

**Volume 1 Issue 2, January 2013**

**International Journal of Inventive  
Engineering and Sciences**

**ISSN : 2319-9598**

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



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

**Address:**

# 22, First Floor, ShivLoka Phase-IV,

Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India

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

Email: [director@blueeyesintelligence.org](mailto:director@blueeyesintelligence.org), [blueeyes@gmail.com](mailto:blueeyes@gmail.com)

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

Skype #: beiesp, Twitter #: beiesp

## **Editor In Chief**

### **Dr. Shiv K Sahu**

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

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

### **Dr. Shachi Sahu**

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

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

## **Vice Editor In Chief**

### **Dr. Himani Sharma**

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

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

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

## **Chief Advisory Board**

### **Prof. (Dr.) Hamid Saremi**

Vice Chancellor of Islamic Azad University of Iran, Quchan Branch, Quchan-Iran

### **Dr. Uma Shanker**

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

### **Dr. Rama Shanker**

Professor & Head, Department of Statistics, Eritrea Institute of Technology, Asmara, Eritrea

### **Dr. Vinita Kumari**

Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., India

### **Dr. Kapil Kumar Bansal**

Head (Research and Publication), SRM University, Gaziabad (U.P.), India

### **Dr. Deepak Garg**

Professor, Department of Computer Science and Engineering, Thapar University, Patiala (Punjab), India, Senior Member of IEEE, Secretary of IEEE Computer Society (Delhi Section), Life Member of Computer Society of India (CSI), Indian Society of Technical Education (ISTE), Indian Science Congress Association Kolkata.

### **Dr. Vijay Anant Athavale**

Director of SVS Group of Institutions, Mawana, Meerut (U.P.) India/ U.P. Technical University, India

### **Dr. T.C. Manjunath**

Principal & Professor, HKBK College of Engg, Nagawara, Arabic College Road, Bengaluru-560045, Karnataka, India

### **Dr. Kosta Yogeshwar Prasad**

Director, Technical Campus, Marwadi Education Foundation's Group of Institutions, Rajkot-Morbi Highway, Gauridad, 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, 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 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, Brahmasantham, Edappally, Cochin, Kerala, India

**Dr. Sangkyun Kim**

Professor, Department of Industrial Engineering, Kangwon National University, Hyoja 2 dong, Chuncheon, Gangwon-do, Korea

**Dr. Sanjay M. Gulhane**

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

**Dr. K.K. Thyagarajan**

Principal & Professor, Department of Information Technology, RMK College of Engineering & Technology, RSM Nagar, Thiruvallur, 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 Advanced Engineering and Nano Technology (IJAENT)

