

2009 Second International Conference on Emerging Trends in Engineering & Technology

(ICETET 2009)

**Nagpur, India
16-18 December 2009**

Pages 1-591



**IEEE Catalog Number: CFP0941E-PRT
ISBN: 978-1-4244-5250-7**

TABLE OF CONTENTS

A Scale Adaptive Tracker Using Hybrid Color Histogram Matching Scheme	1
<i>Nikhil Naik, Sanmay Patil, Madhuri Joshi</i>	
Robust Design of Power System Stabilizer Using Taguchi Technique and Particle Swarm Optimization	7
<i>S. R. Karnik, A. B. Raju, M. S. Raviprakasha</i>	
Neuro-Calibration of a Camera Using Particle Swarm Optimization	13
<i>Sanjeev Kumar, Balasubramanian Raman, Jonathan Wu</i>	
Study of Different Features on Handwritten Devnagari Character	19
<i>S. Arora, D. Bhattacharjee, M. Nasipuri, D. K. Basu, M. Kundu, L. Malik</i>	
Robust Text Line, Word And Character Extraction from Telugu Document Image	24
<i>Vijaya Kumar Koppula, Negi Atul, Utpal Garain</i>	
A Quantitative Evaluation of Software Quality Enhancement by Refactoring Using Dependency Oriented Complexity Metrics	28
<i>K. Narendar Reddy, A. Ananda Rao</i>	
Non-Destructive Quality Evaluation in Spice Industry with Specific Reference to Cuminum Cyminum L (Cumin) Seeds.....	36
<i>Kavindra R. Jain, Chintan K. Modi, Jalpa J. Patel</i>	
Software Process Improvement: A Comparative Analysis of SPI models	42
<i>Bharti Sharma, Neeraj Sharma, Neeshu Sharma</i>	
Design and VLSI Implementation of Pipelined Multiply Accumulate Unit.....	48
<i>S. Shanthala, Cyril Raj, S. Y. Kulkarni</i>	
Design of a Timing Signal Generator (TSG) for RADAR Using FPGA.....	54
<i>S. Anudeepa Kholapure, Arvind Agarwal, K. Aurobindo, Shikha Nema</i>	
Wave Steganography Approach by Modified LSB.....	58
<i>A. J. Umbarkar, A. P. Joshi, A. A. Jadhav, A. R. Buchade</i>	
Speaker Identification Based on Robust AM-FM Features	62
<i>Mangesh S. Deshpande, Raghunath S. Holambe</i>	
LIBRA: Client Initiated Algorithm for Load Balancing Using Work Stealing Mechanism	67
<i>Sudarshan S. Deshmukh, Pooja S. Deshmukh</i>	
iMATCH: Image Matching and Retrieval for Digital Image Libraries.....	70
<i>Sanjay N. Talbar, Satishkumar L. Varma</i>	
Space Vector Pulse Width Modulation Based Induction Motor Speed Control Using FPGA	76
<i>R. Arulmozhiyal, K. Baskaran, N. Devarajan, J. Kanagaraj</i>	
Wavelet Transform Based Data Perturbation Method for Privacy Protection.....	82
<i>Vinod Patel, Yogendra Kumar Jain</i>	
A Framework to Provide a Bidirectional Abstraction of the Asymmetric Network to Routing Protocols.....	86
<i>Vikram Bali, Rajkumar Singh Rathore, Amit Sirohi, Prateek Verma</i>	
IUF Scheduling Algorithm for Improving the Schedulability, Predictability and Sustainability of the Real Time System	94
<i>Radhakrishna Naik, Vivek Joshi, R. R. Manthalkar</i>	
Design of Robust Controller for Wind Turbines.....	100
<i>G. X. Athanasius, J. G. Zhu</i>	
Computer Aided Design Automation of Low Power, Low Voltage Four Quadrant Transconductance Multiplier.....	106
<i>B. K. Mishra, Sandhya Save</i>	
Selection of Optimum Device Size and Trans-Conductance Ratio for High Speed Digital CMOS Inverter Design for a Given Fanout Load.....	111
<i>Abhijit Asati, Subhendu Kumar Sahoo, Chandra Shekhar</i>	
Design and Fabrication of a System for Silastic Silicone Rubber O-Ring	115
<i>Kartik H. Patel, Kamlesh Chauhan, Dattatraya G. Subhedar</i>	
Framework for the Extraction of Clausal Mention Movement Events from the Text Using Its Meaning Representation	120
<i>S. Sangeetha, R. S. Thakur, Michael Arock</i>	
Improvement of Static Performance of Multilevel Inverter for Single-Phase Grid Connected Photovoltaic Modules	124
<i>J. Surya Kumari, Ch. Sai Babu, D. Lenine, J. Lakshman</i>	

