

Volume 5 Issue 10, March 2016

**International Journal of Innovative
Technology and Exploring Engineering**

IJITEE

ISSN : 2278 - 3075

Website: www.ijitee.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

Email: director@blueeyesintelligence.org, blueeyes@gmail.com

Cell #: +91-9669981618, WhatsApp #: +91-9669981618, Viber #: +91-9669981618

Skype #: beiesp, Twitter #: beiesp

Editor In Chief

Dr. Shiv K Sahu

Ph.D. (CSE), M.Tech. (IT, Honors), B.Tech. (IT)

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

Dr. Shachi Sahu

Ph.D. (Chemistry), M.Sc. (Organic Chemistry)

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

Vice Editor In Chief

Dr. Vahid Nourani

Professor, Faculty of Civil Engineering, University of Tabriz, Iran

Prof.(Dr.) Anuranjan Misra

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

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, Uttarakhand, 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 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 Innovative Technology and Exploring Engineering (IJITEE)

Editorial Board

Dr. Saeed Balochian

Associate Professor, Gonaabad Branch, Islamic Azad University, Gonabad, Iratan

Dr. Mongey Ram

Associate Professor, Department of Mathematics, Graphics Era University, Dehradun, India

Dr. Arupratan Santra

Sr. Project Manager, Infosys Technologies Ltd, Hyderabad (A.P.)-500005, India

Dr. Ashish Jolly

Dean, Department of Computer Applications, Guru Nanak Khalsa Institute & Management Studies, Yamuna Nagar (Haryana), India

Dr. Israel Gonzalez Carrasco

Associate Professor, Department of Computer Science, Universidad Carlos III de Madrid, Leganes, Madrid, Spain

Dr. Guoxiang Liu

Member of IEEE, University of North Dakota, Grand Forks, N.D., USA

Dr. Khushali Menaria

Associate Professor, Department of Bio-Informatics, Maulana Azad National Institute of Technology (MANIT), Bhopal (M.P.), India

Dr. R. Sukumar

Professor, Sethu Institute of Technology, Pulloor, Kariapatti, Virudhunagar, Tamilnadu, India

Dr. Cherouat Abel

Professor, University of Technology of Troyes, France

Dr. Rinkle Aggrawal

Associate Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India

Dr. Parteek Bhatia

Associate Professor, Department of Computer Science & Engineering, Thapar University, Patiala (Punjab), India

Dr. Manish Srivastava

Professor & Head, Computer Science and Engineering, Guru Ghasidas Central University, Bilaspur (C.G.), India

Dr. B. P. Ladgaonkar

Assoc. Professor&Head, Department of Electronics, Shankarrao Mohite Mahavidyalaya, Akulj, Maharashtra, India

Dr. E. Mohan

Professor & Head, Department of Computer Science and Engineering, Pallavan College of Engineering, Kanchipuram, Tamilnadu, India

Dr. M. Shanmuga Priya

Assoc. Professor, Department of Biotechnology, MVJ College of Engineering, Bangalore Karnataka, India

Dr. Leena Jain

Assoc. Professor & Head, Dept. of Computer Applications, Global Institute of Management & Emerging Technologies, Amritsar, India

Dr. S.S.S.V Gopala Raju

Professor, Department of Civil Engineering, GITAM School of Technology, GITAM, University, Hyderabad, Andhra Pradesh, India

Dr. Ani Grubisic

Department of Computer Science, Teslina 12, 21000 split, Croatia

Dr. Ashish Paul

Associate Professor, Department of Basic Sciences (Mathematics), Assam Don Bosco University, Guwahati, India

Dr. Sivakumar Durairaj

Professor, Department of Civil Engineering, Vel Tech High Tech Dr.Rangarajan Dr.Sakunthala Engineering College, Avadi, Chennai Tamil Nadu, India

Dr. Rashmi Nigam

Associate Professor, Department of Applied Mathematics, UTI, RGPV, Airport Road, Bhopal, (M.P.), India

Dr. Mu-Song Chen

Associate Professor, Department of Electrical Engineering, Da-Yeh University, Rd., Dacun, Changhua 51591, Taiwan R.O.C., Taiwan, Republic of China

Dr. Ramesh S

Associate Professor, Department of Electronics & Communication Engineering, Dr. Ambedkar Institute of Technology, Bangalore, India

Dr. Nor Hayati Abdul Hamid

Associate Professor, Department of Civil Engineering, Universiti Teknologi Mara, Selangor, Malaysia

Dr. C.Nagarajan

Professor & Head, Department of Electrical & Electronic Engineering Muthayammal Engineering College, Rasipuram, Tamilnadu, India

