

# Contents

## **Part I Trends in Knowledge and Data Engineering, Big Data and Advanced Computing Techniques, Computer Networks, Software Engineering and Artificial Intelligence**

<b>An Enhanced Mechanism for Balanced Job Scheduling Based on Deadline Control in Computational Grid</b> . . . . .	3
K. Jairam Naik, A. Jagan and N. Satyanarayana	
<b>A Secure Location-Based Coupon Redeeming System</b> . . . . .	19
J. Maruthi Nagendra Prasad and A. Subramanyam	
<b>Sanskrit as Inter-Lingua Language in Machine Translation</b> . . . . .	27
Sunita Chand	
<b>Scalability in Virtualization</b> . . . . .	35
Chandrika Prasad, H.M. Varun, M.T. Vijay kumar, K. Yashaswini and G. Suhas	
<b>Blind Spectrum Sensing Techniques in Cognitive Radio-Survey</b> . . . . .	45
S. Vasundara, D. Raghavaraju and D. Venkatesh	
<b>Offline Data Synchronization with Occasionally Connected Databases Using Smart-IPMS</b> . . . . .	53
R.M. Jagadish, L. Swarna Jyothi and Rohini Patil	
<b>An Empirical Analysis of Unsupervised Learning Approach on Medical Databases</b> . . . . .	63
Ritu Chauhan, Harleen Kaur and Roma Puri	
<b>Applying Agile Programming and Design Patterns in IT Domain</b> . . . . .	71
V. Dattatreya, K.V. Chalapati Rao and V.M. Rayudu	
<b>A Novel Approach to Improve the System Performance by Proper Scheduling in Memory Management</b> . . . . .	79
Jisha P. Abraham and Sheena Mathew	

<b>Query Performance Prediction Using Joint Inverse Document Frequency of Multiple Terms</b> . . . . .	93
P. Viswanath, J. Rohini and Y.C.A. Padmanabha Reddy	
<b>Removal of High Density Salt and Pepper Noise from the Image Using CMA</b> . . . . .	99
S. Vijaya Kumar and C. Nagaraju	
<b>Neural Network—Based Diesel Engine Emissions Prediction for Variable Injection Timing, Injection Pressure, Compression Ratio and Load Conditions</b> . . . . .	109
M. Shailaja and A.V. Sita Rama Raju	
<b>Control System of Mobile Robotic Complex Based on Mini Tractor “Belarus 132H”</b> . . . . .	123
Makpal Zhartybayeva, Tamara Zhukabayeva and Ainur Zhumadillayeva	
<b>CA Based Design of Fault Detection Unit for Hierarchical Directories in Scalable CMPs</b> . . . . .	133
Supriti Mukherjee, Bhanu Pratap Singh, M. Chinnapureddy, Chandan Koley and Mamata Dalui	
<b>A New Stratified Immune Based Approach for Clustering High Dimensional Categorical Data</b> . . . . .	141
G. Surya Narayana, D. Vasumathi and K. Prasanna	
<b>Multiclass SVM Classifier with Named Entity Recognition for Scheduling Workflows in Cloud</b> . . . . .	151
Jyothi Bellary and E. Keshava Reddy	
<b>Spatial Data Analysis Using Various Tree Classifiers Ensembled With AdaBoost Approach</b> . . . . .	165
S. Palaniappan, T.V. Rajinikanth and A. Govardhan	
<b>Critical Analysis of Congestion Control for the Future Networks</b> . . . . .	175
G.N. Vivekananda and P. Chenna Reddy	
<b>Part II Trends in Image and Speech Processing, VLSI and Embedded Systems, Communications Technology</b>	
<b>An Intelligent Frame Work System for Finger Touch Association on Planar Surfaces</b> . . . . .	185
S. Asif Hussain, M.N. Giri Prasad and Chandrashekar Ramaiah	
<b>Robust Invisible Watermarking for Image Authentication</b> . . . . .	193
Priyanka R. Kulkarni, Altaaf O. Mulani and P.B. Mane	
<b>Automatic Digital Modulation Recognition System Using Feature Extraction</b> . . . . .	201
H.L. Punith Kumar and Lakshmi Shrinivasan	