Evaluation of Mental Workload for Ship Handling Using Physiological Indices	131
<i>Koji Murai, Yuji Hayashi</i>	
Bi-Level Vector Quantization Method for Codebook Generation	136
<i>H. B. Kekre, Tanuja K. Sarode</i>	
Events - An Alternative to Use Case as Starting Point in Object-Oriented Analysis	143
<i>Sandeep K. Singh, Sangeeta Sabharwal, J. P. Gupta</i>	
Efficient Learning of Linear Single Tree Grammars	150
<i>Gend Lal Prajapati, Ankit Gupta, Anupama Nair, Kritika Swarup</i>	
FPGA Implementation of Image Segmentation Processor	154
<i>K. J. Shanthi, L. R. Ashok, A. S. Anandu, Das B. Gokul</i>	
Analytic Hierarchy Process (AHP), Weighted Scoring Method (WSM), and Hybrid Knowledge Based System (HKBS) for Software Selection: A Comparative Study	158
<i>Anil Jadhav, Rajendra Sonar</i>	
A Hybrid Oriya Named Entity Recognition System: Integrating HMM with MaxEnt	165
<i>Sitanath Biswas, S. Mohanty, S. P. Mishra</i>	
Privacy Preserving Data Communication Model	170
<i>Biswajit Biswal</i>	
ANFIS Based Intelligent Control of Vector Controlled Induction Motor Drive	174
<i>R. A. Gupta, Rajesh Kumar, Rajesh S. Surjuse</i>	
A Neural Network Based Extraction of Salient Regions by Segmenting Color Images	181
<i>Mamata V. Galande, Prasanna Palsodkar, Preeti Bajaj, Amol Deshmukh</i>	
New Watermarking Technique for Relational Databases	186
<i>Arti Deshpande, Jayant Gadge</i>	
A Paramount Pair of Cache Replacement Algorithms on L1 and L2 Using Multiple Databases with Security	192
<i>Richa Gupta, S. Tokekar, D. K. Mishra</i>	
Information Retrieval in Multilingual Environment	198
<i>S. M. Chaware, Srikantha Rao</i>	
Fault Diagnosis of Three Phase Induction Motor Using Neural Network Techniques	203
<i>Vilas N. Ghate, Sanjay V. Dudul</i>	
New Design of CMOS Current Comparator	210
<i>C. B. Kushwah, D. Soni, R. S. Gamad</i>	
Development of HCNG Blended Fuel Engine with Control of NOx Emissions	215
<i>K. R. Patil, P. M. Khanwalkar, S. S. Thipse, K. P. Kavathekar, S. D. Rairikar</i>	
Power Balance Theory Based Voltage and Frequency Control for IAG in Wind Power Generation	222
<i>Bhim Singh, Shailendra Sharma</i>	
Template Matching Algorithm for Gujrati Character Recognition	228
<i>Jayashree R. Prasad, U. V. Kulkarni, Rajesh S. Prasad</i>	
Low Energy Tree Based Network on Chip Architectures Using Homogeneous Routers for Bandwidth and Latency Constrained Multimedia Applications	234
<i>Deepak Majeti, Aditya Pasalapudi, Kishore Yalamanchili</i>	
SEQUEL: A Free Circuit Simulation Software as an Aid in Teaching the Principles of Power Electronics to Undergraduate Students	240
<i>A. B. Raju, S. R. Karnik</i>	
Micro-Controlled Based Vehicle Safety System Using Dedicated Short Range Communications (DSRC)	246
<i>Kumari J. Padmini, S. S. Dorle, A. G. Keskar, Megha B. Chakole</i>	
High-Speed Communication System Development Using FPGA Based CAM Implementation	252
<i>Tribeni Prasad Banerjee, Amit Konar, Joydeb Roy Chowdhury</i>	
Automated Delay Identification for Bus Travel Time Prediction towards APTS Applications	258
<i>R. P. S. Padmanaban, Lelitha Vanajakshi, Shankar C. Subramanian</i>	
Best Fit Void Filling Algorithm in Optical Burst Switching Networks	264
<i>M. Nandi, A. K. Turuk, D. K. Puthal, S. Dutta</i>	
Fingerprint Orientation Field Estimation Algorithm Based on Optimized Neighborhood Averaging	270
<i>H. B. Kekre, V. A. Bharadi</i>	
Parallel Coupled Microstrip Band Pass Filter	277
<i>Vandana M. Anerao, J. S. Pillai, J. V. Chande, Shoba Krishnan</i>	
Hybrid Model Reference Adaptive Fuzzy Controller	281
<i>Nitin J. Patil, Rajan H. Chile, Laxman M. Waghmare</i>	
Comparative Optimal Designs of Non-Uniformly Excited Concentric Circular Antenna Array Using Evolutionary Optimization Techniques	287
<i>D. Mandal, A. K. Bhattacharjee, S. P. Ghoshal</i>	