Dr. Ilaria Cacciotti

Department of Industrial Engineering, University of Rome Tor Vergata Via del Politecnico Rome-Italy

Dr. V.Balaji

Principal Cum Professor, Department of EEE &E&I, Lord Ayyappa Institute of Engg & Tech, Uthukadu, Walajabad, Kanchipuram, Tamil Nadu, India

Dr. G. Anjan Babu

Assoc. Professor, Department of Computer Science, S V University, Tirupati, Andhra Pradesh, India

Dr. Damodar Reddy Edla

Assoc. Professor, Department of Computer Science & Engineering, National Institute of Technology, Goa, India

Dr. D.Arumuga Perumal

Professor, Department of Mechanical Engg, Noorul Islam University, Kanyakumari (Dist), Tamilnadu, India

Dr. Roshdy A. AbdelRassoul

Professor, Department of Electronics and Communications Engineering, Arab Academy for Science and Technology, Electronics and Communications Engineering Dept., POBox 1029, Abu-Qir, Alexandria, Egypt

Dr. Aniruddha Bhattacharya

Assoc. Professor & Head, Department of Computer Science & Engineering, Amrita School of Engineering, Bangalore, India

Dr. P Venkateswara Rao

Professor, Department of Mechanical Engineering, KITS, Warangal, Andhra Pradesh, India

Dr. V.Mahalakshmi M.L

Assoc. Professor & Head, Institute of Management Studies, Chennai CID Quarters, V.K.Iyer Road, Mandaveli, Chennai

S. No	Volume-5 Issue-10, March 2016, ISSN: 2278-3075 (Online) Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.		Page No.
1.	Authors:	Aliyeva Gulchohra Babali	1-8
Paper Title:	On the Definition Technology of Plan of Expression and Plan of Contents in Quantitative Categories within the Frame of Field Theory		
<p>Abstract: Development level of modern science of linguistics is characterized by increasing interest to the description of descriptive function of the language. That's why the attention of the investigators, having changed its orientation, has directed to the study of mutual correlations of elements of different language levels, taking part in conveying the contents of the utterance. This allows making the analysis possible not only directed from forms to contents, from means to functions, but also it makes it possible to carry out analysis directed from contents to the forms/from functions to the means. In order to study quantity semantics expressed by the word form, having the meaning of grammatical quantity, we think it purposeful to devide them into two groups – to the morphological and syntactic forms. Morphological quantity forms are peculiar to the substantivized words and nouns possessing correlative quantity forms. These forms reflect logical dependence on the real quantity of the intended object. But syntactic quantity forms are peculiar to the words of parts of speech, the word forms of which depend on the nouns grammatically and which reflect their quantity. Contents plan of the quantity field and the analysis of the expression plan, the unification of language means within the quantity macro-field bases on the extremely generalized meaning of the quantity. We can distinguish two types of nuclear of the objects in the field of quantity: grammatical category of quantity and number. The difference between their usages often bases on the definite and indefinite quantity meanings. The nuclear in the field of quantity of the movements manifest themselves in the form of word-forming affixes and lexical means. In the field of quantity of signs comparative degree as a grammatical category can be accepted as nuclear. By this time context plays an important role in the expression of this or that quantity meaning.</p> <p>Keywords: quantity, context, semantics, field theory, quantity field of the objects, quantity field of the movements, plan of the contents, expression plan.</p> <p>References:</p> <ol style="list-style-type: none"> Schoor GS. Field theory in linguistics. - M.: Nauka, 1974. - 225. Sossyur F. Course of general linguistics.- Works on linguistics. M.: 1977, p.146 Bondarko AV., Bulanin LL Russian glagol.- L.: 1967, p.18 Kholodovich AA Problems of grammatical theory. L. 1979, AC.109 Baudouin de Courtenay IA. Quantified in linguistic thinking // Selected works on general linguistics: Volume 2, Moscow, 1963, c.311-324 Nasilov DM. Problems Turkic aspectology: Aktsionalnost.L Science, 1989. -208 p. Chesnokov D. Number of categories and ways of expression in the modern Russian language // Taganrog, 1997, p.56 8.Menovschikov GA. Ways of expression of single and multiple languages in different types // Questions of linguistics. 1970. - №1, c.82-88. Van Mintz. The expression amount in the Russian language (From the position of the carrier of the Chinese language): Dis. ... Cand. Philology. Sciences: 10.02.01: Penza, 2004, 174. Hrakovsky V.S. Tipology of iterative constructions. L.: 1989 -309, s.5-53 			
2.	Authors:	Suman Mann	9-14
Paper Title:	Web Page Metrics: An Empirical Analysis to Improve the Quality of Web Page		
<p>Abstract: Web Metrics play an important role in measuring the different attributes of a website. It gives actual values of different attributes of website. It can be further used to distinguish between good site design and bad site design. The web page can be evaluated on the basis of different parameter like size of the page, quality of information load time, content available etc. Nowadays website and Internet are emerging media require improvement in their quality for better customer satisfaction. If the website has high page load time or have ambiguous script it results to freeze of web browser due to this user gets irritated and switch to another site. To improve the quality of website and for better understanding we need to measure the website design using the web page metrics. In this paper I gathered the data from Alexa Website and categorize them into good site design and bad site design on the basis of metrics. I have proposed 15 new metrics related to web page design. To achieve our goal we investigate 19 metrics. We present the conclusion of enumerative analysis of web page attributes. The end result of this paper can be used in reckonable studies in designing of web site.</p> <p>Keywords: Website; Metrics; Web page; Web page quality; Empirical Studies; Web Site Design.</p> <p>References:</p> <ol style="list-style-type: none"> Alexa.http://www.alex.com/. HTTP archive. http://httparchive.org/. A. Broder et al., " Graph structure in the web. Computer Networks", 33(1), June 2000. J. M. Kleinberg, S. R. Kumar, P. Raghavan, S. Rajagopalan et al., " The web as a graph: Measurements, models and methods",In Proc. COCOON, 1999. B. Krishnamurthy, C. E. Willis et al., " On the use and performance of content distribution network" In Proc. IMW, 2001 S. Singh et al. "Active measurement system for high-fidelity characterization of modern cloud applications" In Proc. USENIX Conference on Web Applications, 2010. F. Schneider, S. Agarwal, T. Alpcan et al., "The new Web: Characterizing AJAX traffic" In Proc. PAM, 2008. A. Nazir, S. Raza, D. Gupta, and B. Krishnamurthy, " Network level footprints of Facebook applications" In Proc. IMC, 2009. F. Schneider, A. Feldmann, B. Krishnamurthy et al, "Understanding online social network usage from a network perspective" In Proc. IMC, 2009. P. Gill, M. Arlitt, N. Carlsson and C. Williamson., "Characterizing Organizational Use of Web-based Services: Methodology, Challenges, Observations, and Insights" ACM TWEB, 2011. D. Fetterly and J. Wiener, " A large scale study of the evolution of web pages" In Proc. WWW, 2003. 			