**Editorial Board**

**Dr. Vikas Maheshwari**

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

**Dr. Sudhakara A**

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

**Dr. Jammi Ashok**

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

**Dr. Mohamed Ashabrawy**

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

**Dr. Omer Muhammad Ayoub**

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

**Dr. M. Seenivasan**

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

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

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

**Dr. S. Omkumar**

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

**Dr. Yousef FARHAOU**

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

**Dr. Gutta Sridevi**

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

**Dr. Debmalya Bhattacharya**

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

**Dr. K. Harinadha Reddy**

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



**Dr. C. Gajendran**

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

**Dr. Dibya Prakash Rai**

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

**Dr. Sreenivasa Reddy**

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

**Dr. P. K. Dhal**

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

**Dr. M. A. Ashabrawy**

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

**Dr. K. Meenakshi Sundaram**

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

**Dr. Persis Voola**

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

**Dr. Abhijit Banerjee**

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

**Dr. D. Amaranatha Reddy**

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

**Dr. A. Heidari**

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

**Dr. Ashwani Kumar Aggarwal**

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

**Dr. P. Srinivas**

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

**Dr. Sandeep Chettri**

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

**Dr. Elsanosy M. Elamin**

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

**Dr. Porag Kalita**

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

**Dr. T. A. Ashok Kumar**

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

**Dr. Malini M Patil**

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

**Dr. V. Selvan**

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

**Dr. Syed Umar**

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

S. N o	<b>Volume-1 Issue-2, January 2013, ISSN: 2319-9598 (Online)</b> <b>Published By: Blue Eyes Intelligence Engineering &amp; Sciences Publication Pvt. Ltd.</b>		Page No.
1.	<b>Authors:</b>	<b>Sandeep G. Sawant, A. B. Sawant, M. B. Kumthekar</b>	
	<b>Paper Title:</b>	<b>Strengthening of R.C.C. Beam- Using Different Glass Fiber</b>	
	<p><b>Abstract:</b> Worldwide, a great deal of research is currently being conducted concerning the use of fiber reinforced polymer wraps, laminates and sheets in the repair and strengthening of reinforced concrete members. Fiber-reinforced polymer (FRP) application is a very effective way to repair and strengthen structures that have become structurally weak over their life span. FRP repair systems provide an economically viable alternative to traditional repair systems and materials. Experimental data on load, deflection and failure modes of each of the beams were obtained. The detail procedure and application of GFRP sheets for strengthening of RC beams is also included. The effect of number of GFRP layers and its orientation on ultimate load carrying capacity and failure mode of the beams are investigate.</p> <p><b>Keywords:</b> FRP, GFRP, Retrofitting</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. ACI 440-2R-08- Guide for the Design and Construction of Externally Bonded FRP Systems for Strengthening Concrete Structures.</li> <li>2. Fib-Externally bonded FRP reinforcement for RC structure</li> <li>3. IS 10262- 2007 Recommended Guidelines for Concrete Mix Design</li> <li>4. IS 456- 2000 Plain and Reinforced Concrete - Code of Practice</li> <li>5. IS 516- 1959 Methods of Tests for Strength of Concrete</li> <li>6. Lawrence C. Bank “Composites for Construction Structural Design with FRP Materials” (2006)</li> <li>7. M. L. Gambhir, Concrete Technology (3rd Edition), Published by The McGraw-Hill Companies, New Delhi</li> <li>8. M. S. Shetty, Concrete Technology Theory &amp; Practice, Published by S. CHAND &amp; Company, Ram Nagar, New Delhi</li> <li>9. C.P. Pantelides and J. Gergely. “Seismic Retrofit of Reinforced Concrete Beam- Column T-Joints in Bridge Piers with FRP Composite Jackets” [2005]</li> <li>10. Frederick T. Wallenberger, James C. Watson, and Hong Li, “Glass Fibers” PPG Industries, Inc.