Fingerprint & Palmprint Segmentation by Automatic Thresholding of Gabor Magnitude	293
<i>H. B. Kekre, V. A. Bharadi</i>	
Mel Frequency Teager Energy Features for Isolate Word Recognition in Noisy Environment	300
<i>N. S. Nehe, R. S. Holambe</i>	
Break up of Thermal Boundary Layer - An Energy Improvement Strategy Using Oscillating Combustion Technology.....	305
<i>J. Govardhan, G. V. S. Rao</i>	
Studies on the Application of Carbon Nanotube as Interconnects for Nanometric VLSI Circuits.....	311
<i>C. Thiruvenkatesan, J. Raja</i>	
Congestion Control during Data Privacy in Secure Multiparty Computation.....	317
<i>Zulfa Shaikh, Dinesh Bhati, D. M. Puntambekar, Pushpa Pathak, D. K. Mishra</i>	
Quality Based Jpeg Steganography Using Balanced Embedding Technique	320
<i>Mohammed Ishaque, Syed Abdul Sattar</i>	
Comparison of Process Scheduling Methodologies for Embedded Systems	327
<i>B. Madhusudan Rao, M. Keerthi Teja, N. Nitin</i>	
Pose Variant Based Comparative Analysis of PCA and LDA.....	332
<i>Sudarshan S. Deshmukh, Pooja S. Deshmukh, Sachin S. Sawalkar</i>	
Performance Comparison of Kekre's Transform with PCA and Other Conventional Orthogonal Transforms for Face Recognition	336
<i>H. B. Kekre, Kamal Shah</i>	
Improvement and Analysis of Speed Control of Three Phase Induction Motor Drive including Two Methods	343
<i>Ku. Trupti Deoram Tembhekar</i>	
Role of Power Electronics Based FACTS Controller SVC for Mitigation of Power Quality Problems	349
<i>Shital B. Rewatkar, Shashikant G. Kewte</i>	
A Tree Structure for Efficient Web Service Discovery.....	354
<i>Demian Antony D'Mello, V. S. Ananthanarayana</i>	
Solving First Order Fuzzy Equations: A Modal Interval Approach.....	360
<i>R. J. Bhiwani, B. M. Patre</i>	
MATLAB Based Modelling to Study the Influence of Shading on Series Connected SPVA.....	364
<i>R. Ramaprabha, B. L. Mathur</i>	
Gesture Based Music Generation.....	369
<i>Jay Shankar Prasad, G. C. Nandi, Amit Kumar</i>	
Behavioral Analysis of Hydraulically Driven Fire Fighting Water Monitor Trailer Subjected to Type of Fire & Ways of Its Fire Protection.....	375
<i>Amit R. Bhende, Prashant S. Kadu</i>	
A Review of Literature on Performance Measurement of Supply Chain Network.....	381
<i>A. Ramaa, T. M. Rangaswamy, K. N. Subramanya</i>	
Computer Aided Modelling and Finite Element Analysis of Connecting Rod Fouling on Camshaft of DI Engine of Mahindra and Mahindra Tractor.....	387
<i>Dilip G. Gangwani, R. M. Metkar</i>	
Quad-Port Memory Blocks in Radiation-Tolerant FPGAs: An Application for Image Processing Systems	393
<i>Aakash Jain, Giovanni Staino, Pasquale Corsonello</i>	
Investigation on Loading Effect of a Series Resonance Circuit on Asynchronous Generator with AC-DC-AC Converter as a Load Balancer	397
<i>K. Subramanian, K. K. Ray</i>	
Design of Intelligent Traffic Light Controller Using Embedded System	402
<i>Shilpa S. Chavan, R. S. Deshpande, J. G. Rana</i>	
Filtering and Performance Evaluation for Restoration of Grayscale Image Corrupted by Salt & Pepper Noise Using Low Pass Filtering Schemes.....	408
<i>Chandra Sekhar Panda, Srikanta Patnaik</i>	
IMC-PID and Predictive Controller Design for a Shell and Tube Heat Exchanger	414
<i>R. D. Kokate, L. M. Waghmare</i>	
Characterization of Fiber Optics Gyro and Noise Compensation Using Discrete Wavelet Transform	419
<i>Samrat L. Sabat, N. Giribabu, Jagannath Nayak, K. Krishnaprasad</i>	
Reliable High Speed Data Acquisition System Using FPGA	424
<i>Samrat L. Sabat, Kumar D. Ajay, P. Rangababu</i>	
Effect of Haptic Force Feedback on Upper Limb	429
<i>Sunil Belur Nagaraj, Daniela Constantinescu</i>	