	<p>12. Vincent Flanders and Michael Willis, "Web Pages That Suck: Learn Good Design by Looking at Bad Design" SYBEX, San Francisco, 1998.</p> <p>13. Jakob Nielsen, "The alertbox: Current issues in web usability", http://www.useit.com/alertbox.</p> <p>14. Jakob Nielsen, "User interface directions for the Web," Communications of the ACM, 42(1):65-72, January 1999.</p> <p>15. Jakob Nielsen, "Designing Web Usability: The Practice of Simplicity", New Riders Publishing, Indianapolis, IN, 2000.</p> <p>16. Karen A. Shriver, "Dynamics in Document Design", Wiley Computer Publishing, John Wiley & Sons, Inc., New York, 1997.</p> <p>17. Lincoln D. Stein, "The rating game", http://stein.cshl.org/lstein/rater/, 1997.</p> <p>18. George W. Furans, "Effective view navigation", in proceedings of ACM CHI 97 conference on human factors in computing systems, volume 1 of PAPERS: information structures, pp. 367-374, 1997.</p> <p>19. Kevin Larson and Mary Czerwinski., "Web page design: Implications of memory, structure and scent for information retrieval", In proceedings of ACM CHI 98 Conference on human Factors in Computing Systems, volume 1 of Web Page Design , pp. 25-32, 1998.</p>	
3.	<p>Authors: Hemaraju, Ranganatha S, Shashidhara K N</p>	
	<p>Paper Title: Studies on wear loss and Deformation Morphology in Three Body Abrasion</p>	
	<p>Abstract: Machineries which are used in industries involves relative motion between two components called elements. These relative motion between elements is required either to transfer force or motions. In some cases, example material conveying system, relative motions exists between material and conveyor. All the above cases give rise to discontinuities in velocity and displacements. These discontinuities results in volume loss of materials. Loss of materials give rise to loss of durability and reliability of machines. There will be a lot of thrust in reducing the new advanced machines due to loss of materials or wear. Understanding wear and controlling is a strong need for advanced and reliable design of machines. In the present investigation a basic systematic study has been carried out to understand the impact of material and its metallurgical phases on wear behavior. Rubber wheel abrader with different sized sand as abrader is used for conducting the experiments. CA 40 Steel (269 BHN), Alloy cast iron (450 BHN) Ni Hard cast iron (500 BHN) were used as target materials. Experiments were conducted with two loads 53.2 N and 102.4 N. The speed was maintained at 200 rpm. The time of test was 6 minutes, the flow rate was 100 grams/min. The wear loss was estimated and found that for CA 40 Steel was 0.15 at a normal load of 52.3 N and 0.21 at a load of 102.4 N. The wear loss was for ally cast iron is 0.07 and 0.08 which are comparable at two different normal loads. In case of Ni hard cast iron the wear loss was found to be 0.04 at a normal load of 53.2 N and 0.07 at a normal load of 102.4 N. the effect of normal load was found to be less for materials of higher hardness. The morphology of deformation was found to characterize the experimentally observed wear loss volume for material of different hardness.</p> <p>Keywords: Abrasive wear, Deformation, Hardness.