zheng Chen Wei-Ying Ma Jinwen Ma, SIGIR'04, July 25–29, 2004, Sheffield, South Yorkshire, UK.</li> <li>WEB SEARCH RESULT CLUSTERING- A REVIEW : Kishwar Sadaf1 and Mansaf Alam2, International Journal of Computer Science &amp; Engineering Survey (IJCSSES) Vol.3, No.4, August 2012.</li> <li>Web Usage Mining Based on Complex Structure of XML for Web IDS : Marjan Eshaghi, S.Z. Gawali, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-2, Issue-5, April 2013.</li> <li>Beyond Single-Page Web Search Results : Ramakrishna Varadarajan, Vagelis Hristidis, and Tao Li , IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, VOL. 20, NO. 3, MARCH 2008</li> <li>Extracting Knowledge from Web Search Engine Results : Andreas Kanavos, Evangelos Theodoridis, Athanasios Tsakalidis , IEEE 24th International Conference on Tools with Artificial Intelligence, 2012.</li> <li>A New Search Results Clustering Algorithm based on Formal Concept Analysis : Yun Zhang, Boqin Feng, Yewei Xue, School of Electronics and Information Engineering, Xi'an Jiaotong University, Xi'an, China, Fifth International Conference on Fuzzy Systems and Knowledge Discovery., FSKD'08, IEEE, pp. 356-360, 2008.</li> </ol>		
	<b>Authors:</b>	<b>R. Sathis Kumar, M. Krishna Raj, R. Vinston Raja</b>	
	<b>Paper Title:</b>	<b>Agent Based Trusted Routing and Attitude Based Intrusion Detection for Worm Hole Attack in MANET</b>	

**Abstract:** The Existence of misbehaving nodes may paralyze the routing operation in MANET. To overcome this behavior that trustworthiness of the network nodes should be consider in the route selection process combined with the next count. The trustworthiness is achieved by measuring the trust value for each node in the network. In this paper a new protocol based on agent based monitoring followed the dynamic source routing (DSR) algorithm is presented. This protocol is applied in agent based trusted Dynamic source routing protocol for MANET's. The objective of this protocol is to mange trust information among self nodes with minimal overhead in terms of time delay and data loss. This objective is achieved through Collaborative Agent Monitoring System (CAMS) by installing in each participated node in the network .CAMS Consist of two types of agent: Self monitoring agent and routing agent. A proposed realistic objective model for measuring trust value is introduced. One of the significant attack in ad hoc network is wormhole attack is more hidden in character and tougher to detect. In this paper an Attitude Agent Intrusion Detection System (AAIDS).