Effect of Post Harvest Deterioration on Efficiency of Clarification and Crystallization Process of White Sugar Manufacture of CoS 91269 Cane Variety	433
<i>Pooja Mehrotra, Ashu Mehrotra, Rajendra Suryawanshi</i>	
Evaluation of SAR Reduction for Dipole Antenna Using RF Shield	437
<i>Lakshmappa K. Ragha, Manmohan Singh Bhatia</i>	
The Development of Web Processing Service Using the Power of Spatial Database	442
<i>Sanphet Chumithipaisan, Soravis Supavetch</i>	
Heart Sound Abnormality Detection Using Short Time Fourier Transform and Continuous Wavelet Transform	448
<i>P. S. Vikhe, N. S. Nehe, V. R. Thool</i>	
Design and Implementation of a Multiplayer Bluetooth Game	453
<i>Sukhwant Kaur, H. K. Kaura</i>	
Minimization of Engine Assembly Time by Elimination of Unproductive Activities through 'MOST'	459
<i>Ashish R. Thakre, Dhananjay A. Jolhe, Anil C. Gawande</i>	
Multi Layer Superway: An Infrastructural Concept for Road Traffic Management	464
<i>Dhananjay K. Parbat, Prashant B. Nagarnaik, Vivek L. Manekar</i>	
Study on Residents Perception and Attitudes Towards Urban Traffic Noise in Nagpur City	468
<i>D. R. Nandanwar, Dhananjay K. Parbat, S. K. Deshmukh</i>	
The Role of Computer Modeling and Simulation in Power Electronics Education	472
<i>L. S. Patil, K. D. Patil, A. G. Thosar</i>	
A Novel Bilingual OCR System Based on Column-Stochastic Features and SVM Classifier for the Specially Enabled	476
<i>Bindu Philip, R. D. Sudhaker Samuel</i>	
Genetic Algorithm with Histogram Construction Technique	482
<i>Rahila Patel, Urmila N. Shrawankar, M. M. Raghuvanshi</i>	
On the Inference of Context-Free Grammars Based On Bottom-Up Parsing and Search	486
<i>Gend Lal Prajapati, Aditya Jain, Mayank Khandelwal, Pooja Nema, Priyanka Shukla</i>	
An SVM Classifier for Fatigue-Detection Using Skin Conductance for Use in the BITS-Lifeguard Wearable Computing System	492
<i>Mahesh M. Bunde, Rahul Banerjee</i>	
Optimum Coordination of Overcurrent Relays in Distribution System Using Dual Simplex Method	498
<i>Prashant P. Bedekar, Sudhir R. Bhide, Vijay S. Kale</i>	
Medical Image Registration Using Genetic Algorithm	503
<i>V. T. Ingole, C. N. Deshmukh, Anjali Joshi, Deepak Shete</i>	
Stability Analysis of Symmetrical Induction Motor with Parameter Variation	507
<i>Dipti V. Dhondarkar, S. P. Muley, M. V. Aware</i>	
Improved Low Complexity Hybrid Turbo Code: A Modified Turbo Code	512
<i>Archana Bhise, Prakash D. Vyavahare</i>	
Half Bridge Boost Converter for Power Quality Improvement in PMBLDCM Drive	517
<i>Bhim Singh, Sanjeev Singh</i>	
Simulation of Power Efficient Region Based Approach for Query Processing in Wireless Sensor Networks	523
<i>Manoj Kumar Gupta, Mayank Dave, Archana Purwar</i>	
Starting Analysis of Induction Motor: A Computer Simulation by Etap Power Station	529
<i>Piyush S. Patil, K. B. Porate</i>	
Review of Parallel Operation of Synchronous Generator and Induction Generator for Stability	535
<i>S. P. Gawande, K. B. Porate</i>	
Experimental Investigations of EDM to Optimize Material Removal Rate & Surface Roughness through Taguchi's Technique of Design of Experiments	541
<i>S. S. Khandare, Mitesh A. Popat</i>	
Tumor Demarcation of Mammography Images Using Entropy with Different Window Sizes	548
<i>H. B. Kekre, Saylee Gharge</i>	
Computer Aided Design and Analysis of Air Engine Piston	554
<i>Chetan K. Tembhurkar, Prashant D. Kamble</i>	
Design FPGA Based Implementation of MIMO Decoding in a 3G / 4G Wireless Receiver	560
<i>Pravin W. Raut, Dinesh B. Bhoyar</i>	
Development of Methodology for Collecting Quality Cost in Technical Institute	566
<i>G. N. Akhade, S. B. Jaju</i>	
Performance Analysis of Vehicle Classification System Using Type-1 Fuzzy, Adaptive Neuro-Fuzzy and Type-2 Fuzzy Inference System	570
<i>Prashant Sharma, Preeti Bajaj</i>	