</p> <p>References:</p> <ol style="list-style-type: none"> Bingley M.S, Schne., A study of the mechanisms of abrasive wear for ductile metals under wet and dry three body conditions. <i>Wear</i> 258 (2005) 50-61. Thakare. M.R. Wharton.J.A, Wood.R.J.K., Wood, C. Menger, Effect of abrasive particle size and the influence of microstructure on the wear mechanisms in wear-resistant materials. <i>Wear</i> 276-277 (2012) 16-18. Niko Ojala. Kati Valtonen., Vuokko Heino, Marke Kallio, Joonas Aaltonen, Pekka siitonen, Veli-tapani Kuokkala., Effects of composition and microstructure on the abrasive wear performance of quenched wear resistant steels. <i>Wear</i> 317 (2014) 225-232. Jonas allebert, Mikael Jungedal, Patric waara., Wear on overlay welded HCWI vs. quenched and tempered low alloyed carbon steels evaluated with granite in a laboratory drum test machine. <i>Wear</i> 330-331 (2015) 364-370. Xiaojun Xu, Sybrand van der Zwaag, Wei Xu, <i>Wear</i> 338-339 (2015) 47-53. Xiangtao Deng, Zhadong Wang, Yong Tian, Tianliang Fu, Guodong Wang. An investigation of mechanical property and three body impact abrasive wear behavior of a 0.27 % C dual phase steel. <i>Materials and Design</i> 49 (2013) 220-225. Ronaldo camara cozza., Third abrasive wear mode: is it possible? <i>J MATER RES TECHNOL</i> 2014; 3(2); 191-193. Basavaraju.M and Ranganatha.S, "Effect of material hardness and hard material surface morphology on friction and transfer layer formation; Dry condition. <i>IJRTE</i>, ISSN: 2277-3878, Volume 2, Issue-4, 2013, PP 40-46. Basavaraju.M and Ranganatha.S, "Effect of soft material hardness and material surface morphology on friction & transfer layer formation; Lubricated condition. <i>IJRTE</i>, ISSN: 2277-3878, Volume 2, Issue 4, 2013, PP 59-66. Hemaraju, Ranganatha.S, Shashidhara K.N., Role of hardness on abrasive wear modes in a three body wear. <i>IJRTE</i>. Vol-4, Issue 6,(2016), 40-46. Suresh gowda et al, 2016, Influence of ball material on deformation in non-confirming contact ball elements, <i>IJRTE</i>, Vol 1, 1-8. Suresh gowda et al, 2016, Basic studies on the role of softer metallic coatings in ball bearings. <i>IJITEE</i>, ISSN: 2278-3075, Volume 5, Issue-9, February 2016. Archard, J.F. 1953, Contact and rubbing surfaces, <i>J, Appl.Phys</i>,24,981-988 Bhansali, K.J. 1980 Wear coefficients of hard surfacing materials, in <i>wear control handbook</i>, Peterson M.B and Winer, W.O. (Eds), ASME , 373-383. Hirst, W. 1957, in proceedings of the conference on lubrication and wear, ImechE, London, 674 Hokkirigawa, K. 1997, Wear maps of ceramics, <i>Bulletin of the ceramic society of japan</i>,1, 19-24. Holm, R. 1946, Electric contact. Almqvist and Wiksells, Stockholm, Section 40. Lancaster, J.K 1978, <i>Trans. Inst. Metal Finish.</i> 56,4,145. Rabinowicz, E. 1980, Wear coefficients – metals, <i>wear control hand book</i>, Peterson M.B and Winer, W.O. (Eds), ASME , 475. Kozi Kato, Koshi Adachi. <i>Wear Mechanisms</i>. CRC press LLC (2001). 	15-21
4.	<p>Authors: Cyrus Babu Ong'ondo</p>	
	<p>Paper Title: Communication Management Practice for Better Project Controls in the Construction Industry of Kenya: Industry Players' Perspective</p>	
	<p>Abstract: Communication plays an important role in integrating people, and taking decisions to make project control process a success. However, what constitutes effective communication is lacking as evidenced by failure of projects during implementation. In the construction industry of Kenya for example, several studies have alluded to poor communication within projects as one of the causes of poor project performance during implementation pointing to a missing link between what constitutes effective communication on one hand and its application in the management of projects on the other hand. This study therefore, sought to investigate communication management in the construction industry of kenya, with emphasis on its adequacy. A mixed-method design was used consisting of analysis of a questionnaire survey and interviews with subject matter experts. Data was collected from active 95No.</p>	22-26