<b>A Secure Route Discovery Protocol for AODV Based Mobile Adhoc Networks Using Hyperelliptic Curve Cryptography</b> . . . . .	209
P. Vijayakumar, R. Rajashree and P. Sandhya	
<b>An IoT Based Remote Monitoring of Landfill Sites Using Raspberry Pi2</b> . . . . .	219
K. Tharun Kumar Reddy, P. Ajay Kumar Reddy, P. Siva Nagendra Reddy and G.N. Kodanda Ramaiah	
<b>Design of Common Source Amplifier Using Amorphous Silicon TFT</b> . . . . .	229
G. Srikanth, B.S. Kariyappa and B.V. Uma	
<b>Design of Ultra Low Power Asynchronous Domino Logic Pipeline Using Critical Data Path</b> . . . . .	237
K. Nirmala, P. Prasanth Babu, K. Prasanth and D. Maruthi Kumar	
<b>Contrast Based Color Plane Selection for Binarization of Historical Document Images</b> . . . . .	249
M.E. Paramasivam and R.S. Sabeenian	
<b>Signature Wavelet Identification of Sounds of Musical Instruments Using RLS Algorithm</b> . . . . .	257
Raghavendra Sharma and V. Prem Pyara	
<b>Study on Influence of Hip Trajectory on the Balance of a Biped Robot</b> . . . . .	265
Ravi Kumar Mandava and Pandu R. Vundavilli	
<b>A Novel Technique for Edge Detection Using Gabor Transform and K-Means with FCM Algorithms</b> . . . . .	273
D. Maruthi Kumar, K. Prashanth, Praneel Kumar Peruru and P. Charishma Kumar Reddy	
<b>Part III Trends in Renewable Energy and Control Systems, Power Systems, Power Electronics, Power Quality and FACTS</b>	
<b>Prims Aided Floyd Warshall Algorithm for Shortest Path Identification in Microgrid</b> . . . . .	283
O.V. Gnana Swathika and S. Hemamalini	
<b>A Comparative Study of Decoupler Design Techniques for TITO Control Processes</b> . . . . .	293
R. Hanuma Naik, D.V. Ashok Kumar and K.S.R. Anjaneyulu	

<b>An Adaptive Hybrid Optimization Algorithm for OPF for Non-smooth Fuel Cost Functions with Facts Device . . . . .</b>	<b>303</b>
A. Immanuel and Ch. Chengaiah	
<b>Finite Set Model Predictive Current Control of Three Phase Neutral Point Clamped Inverter with Reduced Leg Count . . . . .</b>	<b>319</b>
Eedara Aswani Kumar, K. Chandra Sekhar and R. Srinivasa Rao	
<b>Coordination of Energy Storage Devices in Hybrid Power Systems . . . .</b>	<b>327</b>
Aayush Sharma and K. Jamuna	
<b>Design of Closed Loop Controller for DC-DC Converter by Using K-Factor Method Used For Renewable Energy Applications . . . . .</b>	<b>337</b>
K.M. Ravi Eswar and D. Elangovan	
<b>Application of Bio-Inspired MPPT Techniques for Photovoltaic System . . . . .</b>	<b>345</b>
Jagadish Kumar Patra, Soumya Bhanu Mohanty, H.M. Tania, D. Elangovan and G. Arunkumar	
<b>Active Power Loss Minimization in Radial Distributed Micro Grid Incorporating Distribution Generators . . . . .</b>	<b>353</b>
S. Angalaeswari and K. Jamuna	
<b>Loop Interaction and It's Influence in Multivariable Process Control . . . . .</b>	<b>361</b>
R. Hanuma Naik, D.V. Ashok Kumar and K.S.R. Anjaneyulu	
<b>Four Level Boost Converter for Linear Loads . . . . .</b>	<b>369</b>
H.M. Tania, Jagadish Kumar Patra, Vinson John, D. Elangovan and G. Arunkumar	
<b>Field Failure Rate Reduction Through ESS with MATLAB Based GUI . . . . .</b>	<b>377</b>
K. Susanna, Swarna Bai Arniker, K. Sita Rama Rao and M. Anka Rao	
<b>A Novel Space Vector Approach Using Shoot Through State for Three Level Z Source Inverter . . . . .</b>	<b>385</b>
B.M. Manjunatha, D.V. Ashok Kumar and M. Vijaya Kumar	
<b>Impact of Distribution Generation on Losses of Distribution System . . . . .</b>	<b>395</b>
K. Kirubarani and A. Peer Fathima	
<b>Performance Analysis of Shunt and Hybrid Active Power Filter Using Different Control Strategies for Power Quality Improvement . . . .</b>	<b>405</b>
S. Shamshul Haq, D. Lenine and S.V.N.L. Lalitha	

<b>A Unique Tuning of PID Controller Using Particle Swarm Optimizer for Modern Multilevel Inverter Fed Micro-grid System . . . .</b>	<b>415</b>
P. Hemachandu, V.C. Veera Reddy, N. Kusuma, D. Mohan Reddy and P. Divya Prasad	
<b>Optimal Operation of an Integrated Power Distribution System Fed with Renewable Energy Sources, Diesel Generation and Battery Storage . . . . .</b>	<b>425</b>
D. Ravi Kumar, K.C. Archana and G.S. Raju	
<b>Mitigation of Power Quality Problems in Distribution System Using D-STATCOM . . . . .</b>	<b>433</b>
N. Visali, Kamarthi Sridevi and N. Sreenivasulu	
<b>Location of IPFC Under Contingency Condition in Power System . . . .</b>	<b>445</b>
B.V. Rami Reddy, P. Sujatha and Y.V. Siva Reddy	

Emerging Trends in Electrical, Communications and  
Information Technologies

Proceedings of ICECIT-2015

Attele, K.R.; Kumar, A.; Sankar, V.; Rao, N.V.; Hitendra  
Sarma, T. (Eds.)

2017, XIII, 458 p. 233 illus., Hardcover

ISBN: 978-981-10-1538-0