Comparison of Optimal Edge Detection Algorithms for Liquid Level Inspection in Bottles	574
<i>Kunal J. Pithadiya, Chintan K. Modi, Jayesh D. Chauhan</i>	
An Adaptive Color Image Segmentation (A Study and Observations Based on Actual Implementation)	580
<i>Varsha Kshirsagar, Amarja Adgaonkar, Kavita Tewari</i>	
Comparison of Redescending and Monotone M Estimator for Surface Roughness Estimation Using Machine Vision	586
<i>Jayesh D. Chauhan, Chintan K. Modi, Kunal J. Pithadiya</i>	
Design and Implementation of an Algorithm for Finding Frequent Sequential Traversal Patterns from Web Logs Based on Weight Constraint	592
<i>Mahendra Singh Sisodia, Mayank Pathak, Bhupendra Verma, Rajesh K. Nigam</i>	
Influence of Rubbing Profile on Friction Welding of Pre-Strained Aluminum to Copper	598
<i>V. Manjubhargavi, P. Chakravarthy, P. Venugopal, D. R. G. Achar</i>	
Face Recognition by PCA Technique	603
<i>A. M. Patil, Satish R. Kolhe, Pradeep M Patil</i>	
Research and Application of New Dynamic Matrix Control Based on State Feedback Theory for Heat Exchanger Control	607
<i>R. D. Kokate, L. M. Waghmare</i>	
Torque Ripple Minimization of BLDC Motor with Un-Ideal Back EMF	613
<i>Somesh Vinayak Tewari, B. Indu Rani</i>	
Multipath Routing Protocol in the Internet	617
<i>Lata L. Ragha, B. B. Bhaumik, S. K. Mukhopadhyay</i>	
Analysis of Selective Parameters Contributing to Road Accidents on Highways for Establishing Suggestive Precautionary Strategies	623
<i>Prema Daigavane, Preeti Bajaj</i>	
Privacy Maintenance Collaborative Data Mining - A Practical Approach	628
<i>R. Raju, R. Komalavalli, V. Kesavakumar</i>	
Hunt Fortune: A System for P2P E-Marketplace Matchmaking	633
<i>Manish Joshi, Virendra Bhavsar, Harold Boley, Ravindra Vaidya</i>	
Critical Factors to Attain ISO 9000 Certification: A Survey of Indian SMEs	641
<i>C. M. Sedani, R. R. Lakhe</i>	
Influence of the Human Motion on Wide-Band Characteristics of the 60 GHz IRC	651
<i>Shweta Shah</i>	
Location Aware Reduced Diffusion Hybrid Routing Algorithm (LARDHR)	655
<i>Pariza Kamboj, A. K. Sharma</i>	
FEM Analysis of Universal Joint of TATA 407	661
<i>Vishal Rathi, N. K. Mandavgade</i>	
Design and Analysis of a New Loadless 4T SRAM Cell in Deep Submicron CMOS Technologies	666
<i>R. Sandeep, Narayan T. Deshpande, A. R. Aswatha</i>	
SoC Level Verification Using System Verilog	673
<i>Purvi D. Mulani</i>	
Key Issues of Security and Integrity in Third Party Association Rule Mining	676
<i>Kamal K. Sethi, D. K. Mishra, Gopal Solanki, Bharat Mishra</i>	
High Speed High Throughput FFT/IFFT Processor ASIC for Mobile Wi-Max	680
<i>Taral D. Chhatbar</i>	
A Design Approach for Intelligent Speed Adaptation System Using Hybrid Controller	684
<i>Sanjay S. Wankhede, M. M. Khanapurkar, V. R. Rathee, P. R. Bajaj</i>	
Modeling and Designing of Circular Microstrip Antenna for Wireless Communication	689
<i>Sachin S. Khade, Prassana L. Zade, N. K. Choudhary</i>	
Face Description with Local Invariant Features: Application to Face Recognition	695
<i>Sanjay A. Pardeshi, S. N. Talbar</i>	
Optimization of Cost Function with Cell Library Placement of VLSI Circuits Using Simulated Annealing	699
<i>Manisha Khorgade, A. Y. Deshmukh, Preeti Bajaj, A. G. Keskar</i>	
File Download Delay Reduction through Parallelization	705
<i>Rajguru Abhijit, D. B. Kulkarni</i>	
Performance Improvement of Selective Unidirectional Links in Cluster Based Routing	711
<i>Sonal A. Bhople, Lata L. Ragha</i>	
A Low-Power Low-Voltage CMOS Thyristor Based Delay Element	716
<i>P. V. Manjunath, H. R. Baghyalakshmi, M. K. Venkatesha</i>	
Azvasa:- Byzantine Fault Tolerant Distributed Commit with Proactive Recovery	722
<i>Sahil Mahajan, Rahul Singhal</i>	