(NCA1, NCA2 and NCA3) contractors selected by way of stratified random sampling. A similar approach was also used to select 92No.Consultants with a response rate of 54.73% and 46.73% respectively. In addition, 11No.practitioners were interviewed in the current study. The study established six (6No.) issues that need to be given careful attention when managing communication during projects implementation. The issues in order of importance include; Quality of decision making process (RII=0.900), Change approval procedure (RII=0.835), Quality & frequency of project meetings (RII=0.825), Update of project plans (RII=0.811), Project vision (RII=0.799) and progress reporting system(RII=0.636). The study concludes by compiling views of the practitioners on what they consider good practice in improving communication management practice. The study recommends the use of the good-practice checklist developed for better communication management in projects.

Keywords: Communication, Management, construction industry, good-Practice checklist, Kenya

References:

1. Akintoye, A. (2007). Collaborative relationships in construction-The UK contractor's perception. *Engineering, Construction and Architectural Management*.
2. Atkinson, R. (1999). Project management: Cost, time and quality, two best guesses and a phenomena. its time to accept other success criteria. *International Journal of Project Management*, Vol 17, Issue 6 December, 1999, Pages 337-342..
3. Chandara, P. (2002). *Projects Planning, Financing, Implementation and Review*. Tata: McGraw-Hill Publishing Company.
4. Chitkara, K. (2002). *Construction Project Management Planning, Scheduling and Control*. Hill Publishing Company Ltd.
5. Christenson, D. (2008). Using vision as a critical Success element in Project Management. *International Journal of Project Management*.
6. Cooke, B. W. (2004). *Construction Planning Programming and Control*. Oxford: Blackwell Publishing.
7. Cooke-Davies, T. (2002). "The real success factors on projects. *International Journal of Project Management*.
8. Egbu, C. (1998). "Planning and Control processes and techniques for refurbishment management." *Construction Management and Economics*, 16(3),315-325.
9. Fena-Mora, F. (2001). Dynamic Planning and control methodology for design/build fast-track construction projects. *Journal of Construction Engineering and Management*, 127(1),1-17.
10. Floyd, L. (2004). " Application of appropriate control tools for contract type". *Cost Engineering*, 46(2),25-30.
11. Forsythe, P. (2008). Modeling customer perceived quality in housing. *International journal of project management*, Elsevier Science Ltd and IPMA.
12. Fortune, J. (2006). Framing of critical success factors by a systems model. *International Journal of Project Management*, Elsevier Science Ltd and IPMA.
13. Frimpong, Y. (2003). Delay and cost overruns in Construction of Ground water Projects in developing countries. *International Journal of Project Management*, 21,321-326.
14. George, R. (2008). Critical activities in front End planning process. *Journal of Management of Engineering*.
15. Gichunge, H. (2000). Risk management in the Building Industry in Kenya. Unpublished PHD. Thesis. University of Nairobi.
16. Goodman, L. (1988). *Project Planning and Management-an integrated system for improving productivity*. New York: Van Nostrand Reinhold Company Inc.
17. Greer, M. (1999). *Handbook of Human performance Technology*. San Francisco: Jossey-Bas.
18. Gwaya, A. (2014). Development of appropriate project management factors for the construction industry in Kenya. *International Journal of Soft Computing and Engineering (IJSCE)*, ISSN:2231-2307, Vol 4, Issue 1.
19. Hendrickson. (1999). Causes of Delay in Construction. *Journal of Construction Engineering and Management*, Vol 134, issue 11, p831.
20. Hillebrandt, P. (2000). *Economic theory and the construction Industry*. 3rd Edition. London: Macmillan.
21. Iyer, K. J. (2005). Factors affecting cost performance evidence from indian construction projects. *International journal of project management*, 23 (4),283-295.
22. Jackson, B. (2004). *Construction Management Jump Start*. CA: Sybex Incorporated Alaneda.
23. Johnson, G. (2006). *Exploring Corporate Strategy 7th Edition*. London: Pearson Education.
24. Kagiri, N. (2005). Time and Cost overrun in Power projects in Kenya: A case study of Kenya Electricity Generating Company Ltd. Unpublished MBA Thesis. University of Nairobi.
25. Kaming, P. (1997). Factors Influencing Construction Time and Cost Overruns on High-Rise Projects in Indonesia. *Journal of Construction Management and Economics*, 7,83-94.
26. Kenny, C. (2007). *Construction, Corruption and developing countries*. World Bank policy Research working paper.
27. Kerzner, H. (2006). *Project Management: A systems Approach to Planning, Scheduling and Controlling 9th Edition*. John Wiley & Sons publications.
28. Kongere, N. S. (2010). *Project Management, From Design to Implementation*. Nairobi: Richmond Designers and Printers.
29. Lester, A. (2000). *Project Planning and Control*. Oxford: Butterworth Heinemann.
30. Lindahl, G. (2007). Client's goals and the Construction Project Management Process. *Journal of Construction Management and Economics*.
31. Ling, F. (2009). How Project Managers can better control the performance of design build projects. *International Journal of Project Management*, 22(6),477-488.
32. Masu, S. (2006). An investigation into the causes and impact of resource mix practices in the performance of construction firms in Kenya. Nairobi: Unpublished Phd. Thesis. University of Nairobi.
33. Morris, S. (1990). *Cost and Time Overruns in Public Sector Projects*.
34. Muchungu, P. (2012). The contribution of human factors in the performance of construction projects in kenya. Nairobi: Unpublished Phd. Thesis. University of Nairobi.
35. Munano, A. (2012). *Pre-construction Planning: Exploring the factors that influence timelines of project completion for public sectors buildings in Kenya*. Unpublished Master of Construction Management Thesis. Jomo Kenyatta University.
36. Musa, G. (1999). Determination of Factors Influencing Projects Delays in Water Projects in Kenya: The case of Government Funded Projects. Nairobi: Unpublished MBA Thesis University of Nairobi.
37. Mwandali, D. (1996). Analysis of Major Factors that affect Projects Management: A Case of Kenya Railways Projects. Nairobi: Unpublished MBA Thesis, University of Nairobi.
38. Nguyen, A. (2004). A study on Project success factors in large construction projects in Vietnam.
39. Nicholas, J. (2001). *Project Management for Business and Technology*. New Jersey: Prentice Hall.
40. Olawale, Y. a. (2010). "Cost and time control of construction projects: Inhibiting factors and mitigating measures in practice". *Construction Management and Economics*, 28 (5),509-526.
41. Pellicer, E. (2005). Cost control in Consulting engineering firms. *Journal of Management in Engineering*, 21 (4),189-192.
42. Project Management Institute. (2013). *PMBOK: A guide to the Project Management Book of Knowledge*. Project Management Institute.
43. Rozenes, S. (2006). "Project Control: Literature review". *Project Management Journal*, 37(4) 4-14.
44. Samuelson, W. (2006). *Managerial Economics*. 5th Edition. New Jersey: John Wiley & Sons.
45. Talukhaba, A. (1998). Time and Cost Performance of Construction Projects. Nairobi: Unpublished M.A. Thesis, University of Nairobi.
46. Tucker, L. A. (1987). Is Construction Project planning really doing its job?. A critical focus, role and progress in the construction management economic. Vol 5,243-266.
47. Wanyona, G. (2005). Risk Management in the cost planning and control of building projects. The case of quantity Surveying profession in Kenya. Unpublished PhD Thesis. University of Cape Town.