</li> <li>11. Giuseppe Oliveto and Massimo Marletta. “Seismic retrofitting of reinforced concrete building using traditional and innovative techniques”. University of Catania, Italy. ISET Journal of Earthquake Technology, Paper No. 454, Vol. 42, No. June-September 2005, pp. 21-46</li> <li>12. Guidelines for retrofit of concrete structures. Translation from the CONCRETE LIBRARY No.95 published by JSCE, September 1999)</li> <li>13. M. A. A. Saafan. ‘ Shear Strengthening of Reinforced Concrete Beams Using GFRP Wraps’ Czech Technical University in Prague Acta Polytechnica Vol. 46 No. 1/2006</li> <li>14. Marvin W. Halling, Kevin C. Womack, “Retrofit of existing concrete beam-column Joints using advanced carbon-fiber composites”. Utah State University .Logan, Utah[April 2008]</li> <li>15. Patil S.S. “Shear strengthening of RC beam using carbon fiber reinforced polymer composite.”University of Mumbai [2010]</li> <li>16. S. K. Bhattacharyya. “Retrofitting of building structures damaged due to earthquake”. Department of Civil Engineering. IIT, Kharagpur.</li> <li>17. Suresh Chandra Pattanaik. “Structural stenthening of damaged R.C.C. structures with polymer modified concrete”. Dr Fixit Institute of Structural Protection and rehabilitation, C/O-Pidilite Industries Limited, Mumbai[2009]</li> <li>18. T. Jeff Guh, Ph.D., S.E.1 and Arash Altoontash, Ph.D., P.E.2. “Seismic retrofit of historic building structures”. San Francisco, California, USA. April 18-22, 2006,</li> <li>19. Triantafillou, T. C.,1998 “Shear Strengthening of Reinforced Concrete Beams Using Epoxy- Bonded FRP Composites,” ACI Structural Journal, V. 95, No. 2, Mar.-Apr. 1998, pp. 107-115.</li> <li>20. www.glass-fiber.net</li> <li>21. www.reasins.com</li> <li>22. www.retrofitting.com</li> </ol>		1-8
2.	<b>Authors:</b>	<b>A. B. Sawant, M. B. Kumthekar, S. G. Sawant</b>	
	<b>Paper Title:</b>	<b>Utilization of Neutralized Red Mud (Industrial Waste) in Concrete</b>	
	<p><b>Abstract:</b> Sustainable industrial development causes accumulation of heaps of waste disturbing the natural mechanism the waste can be sometime best alternative for conventional; material like red mud. Red mud is industrial waste obtained as by product from Bayer method of alluminium extraction in this process, alkaline digestion of 2.5 T of bauxite affords alumina &amp; 105 T of red mud. The average 4 million tones of red mud produces per annum, this amount composed of Fe &amp; Ti oxides behaving as chemically inert material with variable percentage of nominal SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> &amp; Na<sub>2</sub>O<sub>3</sub> which are partly present in cement. This paper covers significance of red mud over Portland cement by partial replacement of cement up to certain extent.</p> <p><b>Keywords:</b> Industrial development, industrial waste, red mud.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J. Pera, R. Boumaza and J. Ambroise, ‘Development of a pozzolanic pigment from red mud Cement and Concrete Research’, Volume 27, Issue 10, October 1997, Pages 1513-1522.</li> <li>2. P.E. Tsakiridis, S. Agatzini-Leonardou and P. Oustadakis, ‘Red mud addition in the raw meal for the production of Portland cement clinker’, Journal of Hazardous Materials, Volume 116, Issues 1-2, 10 December 2004, Pages 103-110.</li> <li>3. Paramguru, R.K., Rath, P.C., Misra, V.N., ‘Trends in red mud utilization - A review’, Miner. Process Extr. Metal. Rev. 26(1), (2005), 1-29.</li> <li>4. Venkatarama Reddy, B. V., Rao, S. M. and Arun Kumar, M. K., ‘Characteristics of stabilized mud blocks using ash modified soils’, Indian Concrete Journal, 2003, 77, 903–911.</li> <li>5. Yogananda, M. R. and Jagadish, K. S., ‘Possolanic properties of rice husk ash, burnt clay and red mud’, Build Environ, 1988, 23, 304–308.</li> <li>6. New construction materials in India, RMP Corrugated roofing Sheets’, Civil Engineering and construction Review 2002.</li> <li>7. Cement News, ‘Cement Production’, International cement review, August 2009.</li> <li>8. Dr. K. K. Jain, S. K. Singh and Laljee Sahu, ‘The Geo Technical properties of Red Mud and Red Mud Lime Mixtures’, Indian Highways, October 2001.</li> <li>9. Dr. R. P. Joshi, V.G.M. Desai and B. S. Setty, ‘The use of locally available materials for low cost housing’, Proceeding of</li> </ol>		9-13

