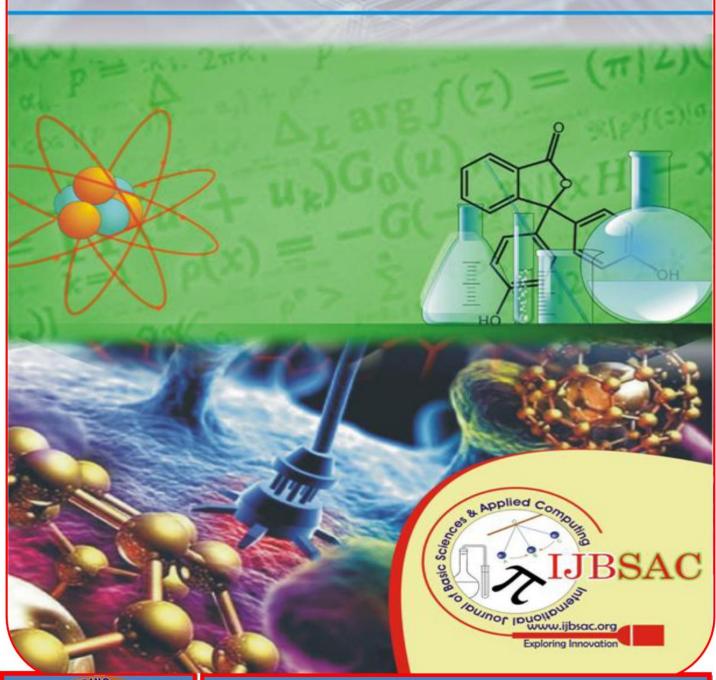
# Volume 1 Issue 1, August 2014

# International Journal of Basic Science and Applied Computing





# 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)

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

#### Vice Editor In Chief

#### Prof.(Dr.) Anuranjan Misra

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

#### Prof. (Dr.) Uma Shanker

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

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

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 Basic Sciences and Applied Computing (IJBSAC), India