	<p>48. White, D. F. (2002). Current practice in project management-An Emperical study. International Journal of Project Management, 20(2),1-11.</p> <p>49. Yakubu, O. a. (2009). Cost and time control of construction projects: A survey of Contractors and Consultants. Construction Information Quarterly, , 11(2),53-59.</p> <p>50. Zhen Yu, Z. (2010). Application of innovative Critical Chain Method for project planning and control. Journal of Construction Engineering and Management.</p>					
5.	<table border="1"> <tr> <td>Authors:</td> <td>Kamalkishor G. Maniyar, Swapnil K. Agrawal, D. S. Ingole</td> </tr> <tr> <td>Paper Title:</td> <td>Optimization of Multiple Performance Characteristics in EDM: A Critical Literature Review</td> </tr> </table> <p>Abstract: Electrical discharge machining (EDM) plays a very important role in manufacturing industries for shaping hard metals and alloys. Optimization is one of the techniques used in manufacturing sectors to arrive for the best manufacturing conditions, which is an essential need for industries towards manufacturing of quality products at lower cost. [14] EDM performance is evaluated on the basis of multiple performance characteristics. The objective of this paper work is to study optimization of multiple performance characteristics in EDM. A sufficient amount of research work has been described by the researchers on the evaluation of EDM performance on the basis of multiple performance characteristics for various materials. Design of experiment (DOE) is very useful in the analyzing the optimum condition of parameters, main effect, and the significance of individual parameter to machining characteristics for various materials. In a vision of above, this paper work presents a critical literature review on optimization of multiple performance characteristics in EDM.</p> <p>Keywords: EDM Parameters, EDM Characteristics, DOE Method</p> <p>References:</p> <ol style="list-style-type: none"> 1. Yan Cherng Lin, Biing Hwa, Yong Song Chang “Machining characteristics of titanium alloy (Ti-6Al-4V) using a combination of process of EDM with USM”, Journal of Material Processing Technology, vol.104, 2000, pp. 171-177. 2. S.H. Lee, and X.P. Li, “Study of the effect of machining parameters on the machining characteristics in electrical discharge machining of tungsten carbide”, Journal of Materials Processing Technology, vol. 115(3), 2001, pp. 344-358. 3. B. Mohan, A. Rajadurai, and K.G. Satyanarayana, “Effect of sic and rotation of electrode on electric discharge machining of Al-sic composite”, Journal of Materials Processing Technology, vol. 124(3), 2002, pp. 297-304. 4. H. C. Tsai, B. H. Yan, F. Y. Huang, “EDM performance of Cr/Cu based composite materials”, International Journal of Machine Tools & Manufacture, vol. 43, 2003, pp. 242-252. 5. Puertas, L., Luis, C.J., and Alvarez, L. “Analysis of the Influence of EDM Parameters on Surface Quality, MRR and EW of WC-Co”, Journal of Material Processing Technology, 2004. 6. H. K. Kansal, Sehjpal Singh, and P. Kumar, “Developed of Powder Mixed Electrical Discharge Machining (PMEDM) Process”, 14th ISME International Conference on Mechanical Engineering in Knowledge Age December 12-14, 2005. 7. Y. Lin, C. Cheng, and L. Hwang, “Machining characteristics and optimization of machining parameters of SKH 57 high-speed steel using electrical-discharge machining based on Taguchi method”, Materials and Manufacturing Processes, vol. 21(8), 2006, pp. 922- 929. 8. S. Dhar, R. Purohit, N. Saini and G.H. Kumar, “Mathematical modeling of electric discharge machining of cast Al-4Cu-6Si alloy-10 wt.% sicp composites”, Journal of Materials Processing Technology, vol. 193(1-3), 2007, pp. 24-29. 9. A A. Khan, “Electrode wear and material removal rate during EDM of aluminum and mild steel using copper and brass electrodes”, International Journal of Advanced Manufacturing Technology, 2008, vol. 39, pp. 482-487. 