An Instance Based Methodology for Merging Domain Ontology	727
<i>Rajesh Kumar Gupta, B. D. Chaudhary</i>	
Comparative Evaluation of Different Modulation Schemes in UWB	735
<i>Sharada Mungale, R. D. Thakare</i>	
Aeroelasticity - In General and Flutter Phenomenon	740
<i>Panda Chinmaya, S. R. P. Venkatasubramani</i>	
Educational Resource Planning – A Framework for Educational Institutions	745
<i>Aarthi Mudaliar, V. D. Garde, D. P. Sharma</i>	
Wavelet Based Features for Ultrasound Placenta Images Classification	751
<i>G. Malathi, V. Shanthi</i>	
A Comparative Performance Analysis of PID Tuning Techniques Based on Frequency Response Specification	756
<i>A. S. Deshmukh, S. R. Vaishnav</i>	
Generalized Two-Dimensional Fractional Mellin Transform	760
<i>V. D. Sharma, P. B. Deshmukh</i>	
Small-Signal Analysis of Hybrid Distributed Generation System with HVDC-Link and Energy Storage Elements	764
<i>P. K. Ray, S. R. Mohanty, Nand Kishor, A. Mohanty</i>	
Performance Analysis of Energy Constraint Gossip Based Routing Protocol Under Stochastic Traffic	770
<i>Dhiraj Nitnaware, Pravin Karma, Ajay Verma</i>	
Implementation of Web Crawler	775
<i>Pooja Gupta, Kalpana Johari</i>	
A High CMRR, High Slew Rate, Low Total Harmonic Distortion CMOS OTA for HF Applications	781
<i>Anup Mane, Deepa Yagain</i>	
Randomly Reinforced Fly Ash as Embankment Material	789
<i>Pradip D. Jadhao, P. B. Nagarnaik</i>	
Simulation for Energy Expenditure Estimation of WSN for Comparison of Network Routing Protocols	795
<i>Sanjeev Gupta, Mayank Sharma, Sanjeev Sharma</i>	
Performance Analysis of Tree Based Interleaver with IDMA Systems Using Optimum Power Allocation Algorithm	799
<i>M. Shukla, V. K. Srivastava, S. Tiwari</i>	
Optimum Node Deployment Strategy for Heterogeneous Wireless Sensor Network by Estimating Network Lifetime	804
<i>Sanjeev Gupta, Naushad Parveen</i>	
Performance Evaluation of Combined Batch Type Solar Water Heater Cum Regenerative Solar Still	808
<i>A. Sumit Ambade, B. Tarun Narekar, C. Vikrant Katekar</i>	
Enhancement of Convective Heat Transfer Coefficient in Solar Air Heater of Roughened Absorber Plate	812
<i>A. Vikrant Katekar, B. Ankur Vithalkar, C. Bhojraj Kale</i>	
A Control Strategy of a VSC HVDC System for Power System Enhancement	817
<i>Sonali Dasgupta, Gayatri Agnihotri</i>	
An Introduction To Cluster Computing Using Mobile Nodes	823
<i>Priti Sharma, Brijesh Kumar, Pooja Gupta</i>	
Design and Implementation of Real Time Neurofuzzy Based pH Controller	827
<i>Sonali Navghare, G. L. Bodhe</i>	
Applying Hyperthreading Technology for Evaluating the Performance of HTTP Server for Stored Audio/Video Retrieval	834
<i>A. Madhura, V. Phatak, B. Rakhi Dongaonkar Jr.</i>	
Development of GUI Panel for Microprocessor-Based Controller of a Mini-Aerial Helicopter Application	838
<i>H. A. Kasdirin, M. Herman Jamaluddin, A. Zaki H. Shukor, Alias Khamis</i>	
Experimental Investigation of Vacuum Tube Solar Collector	842
<i>N. N. Wadaskar, S. R. Karale</i>	
Experimentation and Performance Analysis on Continuous Longitudinal Fins Solar Air Heater	848
<i>P. C. Tiwade, N. R. Pathare</i>	
Modified Transport Control Protocol for Cellular Network	853
<i>Sonali Sankpal, P. P. Kulkarni</i>	
Bidirectional Expansion – Insertion Algorithm for Sorting	858
<i>Rupesh Srivastava, Tarun Tiwari, Sweetesh Singh</i>	
Effect of Timing Jitter on Sigma Delta ADC for SDR Mobile Receiver	862
<i>Poornima Raikwar, Preeti Trivedi, Jaya Dipti Lal</i>	

