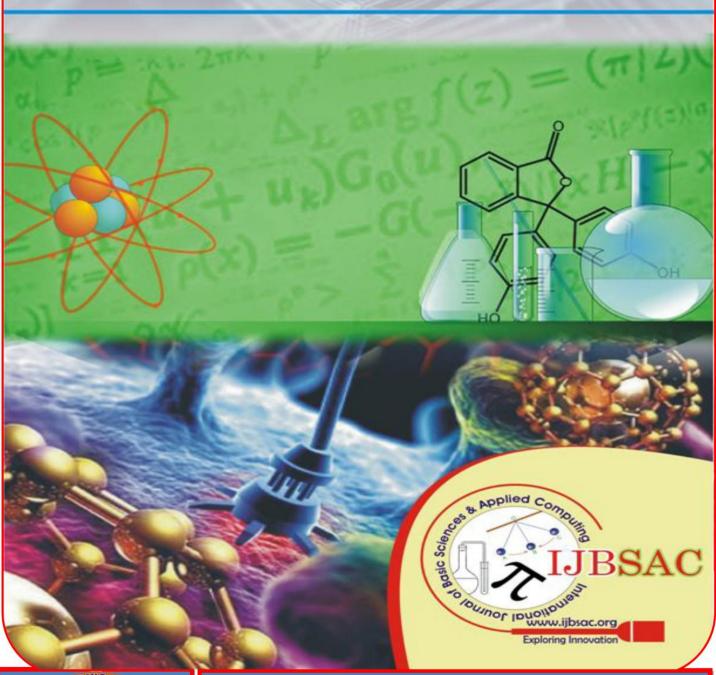
Yolume 1 Issue 7, June 2015

International Journal of Basic Science and Applied Computing





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

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-7, June 2015, ISSN: 2394-367X (Online) S. Page No. Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd. No **Authors:** Sevilay UCAR, Turgay ARMAĞAN, Sehban KARTAL **Paper Title:** Calculation of Surface Tension and Viscosity of Liquid Transition Metals Abstract: The results of calculations of structure and some surface properties such as, isothermal compressibility, surface tension and viscosity for liquid 3d transition metals, Ti, Ni and V, near melting temperatures are presented. We used the parameters of the Wills-Harrison (WH) approximation in conjunction with the Bretonnet-Silbert (BS) local model pseudopotential, which is suggested separate description of the s- and d-electron states are calculated using Dubinin procedure [1]. Isothermal compressibility and surface tension properties of Ti, Ni and V are calculated using extended Mayer's empirical formula in terms of hard sphere diameter and packing fraction which calculated using Waseca's formula [2]. We have obtained in very good agreement near melting point with available experimental data. **Keywords:** transition metal, scaled particle theory, surface tension, viscosity. **References:** N.E. Dubinin." Interatomic Pair Interaction In Liquid Transition Metals", Act. Phys.Pol.A, 2009, 115,783. Y. Waseda, The Structure Of Non-Crystalline Materials, Mcgraw-Hill Publ. Co., New York, 1980. V. B. Bobrov, Yu. P. Vlasov and S. A. Trigger, Theory of isothermal compressibility of two-component liquid metal plasmas, TVT, 1992, 30, 641. S. A. Trigger, V. B. Bobrov, Yu. P. Vlasov, Liquid metal compressibility theory using the OCP model as a reference system Physica B, 1994, 193, 291. 1. T. Armağan, The isothermal compressibility theory; Application to the liquid metals Pb and Sn, Balkan Physics Letters, 1.4 S. Uçar and T. Armağan, Application of liquid metal compressibility theory to the liquid rare earth metals, J. of Optoelectronics and Advanced Materials, 2007, 9, 148. S. W. Mayer, A molecular parameter relationship between surface tension and liquid compressibility, J. Phys. Chem., 1967 63, 216 M. R. Amin, R. C. Gosh, G. M. Bhuiyan, Surface tension of liquid transition and noble metals, J. of Non-Crystalline Solids, 2013, 380, 42. P. A. Egelstaff and B. Widom, Liquid Surface Tension near the Triple Point, J. Chem. Phys., 1970, 53, 2667. R. Tahery and H. Modarress, Relationship between Surface Tension, Compressibility and Molecular Parameter, 9. Iranian Chemical Engineering Congress, 23-25 Nov. 2005, Page 515. J.L. Bretonnet, M. Silbert, Interionic Interactions in Transition Metals. Application to Vanadium, Phys. Chem. Liq., 1992, 24, 169. 12. M Hasegawa, Freezing of the classical one-component plasma: analyses of the non-perturbative density-functional theories, J. Phys.: Condens. Matter, 1992, 4, 5493. A. Sarkar, D. Sen, S. Haldar, D. Roy, Static local field factor for dielectric screening function of electron gas at metallic and lower densities, Mod. Phys. Lett., 1998, 12, 639. Egry, G. Lohoefer, And S. Sauerland, Surface Tension And Viscosity Of Liquid Metals, Journal Of Non-Crystalline Bretonnet, J.L. and Derouiche, A., Variational Thermodynamic Calculations For Liquid Transition Metals, Phys. Rev. B. 1991, 43, 8924. W.A. Harrison, Elementary electronic structure, World Scientific, Singapore, 1999. R. N. Joarder and T. Das, Thermodynamics of liquid metals based on charged hard sphere (CHS) model, Phys. Scripta, T. IIda, and R. I. L., Gutrie, The Physical Properties Of Liquid Metals, Clarendon Press, Oxford (Gb), 1988. G. Kaptay, A unified equation for the viscosity of pure liquid metals, Z. Metallkd., 2005, 96, 1. Mahmoud A. Ghandour, Hassan Sedaira, Azza M. M. Ali, Mohmed M. A. Mansour **Authors:** Determination of Uranium (VI) in Underground Water and Rock Samples by Adsorptive **Paper Title: Cathodic Stripping Voltammetry** Abstract: Uranium (VI) forms a complex with potassium hydrogen phthalate. This complex is adsorbed onto a hanging mercury drop electrode (HMDE) and uranium is determined by differential pulse cathodic stripping voltammetry (DPCSV). This method is applied for the determination of U (VI) in 10 rock samples and 15 underground water samples. The reduction current of adsorbed complex of uranium (VI) was measured by differential pulse cathodic stripping voltammetry (DPCSV), preceded by a period of accumulation onto the electrode surface. Concentration of U(VI) found were ranged from: nil - 3.34µgL-1in ground water samples and 0.167 - 3.637 mgkg-1 in rock samples. The statistical parameters (standard deviation, correlation coefficients, for estimation and confidence 2. interval for standard deviations) are made by linear regression method. The values reveal the accuracy and reliability of the proposed method for monitoring of U(VI) in underground water and rock samples. 5-10 **Keywords:** Differential pulse cathodic adsorptive stripping voltammetry, Uranium, Uranium (VI), rocks, underground ground water samples. References: 1. Sawant L. R, Kalsi P. K, Kulkarni A. V and Vaidyanathan S, J. Radioanal. Nucl. Chem. 207 (1996) 1 39-43.W.-K. Belmont, CA: Wadsworth, 1993, pp. 123-135. Chen, Linear Networks and Systems (Book style). Zamora M.L., Zielinski J.M, Meyerhof D.P, and Tracy B.L. German Federal Environment Agency 2005 48(2005) 7 822-