10. Yan Cherng Lin, Yuan Feng Chen, Der An Wang, Ho Shiun Lee, “Optimization of machining parameters in magnetic force assisted EDM based on Taguchi method”, Journal of Material Processing Technology, 2009, vol. 209, pp. 3347-3383. 11. Rajesh Choudhary, H. Kumar, and R K Garg, “Analysis and evaluation of heat affected zones in electric discharge machining of EN-31 die steel”, Indian Journal of Engineering & Materials Sciences, 2010, Vol. 17, pp. 91-98. 12. N Natarajan, and R M Arunchalam, “Optimization of micro- EDM with multiple performance characteristics using Taguchi method and Grey relational analysis”, Journal of Scientific & Industrial Research, 2011, vol. 70, pp. 500-505. 13. Pushpendra S. Bharati, S. Maheshwari and C. Sharma, “Multi- objective optimization of electric- discharge machining process using controlled elitist NSGA-II”, Journal of Mechanical Sciences and Technology, 2012, vol. 26(6), pp. 1875-1883. 14. Raghuraman S. Thirupathi K. Paneerselvam T., Santosh S., “Optimization of EDM parameters using Taguchi method and Grey relational analysis for mild steel IS 2026”, International Journal of Innovative Research in Science, Engineering and Technology, 2013, vol. 2, Issue 7. 15. Sureshkumar S., Uthayakuma M., Thirumalai Kumaran S.,Parameswaran P., and Mohandas E., “Electrical Discharge machining of Al (6351)- 5% SiC-10 % B₄C Hybrid Composite : A Grey Relational Approach”, Hindawi Publishing Corporation Modeling and Simulation in Engineering, Volume 2014Article ID426718, 7 pages. 	Authors:	Kamalkishor G. Maniyar, Swapnil K. Agrawal, D. S. Ingole	Paper Title:	Optimization of Multiple Performance Characteristics in EDM: A Critical Literature Review	27-32
Authors:	Kamalkishor G. Maniyar, Swapnil K. Agrawal, D. S. Ingole					
Paper Title:	Optimization of Multiple Performance Characteristics in EDM: A Critical Literature Review					
6.	<table border="1"> <tr> <td>Authors:</td> <td>Akhilesh Kumar Pandey, Rajeev Singh</td> </tr> <tr> <td>Paper Title:</td> <td>CPW-Fed Band Pass Filter for GSM Application</td> </tr> </table> <p>Abstract: A novel band pass filter of a coplanar waveguide fed planar patch is proposed for Global System for Mobile Communication (GSM) (880-965 MHz) applications and is simulated by means of AWR (Microwave Wave Office) and results are compared with ideal transmission line model, balance strip model and lumped element model for GSM applications. Simulated results of insertion loss and transmission loss of models have been discussed.</p> <p>Keywords: Coplanar plane wave guide (CPW); Micro strip antenna; Band pass filter; Lumped-Distributed element; AWR.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Y.H. Cho, I.S. Jeon, X.G. Wang, S.W. Yun, Balanced dual-band bandpass filter using microstrip resonator loaded with lumped-elements, IEEE CONFERENCE. (2011) 1286 – 1289. 2. M. D. Sindreu, J. Bonache, F. Martín, Compact CPW dual-band bandpass filters based on semi-lumped elements and metamaterial concepts, IEEE CONFERENCE. (2010) 670 – 673. 3. J. Bonache, I. Gil, J. G.Garcia, F. Martín, Compact microstrip band-pass filters based on semi-lumped resonators, IET Microwaves. Antennas & Propagation. 1 (4) (2007) 932 – 936. 4. R. Sorokin, Waveguide band-pass filters on the lumped elements, IEEE Conference, (2001) 119 -120. 5. L. Hepburn, J. Hong, Compact integrated lumped element LCP filter, IEEE Microwave and Wireless Components Letters. 26 (1) (2015) 19-21. 6. J. Rhodes, Design formulas for stepped impedance distributed and digital wave maximally flat and Chebyshev low-pass prototype filters, IEEE Transactions on Circuits and Systems. 22 (11) (1975) 866 - 874. 7. M. F. Karim, A. Q. Liu, A. Alphones, X. J. Zhang, CPW band-stop filter using unloaded and loaded EBG structures, IEE Proceedings – 	Authors:	Akhilesh Kumar Pandey, Rajeev Singh	Paper Title:	CPW-Fed Band Pass Filter for GSM Application	33-38
Authors:	Akhilesh Kumar Pandey, Rajeev Singh					
Paper Title:	CPW-Fed Band Pass Filter for GSM Application					