**Keywords:** Routing -Worm hole – Intrusion - Detection.

### References:

1. Zhang, Y., Lee, W., & Huang, Y. (2003). Intrusion detection techniques for mobile wireless networks. *ACM Wireless Networks Journal*, 5, 545–556.
2. Lau, F., Rubin, S. H., & Smith, M. H. (2000). Distributed denial of service attacks. In *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics* (pp. 2275–2280).
3. Ou, C.-M. (2012). Host-based intrusion detection systems adapted from agent-based artificial immune systems. *Journal of Neuro computing*, 88, 78–86.
4. Gonzalez, F. A., & Dasgupta, D. (2003). Anomaly detection using real-valued negative selection. *Journal Genetic Programming and Evolvable Machines*, 4, 383–403.
5. Dasgupta, D., & Gonzalez, F. (2002). An immunity based technique to characterize intrusions in computer networks. *IEEE Transactions on Evolutionary Computation*, 3, 281–291.
6. De Castro, L. N., & Timmis, J. (2002). An introduction to artificial immune systems: A new computational intelligence paradigm. In *Proceedings of IEEE Congress on Evolutionary Computation* (pp. 699–674).
7. Azandaryani, A. H. M., & Meybodi, M. R. (2009). A learning automata based artificial immune system for data classification. In *Proceedings of IEEE Computer Conference* (pp. 530–535).
8. Sompayrac, L. M. (2003). *How the immune system works* (2nd ed.). Oxford: Blackwell.
9. Sarafijanovic, S., & Le Boudec, J.-Y. (2005). An artificial immune system approach with secondary response for misbehavior detection in mobile ad hoc networks. *IEEE Transactions on Neural Networks*, 5, 1076–1087.
10. Forrest, S., Perelson, A. S., Allen, L., & Cherukuri, R. (1994). Self-nonself discrimination in a computer. In *Proceedings of the IEEE Symposium on Research in Security and Privacy* (pp.202–212). IEEE Computer Society Press.
11. Li, X., Lyu, M. R., & Liu, J. (2004) A trust model based routing protocol for secure ad hoc networks. In *Proceedings of IEEE Aerospace Conference, Big Sky, Montana, USA*, pp 1286–1295.
12. Pirzada, A. A. & McDonald, C. (2006) Reliable routing in MANETs using direct trust mechanisms. In *Advances in Ad Hoc and Sensor Networks*. Berlin: Springer, ch. 6, pp. 133–159.
13. Zhan, G., Shi, W., & Deng, J. (2012). Design and implementation of TARF: a trust-aware routing framework for WSNs. *IEEE Transactions on Dependable and Secure Computing*, 9(2), 184–197.
14. Rahman, A. A. & Hailes, S. (1997) A distributed trust model. In *Proceedings of the ACM New Security Paradigms Workshop, Cumbria, UK*, pp. 48–60.
15. He, D., et al. (2012). ReTrust: Attack-resistant and lightweight trust management for medical sensor network. *IEEE Transactions on Information Technology in Biomedicine*, 16(4), 623–632.
16. Maleknasab, M., & Bidaki, M. (2013). Trust-based clustering in mobile ad hoc networks: Challenges and issues. *International Journal of Security and Its Applications*, 7(5), 321–342.
17. Johnson, D., & Maltz, D. (1996). Dynamic source routing in ad hoc wireless networks. In I. A. Korth (Ed.), *Mobile Computing* (Vol. 353, pp. 153–181). Norwell: Kluwer.
18. Yang, H., Luo, H., Ye, F., Lu, S., & Zhang, L. (2004). Security in mobile ad hoc networks: Challenges and solutions. *IEEE Wireless Communications*, 11(1), 38–47.
19. Liu, K., & Deng, J. (2007). An acknowledgment-based approach for the detection of routing misbehavior in MANETs. *IEEE Transactions on Mobile Computing*, 6(5), 536–550.
20. Marti, S., Giuli, T. J., Lai, K., & Baker, M. (2000). Mitigating routing misbehavior in mobile ad hoc networks. In *Proceedings of Mobile Computing and Networking (MobiCom'00)*, pp. 255–265.
21. Buchegger, S. & Boudec, L. (2002) Performance analysis of the CONFIDANT protocol. In *Proceedings of the 3rd ACM International Symposium on Mobile Ad Hoc Networking & Computing, Lausanne, Switzerland*, pp. 226–236.
22. Michiardi, P., & Molva, R. (2002) CORE: A collaborative reputation mechanism to enforce node cooperation in mobile ad hoc networks. In *Proceedings of the 6th IFIP conference on security communications, and multimedia, Portoroz, Slovenia*, pp. 107–121.
23. Pirzada, A. A., McDonald, C., & Datta, A. (2007). Dependable dynamic source routing without a trusted third party. *Journal of Research and Practice in Information Technology*, 39(1), 71–85.
24. Dhurandher, S. K. & Mehra, V. (2009). Multi-path and message trust-based secure routing in ad hoc networks. In *Proceedings international conference advances in computing, control and telecomm. Technologies, Trivandrum, Kerala*, pp. 189–194.
25. Li, X., Jia, Z., Zhang, P., Zhang, R., & Wang, H. (2010). Trustbased on-demand multipath routing in mobile ad hoc networks. *Information Security, IET*, 4(4), 212–232.