#### 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.

Volume-1 Issue-1, August 2014, ISSN: 2394-367X (Online) Page No. Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd. No **Authors:** Sadhana Vishwakarma Paper Title: **Ionic Liquids-Designer Solvents for Green Chemistry Abstract:** Ionic liquids, as green solvents have been studied widely now a days due to their appealing properties such as negligible vapour pressure, large liquid range, high thermal stability, high ionic conductivity, large electrochemical window, and ability to solvate compounds of widely varying polarity. Utilizing ionic liquids is one of the goals of green chemistry because they create a cleaner and more sustainable chemistry and are receiving increasing interest as environmental friendly solvents for many synthetic and catalytic processes. Ionic liquids have been investigated for a wide range of synthetic applications; they have fascinated considerable interest for used as non-volatile solvent based electrolytes in the field of organic synthesis, catalysis, electrochemistry, solar cells, fuel cells, etc., as they possess many benefits than volatile organic solvents. **Keywords:** Green chemistry, applications, classification, ionic liquids, properties. References: 1. Anon., Ionic Liquids: Enabling Solvents, Covalent Associates, Woburn, MA, April 2001. Y. Chauvin, L. Mussmann, H. Olivier, Angew. Chem. Int. Ed. Engl. 1995, vol.34, pp. 2698. 3. S. Dai, Y.Shin, L.M. Toth and C.E. Barnes, Inorg. Chem. 1997, vol.36, pp. 4900. T. Fischer, A. Sethi, T. Welton and J Woolf, Tetrahedron Lett, 1999, vol. 40, pp.793.
 P. Frank, S. Danuta, S. Harald, and G. Ralf, "Bionic liquids: imidazolium-based ionic liquids with antimicrobial activity". Zeitschrift für Naturforschung, 2013, vol. B 68b, pp.1123-1128. J. Stoimenovski, D. R. MacFarlane, K. Bica, R. D. Rogers "Crystalline vs. ionic liquid salt forms of active pharmaceutical 1. ingredients: a position paper", Pharmaceutical Research, 2010, vol.27, pp. 521-526. 1-4 7. J.D. Holbrey, M.B. Turner and R.D. Rogers, "Selection of ionic liquids for green chemical applications. in Ionic liquids as green solvents: progress and prospects", ACS Symposium Series, Amer Chemical Soc, Washington, 2003, vol. 856, pp. 2-12. 8. A. Kumar & D. Sarma, "Recent applications of chloroaluminate ionic liquids in promoting organic reactions, inionic liquids iib: fundamentals, progress, challenges and opportunities, transformations and processe"s, edited by R D Rogers & K R Seddon, ACS Symposium Series, ,American Chemical Society, Washington, DC, 2005, pp. 350. W. Lu, A. G. Fadeev, Qi B, E. Smela, B. R. Mattes, J. Ding, G. M. Spinks, J Mazurkiewicz, G. Zhou, G. Wallace, D. R. MacFarlane, S. A. Forsyth and M. Forsyth, Science, vol. 297, pp. 983, 2002. D. S. Silvester & R. G. Compton, Z Phys Chem, 2006, vol. 220pp. 1247. V. V Namboodiri, R. S. Varma, Tetrahedron Lett. 2002, Vol.43, pp. 5381-5383. A. O'Sullivan, "Cellulose: the structure slowly unravels." Cellulose, 1997, vol.4(3),pp. 173-207. P Wassercheid and W. Keim. "Ionic Liquids-new solutions for transition metal catalysis", Angewandte Chemie-International Edition, 2000, vol.39, pp. 3772-378. P.Bonhote, A.P.Dias, N.Papageorgiou, K. Kalyanasundaram and M. Gratzel. "Hydrophobic, high conductive ambienttemperatrure molten salts", Inorganic Chemistry, 1996, vol.35, pp.1168-1178. N.V. Plechkova, K.R. Seddon Chem Soc.Rev 2008, vol.37, pp. 123-150. A.E. Visser, R.P. Swatloski, W.M. Reichert, R. Mayton, S.Sheff, A.Wierzbicki, J.H. Davis, R.D. Rogers. "Task-specific ionic liquids incorporating novel cations for the coordination and extraction of hg2+ and cd2+: synthesis, characterization, and extraction studies". Environ.Sci.Technol, 2002, vol. 36(11), pp. 2523-2529. T Welton, "Room-temperature ionic liquids. solvents for synthesis and catalysis", Chem.Rev., 1999, vol.99(8), pp. 2071-2084. J.S. Wikes, M.J. Zaworotko, J.Chem.Soc. Chem.Commun, 1990, pp.965. S. L. Wilkinson, Chemical & Engineering News, 1997, vol.75, pp.35–43. D. Zhou, G. M. Spinks, G. G. Wallace, C. Tiyapiboonchaiya, D. R. MacFarlane, M.Forsyth & J. Sun, Electrochim Acta, 2003, vol. 48, pp.2355-2370. **Authors:** Anouar Tadlaoui Mouenis, Khaldi Mohamed, Aammou Souhaib **Paper Title: Bayesian Networks for Learner Modeling** Abstract: Bayesian networks tend to be increasingly used for the management of uncertainty in modelling of the learner. They have been successfully used in many systems, with different objectives. However their use as part of the cognitive process modelling raises a number of problems. On the one hand the underlying semantics of arcs is often not clearly explained, and on the other hand the evolution of the knowledge structure is not taken into account. Our work focuses on the question of the orientation of the arcs, and more generally on the structure of Bayesian network modeling of the learner. We try to show in this work how this question is crucial. In addition, the issue of structural adjustment in the network behavior of the learner sometimes had been suggested, and while different results from cognitive psychology attests to the existence of structural differences by level of expertise. 2. 5-9 The central hypothesis of our work is that has been a link between the structure of the learner model and level of expertise. We present our probabilistic graphical models of multi- networks to take into account several networks within the same model. The experiments presented in this work are arguments in favor of our hypothesis on the link between the level of expertise of the learner and the structure of Bayesian network.

Keywords: Bayesians Networks, cognitive diagnosis, Learner modeling.

[PEARL 88] PEARL, J., Probabilistic Reasoning in Intelligent System, Morgan Kaufmann. 1988.