	<p>Microwaves. Antennas and Propagation. 152 (6) (2005) 434 -440.</p> <p>8. M. Soliman, Conversion of a band-pass resonator to an all-pass or a notch filter, International Journal of Electronics. 38 (4) (1975) 559-562.</p> <p>9. L. A. Khateeb, O. A. Safia, Dual-band bandpass filter based on CPW series-connected resonators, Electronics Letters. 49 (12) (2013) 761 – 762.</p> <p>10. J. S. Kwak, J. H. Lee, J.P. Hong, S. K. Han, Narrow pass band high-temperature superconducting filters of highly compact sizes for personal communication service applications, IEEE Transactions on Applied Superconductivity. 13 (1) (2003) 17 –19.</p> <p>11. M.A. Morgan, T. A. Boyd, theoretical and experimental study of a new class of reflection less filter, IEEE Transactions on Microwave Theory and Techniques. 59 (5) (2011) 1214 –1221.</p> <p>12. R. Djordjevic, A. G. Zajic, Low-reflection band pass filters with a flat group delay, IEEE Transactions on Microwave Theory and Techniques. 53 (4) (2005) 1164 – 1167.</p> <p>13. J. Lu, D. La, Novel band-pass filters using E-shape resonator, Journal of Electromagnetic Waves and Applications. IEEE Transactions on Microwave Theory and Techniques. 27 (4) (2013) 458-463.</p> <p>14. K. KAMAL, S. C. Gupta, N. K. Agrawal, K. Singh, Design of band-pass wideband microwave filters in X-band and their use as time-delay filters, International Journal of Electronics. 22 (11) (1976) 723-727.</p> <p>15. K. N. SHAMANNA, V. S. RAO, S. P. KOSTA, Design of parallel coupled microstrip band-pass filters, IEEE Transactions on Microwave Theory and Techniques. (1977) 89-96.</p> <p>16. K. Tiwary, N. Gupta, Performance of microstrip low-pass filter on electromagnetic band gap ground Plane, IETE Journal of Research. 56 (5) (2010) 230-234.</p> <p>17. D. Pozar, Microwave Engineering, 2nd Edition. J. Wiley. 1998</p>	
--	---	--