MLP NN Based DSS for Analysis of Ultrasonic Liver Image and Diagnosis of Liver Disease	869
<i>M. R. Potdukhe, P. T. Karule</i>	
Analyzing the Quality Issues in ERP Implementation: A Case Study	875
<i>M. N. Vijaya Kumar, A. V. Suresh, P. Prashanth</i>	
Pluggable Encryption Algorithm In Secure Shell(SSH) Protocol	881
<i>P. Iyappan, K. S. Arvind, N. Geetha, S. Vanitha</i>	
Development and Validation of an Instrument for Six Sigma Implementation in Small and Medium Sized Enterprises	887
<i>S. V. Deshmukh, R. R. Lakhe</i>	
Performance Evaluation of Valve Seat Leakage in Cylinder Head Assembly of 35 Hp Tractor	895
<i>Manisha S. Lande, S. K. Ganguly</i>	
Modeling of Cantilever Based Power Harvester as an Innovative Power Source for RFID Tag	901
<i>Suresh S. Balpande, Sudhir B. Lande, Umesh Akare, Laxman Thakre</i>	
High Performance WDM Using Semiconductor Tunable Laser	907
<i>S. S. Agrawal, K. D. Kulat, M. B. Daigavane</i>	
PCA NN Based Classifier For Liver Diseases from Ultrasonic Liver Images	912
<i>P. T. Karule, S. V. Dudul</i>	
Surface Void Migration in Copper (Cu) VLSI Interconnect	917
<i>D. J. Pete, J. B. Helonde, Rohan Bhattacharya</i>	
Adsorption Air-Conditioning (AdAC) for Automobiles Using Waste Heat Recovered from Exhaust Gases	920
<i>A. C. Deshpande, R. M. Pillai</i>	
Robust Algorithms for DOA Estimation and Adaptive Beamforming for Smart Antenna Application	926
<i>Suchita W. Varade, K. D. Kulat</i>	
The Role of Power Electronics in Renewable Energy Systems Research and Development	932
<i>S. M. Shinde, K. D. Patil, S. S. Khairnar, W. Z. Gandhare</i>	
Improving Network Utilization Using Dynamic Allocation Adjustment Algorithm	937
<i>M. S. Bhende, D. B. Gothwal, N. V. Patil</i>	
APP2MID: Methodology for Conversion of Java Applets Animations to Java MIDlets	942
<i>Kapil Kadam, Sameer Sahasrabudhe</i>	
Thermal Analysis of Extended Pin Fin Heat Exchanger For Composite Material	946
<i>Anand Sharad Girde, S. R. Karale</i>	
Approach to Avoid Collision Between Two Vehicles in Intelligent Transportation System	952
<i>Pravin P. Ashtankar, Sanjay S. Dorle, M. B. Chakole, Avinash G. Keskar</i>	
Approach for VHDL and FPGA Implementation of Communication Controller of Flex-Ray Controller	958
<i>Jayant Y. Hande, Milind Khanapurkar, Preeti Bajaj</i>	
Evaluation of Moisture Content in Paper-Oil of Aged Power Transformer Using RVM	963
<i>C. K. Dwivedi, M. B. Daigavane</i>	
Computer Simulation of 132 / 11 KV Distribution Substation Using Static Var Compensator (SVC) for Voltage Enhancement - A Case Study	969
<i>M. J. Katira, K. B. Porate</i>	
Secured Communication in Real Time VANET	975
<i>Smita Narendra Pathak, Urmila Shrawankar</i>	
Impact of Wireless IEEE802.11n Encryption Methods on Network Performance of Operating Systems	980
<i>Shaneel Narayan, Tao Feng, Xiangle Xu, Shailaja Ardham</i>	
Critical Review of Perceptual Models for Data Authentication	986
<i>S. S. Sherekar, V. M. Thakare, Sanjeev Jain</i>	
A Novel Technique to Reduce the Lightning Effect on Transmission Line	993
<i>Swati Agrawal Dhanjal, Prema M. Daigavane, M. B. Daigavane, J. B. Helonde</i>	
Smart Surveillance System for Vehicles Using Mobile Phone Camera	999
<i>Sukanya V. Alevoor, Bhavesh Parmar, Amarsinh Vidhate</i>	
Human Perception-Based Color Image Segmentation Using Comprehensive Learning Particle Swarm Optimization	1002
<i>Parag Puranik, Preeti Bajaj, Ajith Abraham, Prasanna Palsodkar, Amol Deshmukh</i>	
A Comparison Study of Receiver Performances on Ultrawide Band Indoor Wireless Channel Model	1008
<i>Bikramaditya Das, Susmita Das</i>	
A Comparative Study Between Fuzzy Logic Control and Adaptive Neuro-Fuzzy Control for Water Bath System	1013
<i>Leena O. Mangar, Vishal Rathee</i>	