**References:** 

- 2. [BECKER & NAIM 99] BECKER, A., NAÏM, P., Les réseaux Bayésiens, modèles graphiques de connaissances, Eyrolles, 1999.
- 3. [CONATI et al., 02] CONATI, C., GERTNER, A., VANLEHN, K., Using Bayesian networks to manage uncertainty in student modeling, Journal of User Modeling and User-Adapted Interaction, volume 12 (4), pages 371-417, 2002.
- 4. [MAYO & MITROVIC 01] ] Mayo M., Mitrovic. Optimising, A., ITS behaviour with Bayesian networks and decision theory, in International Journal of Artificial Intelligence in Education, n°12, pages 124-153, 2001.
- 5. [MISLEVY & GITOMER 1996] Mislevy R., Gitomer D. (1996). The role of probability-based inference in an intelligent tutoring system, User-Modeling and User- Adapted Interaction, n°5, pp 253-282.
- 6. [ZAPATA-RIVERA&GREER 2002] Zapata-Rivera J.-D., Greer J.(2000) « Inspecting and Visualizing Distributed Bayesian Student Models », Intelligent Tutoring Systems 00, pp. 544-553.
- 7. [VERMA & PEARL 1991] Geiger D., Heckermann D. (1996). Knowledge representation and inference in similarity networks and Bayesian multinets, Artificial Intelligence, volume 82 (1–2), pp. 45–74.
- 8. [GEIGER & HECKERMAN 96] GEIGER, D., HECKERMAN, D., Knowledge representation and inference in similarity networks and Bayesian multinets, Artificial Intelligence, volume 82 (1–2), pages 45–74, 1996.
- 9. [RAGNEMALM, 1995] RAGNEMALM E. (1995). Student Diagnosis in Practice; Bridging the Gap. User Modeling and User-Adapted Interaction (UMUAI) International Journal, 5, Kluwer Academic Publishers, pp. 93-116.
- 10. [VASSILEVA, 1996] VASSILEVA J. (1996). A Task-centered Approach for User Modelling in a Hypermedia Office Documentation System, User Modeling and User-Adapted Interaction Journal, 6, pp. 185-223
- 11. [SELF, 1991] SELF J. (1991). Formal Approaches to Student Modeling. Technical Report AI-59. Lancaster University,
- England.

  12. [JAMESON 96] JAMESON, A., Numerical uncertainty management in user and student modeling: an overview of systems and issues, in User- Adapted Interaction, volume 5 (3-4), n°5, pages 193-251, 1996.
- 13. [LAUITZEN, 1996] Lauritzen S.L. (1995). The EM-algorithm for graphical association models with missing data, Computational Statistics and Data Analysis, vol 1, pp 191-201.
- 14. [M. ANOUAR TADLAOUI et al. 2014] M. Anouar Tadlaoui, M. Khaldi, S. Aammou (2014) TOWARDS A LEARNING MODEL BASED ON BAYESIAN NETWORKS, EDULEARN14 Proceedings, pp. 3185-3193.
- 15. [CHI et al., 1981] Chi M.T.H., Feltovitch P.J., Glaser R. (1981). Categorization and representation of physics problems by experts and novices, Cognitive Science, vol 5, pp.121-152.

Authors:	A. Sreedevi, N. Ravi Shankar
Paper Title:	A Novel Fuzzy Soft Theory on Compact Spaces for Particular Issues

**Abstract:** The aim of this work is to study some properties related to fuzzy soft topological spaces particularly fuzzy soft boundary point, fuzzy soft compact space, fuzzy soft open base and fuzzy soft open sub-base.

**Keywords:** Fuzzy soft set, fuzzy soft topological space, fuzzy soft interior, fuzzy soft closure, fuzzy soft boundary point, fuzzy soft neighborhood, fuzzy soft compact space, fuzzy soft open base, fuzzy soft open subbase, fuzzy soft basic open cover, fuzzy soft sub basic cover fuzzy soft closed base, fuzzy soft closed subbase.

# 3. References:

1. Tanay, Bekir, and M. BurcKandemir. "Topological structure of fuzzy soft sets." Computers & Mathematics with Applications 61.10 (2011): 2952-2957.

2. Mahanta, J., and P. K. Das. "Results on fuzzy soft topological spaces." arXiv preprint arXiv:1203.0634 (2012).

- 3. Atmaca, S. E. R. K. A. N., and I. D. R. I. S. Zorlutuna. "On fuzzy soft topological spaces." Ann. Fuzzy Math. Inform 5.2 (2013): 377-386.
- 4. Simsekler, Tugbahan, and SaziyeYuksel. "Fuzzy soft topological spaces." Ann. Fuzzy Math. Inf 5.1 (2012): 87-96.
- 5. Maji, Pabitra Kumar, R. Biswas, and A. R. Roy. "Fuzzy soft sets." Journal of Fuzzy Mathematics 9.3 (2001): 589-602.
- 6. Maji, P. K., Ranjit Biswas, and AkhilRanjan Roy. "Soft set theory." Computers & Mathematics with Applications 45.4
- 7. Brown, Joseph G. "A note on fuzzy sets." Information and control 18.1 (1971): 32-39.
- 8. Neog, TridivJyoti, Dusmanta Kumar Sut, and Gopal Chandra Hazarika. "Fuzzy Soft Topological Spaces." International Journal of Latest Trends in Mathematics 2.1 (2012).
- 9. Gain, Pradip Kumar, et al. "On Some Structural Properties of Fuzzy Soft Topological Spaces."
- 10. Tanay, Bekir, and M. BurcKandemir. "Topological structure of fuzzy soft sets." Computers & Mathematics with Applications 61.10 (2011): 2952-2957.

10-14