3. Shanon S. S, The and its Relation to the Nure Effort Symposium on Hydrochemical and HSSR Program Stream-Sediment Reconnaissance for Uranium in the United States Grand Junction (1977) 1.E. H. Miller, "A note on reflector arrays

(Periodical style—Accepted for publication)," IEEE Trans. Antennas Propagat., to be published.

- 4. Singhal R. K., Joshi V. M, Preetha J., Carped. R, Kumar A. and Hegde A. G. Water Air Soil Pollut.184 (2007) 17–27.C. J. Kaufman, Rocky Mountain Research Lab., Boulder, CO, private communication, May 1995.
- 5. WHO. Uranium in drinking water. Background Document for development of WHO guidelines for Drinking Water Quality;b. WHO/ SDE/03.04/118 (2005).M. Young, The Technical Writers Handbook. Mill Valley, CA: University Science, 1989
- 6. Lin L., Thongngamdee S., Wang J., Lin Y., Sadik O. A and Ly .S.Y. Anal. Chim. 535(2005) 9–13.J. Jones. (1991, May 10). Networks (2nd ed.) [Online]. Available: http://www.atm.com
- 7. Wise, S.S., Thompson W.D, Aboueissa A.M., Mason M.D, and Wise. J.P. Chem. Res. Toxicol. 20 (2007) 5 815-820.
- 8. Domingo J. L, Handbook of Hazardous Materials: Corn, M.W. (Ed.), Academic Press, London. 705 (1993) 11-15.
- 9. Lewis R. J, ax's Dangerous properties of Industrial Material, Van ostrand Reinhold, New York. A Textbook (1999).
- 10. Ku T. L, Knaus K.G and Mathieu. G.G, Fiji Deep Sea Res. 302 (1983) 603-606.
- 12. Holzbecher J and Ryan DE. Anal Chim Acta 119 (1980) 405-408.
- 13. Florence T.M. and Farrer Y., Anal. Chem. 35 (1963) 1613.
- 14. Li W.C, Victor D.M and Chakrabarti C.L, Anal. Chem. 52 (1980) 520.
- 16. Siek R.F, Richard J.J., Iverson K. and Barks C.V., Anal. Chem. 43 (1971) 913.
- 17. Marsh S.F., Bets M.R. and Rein J.E., Anal. Chim. Acta 119 (1980) 401.
- 18. Gholivand M. B and Rashidi Nassab H., Electroanalysis . 17 (2004) 719-723.
- 19. Farghaly O A. and Ghandour M. A.. Talanta. 49 (1999) 31-40.
- 20. Dostal J. Dupuy C(Nova Scotia, Canada) 45 (1983) 245-261
- 21. Oates. C. J. and Price. R. C, Geol. Soc. Aust., 30 (1983)1-2.
- 22. Pournaghi-Azar M.H and Zargharian, R. Anal.Chim.Acta.328(1996) 33-39.
- 23. Mieczyslaw.K, Katarzyna T and Malgorzata G. Talanta 72 (2007) 957–961.
- 24. National Primary Drinking Water Regulations. EpAs Drinking Water Standards. Wysiwyg://40// htt://www.epa.gov/safewater mcl.html.
- 25. www.hc-sc.gc.ca/ehd/catalogue/bch Guidelines for Canadian Drinking Water Quality http:// uranium.pd pubs/dwgsup-doc (2007).
- 26. Altschuler Z.S., Sepm Special Publication. 29 (1980) 19. 27.