Performance of Simulink Based SS-OFDM Model for Broadband Wireless Access Network	1017
<i>Umesh P. Akare, Sudhir B. Lande, Suresh Balpande, Laxman P. Thakre</i>	
Printed Document Watermarking Using Phase Modulation	1023
<i>Chabukswar Hrishikesh, S. Shefali</i>	
Congestion Avoidance and Load Balancing in AODV-Multipath Using Queue Length	1029
<i>Shalini Puri, Satish R. Devene</i>	
User Requirement Based Service Discovery for Event Planning System	1034
<i>Urjita Thakar, Neeraj Khede, Nirmal Dagdee</i>	
Architectural & Decorative Construction Using Coloured Concrete Sample	1040
<i>Kiran M. Tajne, N. U. Thakare</i>	
E-Governance in Education as an Effective Management Control Tool in Developing Human Resource-Faculty Appraisal System	1043
<i>Naim Shaikh, Kishori Kasat</i>	
rePivot - Developing Analysis Services with Column Store Database	1049
<i>L. Suresh, Jay B. Simha, Rajappa Velur</i>	
Adaptive PSO Based Tuning of PID- Fuzzy and SVC-PI Controllers for Dynamic Stability Enhancement: A Comparative Analysis	1055
<i>M. Sridhar, K. Vaisakh, K. S. Linga Murthy</i>	
2D Shape Matching	1061
<i>Bhupesh P. Paradhi, Anjali Mahajan, Shubhalaxmi Hingway</i>	
Implementation of an Isolated Three-Leg VSC with Star/Hexagon Transformer Based Three-Phase Four-Wire DSTATCOM	1067
<i>P. Jayaprakash, Bhim Singh, D. P. Kothari</i>	
Application of Fuzzy Clustering Technique to Reduce the Load Data in Reliability Evaluation of Restructured Power Systems	1073
<i>P. A. Viswanath, L. Goel, P. Wang</i>	
Improved K-MEAN Clustering Approach for Web Usage Mining	1079
<i>Kiran Agrawal, Ashish Mishra</i>	
Performance Evaluation of Image Retrieval Using VQ for Compressed and Uncompressed Images	1082
<i>Vidya R. Khapli, Anjali S. Bhalchandra</i>	
Wireless Control System for Agricultural Motor	1086
<i>A. D. Kadage, J. D. Gawade</i>	
Analysis of SEMG for Treadmill and Ground Walk of Healthy Individuals	1090
<i>Neelesh Kumar, Nissan Kunju, Aseem Dhawan, Amod Kumar, B. S. Sohi</i>	
Combating Man-Made Disaster Using Remote Sensing	1094
<i>Saru Chandrakar, Ani Thomas</i>	
The Application of Data Mining for Direct Marketing	1100
<i>Purushottam R. Patil, Pravin Revankar, Prashant Joshi</i>	
Development and Simulation of SPWM and SVPWM Control Induction Motor Drive	1105
<i>Vaishnavi Deshpande, J. G. Chaudhari, P. P. Jagtap</i>	
Design of Fuzzy PI+D and Fuzzy PID Controllers Using Gaussian Input Fuzzy Sets	1110
<i>P. Ananthababu, B. Amarendra Reddy, K Ram Charan</i>	
Performance Evaluation of Parameters for Biomass Gasifier-Diesel Engine Setup Using Woody Biomass (Subabool)	1115
<i>Pravinkumar P. Wankhade, B. N. Jajoo, Ranjana P. Wankhade</i>	
Low Voltage, Low Power, High Linearity, High Speed CMOS Voltage Mode Analog Multiplier	1120
<i>B. C. Akshatha, Vijay Kumar Akshintala</i>	
Embedded Web Server on Nios II Embedded FPGA Platform	1126
<i>Nivedita N. Joshi, P. K. Dakhole, P. P. Zode</i>	
Analysis & Optimization of Connecting Rod	1132
<i>Pranav G. Charkha, Santosh B. Jaju</i>	
Quality Assessment of ICA for ECG Signal Analysis	1138
<i>H. P. Kasturwale, C. N. Deshmukh</i>	
New Method of Iris Recognition Based on J.Daugman's Principle	1141
<i>Er. Vijay Dhir, Maitryee Dutta</i>	
A New Suffix Tree Similarity Measure and Labeling for Web Search Results Clustering	1148
<i>Archana Kale, Ujwala Bharambe, M. Sashikumar</i>	
Statcom Based Fuzzy Controller for Grid Connected Wind Generator	1154
<i>K. D. Joshi, H. S. Dalvi, S. G. Thakare</i>	
Low Power Quaternary CMOS Circuit Design	1159
<i>Karuna P. Madurwar, P. K. Dakhole</i>	

Application of Steerable Wavelets in Medical Image Registration	1164
<i>Sonal S. Gahankari, Bhavesh Parmar, Poornima Talwai</i>	
Algorithm to Break Visual CAPTCHA	1169
<i>A. A. Chandavale, A. M. Sapkal, R. M. Jalnekar</i>	
Static Synchronous Compensator (STATCOM) with Energy Storage	1174
<i>Pallavi Mahale, K. D. Joshi, V. K. Chandrakar</i>	
A Comparative Study Of Shock Graph Methods For Shape Recognition	1178
<i>S. P. Hingway, K. M. Bhurchandi</i>	
Optimum Switching of TSC-TCR Using GA Trained ANN for Minimum Harmonic Injection	1184
<i>D. B. Kulkarni, G. R. Udupi</i>	
Implementation of FM-ZCS-Quasi Resonant Converter Fed DC Servo Drive	1190
<i>K. Narasimha Rao, V. C. Veera Reddy</i>	
An Improved Interpolative Vector Quantization Scheme Using Visual Pattern (IIVQ)	1197
<i>Darshana D. Chaware, S. D. Giripunje</i>	
TTC and CBM Calculation of IEEE-30 Bus System	1201
<i>Priti Kachore, M. V. Palandurkar</i>	
Motion Vector Estimation of Video Image by Pyramidal Implementation of Lucas Kanade Optical Flow	1205
<i>Sukeshni N. Tamgade, Vibha R. Bora</i>	
Author Index	