	<p>National seminar on 'Recent advances in low cost building material and technology', Anantapur 1992.</p> <p>10. Dr. Y. P. Kakar, 'Management of Industrial Solid Waste Need for Recycling', Civil Engineering &amp; Construction Review, February 1998</p> <p>11. Guelensoy, Huseyin, Mahramanoglu, Mehmet. , 'Studies on the strengths of concretes produced from cements prepared with the addition of red mud', Cimento ve Beton Dunyasi (1996), 1(3), 17-21</p> <p>12. Mohan Rai, M. P. Jaising, CBRI Rookee, 'Advances in Building Materials and Construction'.</p>	
3.	<b>Authors:</b>	<b>Rajesh Nema, Rajeev Thakur, Ruchi Gupta</b>
	<b>Paper Title:</b>	<b>Design &amp; Implementation of FPGA Based on PID Controller</b>
	<p><b>Abstract:</b> Proportional-Integral-Derivative controllers are universal control structure and have widely used in Automation systems, they are usually implemented either in hardware using analog components or in software using Computer-based systems. In this paper, we focused our works designing on building a multi-channel PID controller by Field Programmable Gate Arrays (FPGAs). To overcome the hardware complexity by the use of more processors for multi channel, we are using single PID controller for multi channel .Multi channel can be implemented by the use of FPGA.when the error is more it can differentiate and produce the constant output, when signal is low when compared to reference signal it can integrate it.FPGA can offer parallel processing, more speed.</p> <p><b>Keywords:</b> FPGA, PID, PWM, SENSOR.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Efficient Dynamic System Implementation Of Fpga Based Pid Control Algorithm For Temperature Control System. Volume 3, Issue 2, July – September (2012), pp. 306-312</li> <li>2. High-Speed and Low-Power PID Structures for Embedded Applications PATMOS'11. Madrid: Spain (2011)"</li> <li>3. ISSN 0974-2190 Volume 2, Number 1 (2010), pp. 71--82 Analysis and Implementation of Discrete Time PID Controllers using FPGA</li> <li>4. FPGA technology for multi-axis control systems Armando Astarloa*, Jesús Lázaro, Unai Bidarte, Jaime Jiménez, Aitzol Zuloaga Accepted 1 September 2008</li> <li>5. Design and Implementation of Modular FPGA-Based PID Controllers, Yuen Fong Chan, M. Moallem, Member, IEEE, and Wei Wang, Member, IEEE-2007.</li> <li>6. Simulink/Modelsim Simulable VHDL PID Core for Industrial SoPC Multiaxis Controllers Jesús Lázaro, Armando Astarloa, Jagoba Arias, Unai Bidarte, Aitzol Zuloaga IEEE-2006.</li> <li>7. Xilinx Corp. Multipliers.</li> <li>8. National Semiconductor. LMD18245 3A, 55V DMOS Full- Bridge Motor D</li> </ol>	14-16
4.	<b>Authors:</b>	<b>VPS Naidu, Bindu Elias</b>
	<b>Paper Title:</b>	<b>A Novel Image Fusion Technique using DCT based Laplacian Pyramid</b>
	<p><b>Abstract:</b> A novel image fusion technique using discrete Cosine transform (DCT) based laplacian pyramid is presented and studied. It is concluded that fusion with higher level of pyramid provides better fusion quality. The execution time is proportional to the number of pyramid levels used in the fusion process. This technique can be used for fusion of complementary information images as well as multi model image fusion. The proposed algorithm is very simple, easy to implement and could be used for real time applications. MATLAB code has been provided for quick implementation and validation of the proposed algorithm.</p> <p><b>Keywords:</b> Image fusion, DCT, Pyramids.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. H. Li, B.S. Manjunath and S.K. Mitra, "Multisensor image fusion using wavelet transform", Graph. Models Image Process, 57(3), pp.235-245, 1995.</li> <li>2. VPS Naidu and J.R. Raol, "Pixel-Level Image Fusion using Wavelets and Principal Component Analysis – A Comparative Analysis" Defence Science Journal, Vol.58, No.3, pp.338-352, May 2008</li> <li>3. A. Toet, L.J. Van Ruyven and J.M. Valette, "Merging thermal and visual images by a contrast pyramid", Opt. Eng. 28(7), pp.789-792, 1989.</li> <li>4. Rick S. Blum, "Robust image fusion using a statistical signal processing approach", Image Fusion, 6, pp.119-128, 2005.</li> <li>5. VPS Naidu, "Discrete Cosine Transform-based Image Fusion", Special Issue on Mobile Intelligent Autonomous System, Defence Science Journal, Vol. 60, No.1, pp.48-54, Jan. 2010.</li> <li>6. N. Ahmed, T. Natarajan and K.R.Rao, "Discrete Cosine Transform", IEEE Trans. On Computers, Vol.32, pp.90-93, 1974.</li> <li>7. Shutao Li, James T. Kwok and Yaonan Wang, "Combination of images with diverse focuses using the spatial frequency", Information fusion, 2(3), pp.167-176, 2001.</li> <li>8. <a href="http://en.wikipedia.org/wiki/Principal_components_analysis">http://en.wikipedia.org/wiki/Principal_components_analysis</a></li> <li>9. <a href="http://www.imagefusion.org">http://www.imagefusion.org</a></li> </ol>	17-24
5.	<b>Authors:</b>	<b>Okoli F. I, Onubogu J. O, Okezie C. C, Okorogu V. N</b>
	<b>Paper Title:</b>	<b>The Simulation of the Control of an Industrial Mixer using PLC</b>
	<p><b>Abstract:</b> This paper is as a result of the need for an effective, reliable and highly flexible method for the control of processes within an Industrial environment. The objective of this study is to simulate the control an industrial mixer and by doing this we can develop a program that can be used for the actual implementation of such a model. This mixer is controlled using a programmable logic controller and programmed using ladder logic language.</p> <p><b>Keywords:</b> Effective, reliable and highly flexible method.</p> <p><b>References:</b></p>	25-29



	<div><div><div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div><div></div><div></div><div></div></div>&lt;/</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>
--	--

