Contents

Human Action Recognition Using Trajectory-Based Spatiotemporal Descriptors ........................................ 1
Chandni Dhamsania and Tushar Ratanpara

Mathematical Modeling of Specific Fuel Consumption Using Response Surface Methodology for CI Engine Fueled with Tyre Pyrolysis Oil and Diesel Blend ........................................ 11
Saumil C. Patel and Pragnesh K. Brahmbhatt

Ensemble Learning for Identifying Muscular Dystrophy Diseases Using Codon Bias Pattern .......................... 21
K. Sathyavikasini and M.S. Vijaya

Basic Arithmetic Coding Based Approach to Compress a Character String ............................................. 31
Ipsita Mondal and Subhra J. Sarkar

Comparative Analysis of Different Feature Ranking Techniques in Data Mining-Based Android Malware Detection ...................... 39
Abhishek Bhattacharya and Radha Tamal Goswami

Feature Optimality-Based Semi-supervised Face Recognition Approach .................................................. 51
Taqdir and Renu dhir

Fuzzy-Based Algorithm for Resource Allocation ...................... 69
Gurpreet Singh Saini, Sanjay Kumar Dubey and Sunil Kumar Bharti

Agreement-Based Interference-Aware Dynamic Channel Allocation in Cognitive Radio Network (CRN) ................ 79
Diksha and Poonam Saini

Energy Efficient Resource Allocation for Heterogeneous Workload in Cloud Computing .............................. 89
Surbhi Malik, Poonam Saini and Sudesh Rani
Accent Recognition System Using Deep Belief Networks for Telugu Speech Signals ........................................ 99
Kasiprasad Mannepalli, Panyam Narahari Sastry and Maloji Suman

Text Document Classification with PCA and One-Class SVM ........ 107
B. Shravan Kumar and Vadlamani Ravi

Data Mining Approach to Predict and Analyze the Cardiovascular Disease ........................................ 117
Anurag Bhatt, Sanjay Kumar Dubey, Ashutosh Kumar Bhatt and Manish Joshi

A Hybrid Genetic Algorithm for Cell Formation Problems Using Operational Time ............................ 127
Barnali Chaudhuri, R.K. Jana and P.K. Dan

Efficient and Parallel Framework for Analyzing the Sentiment ......... 135
Ankur Sharma and Gopal Krishna Nayak

Content-Aware Video Retargeting by Seam Carving ..................... 147
Shrinivas D. Desai, Mahalaxmi Bhillie and Namrata D. Hiremath

Intelligence System Security Based on 3-D Image ...................... 159

PDA-CS: Profile Distance Assessment-Centric Cuckoo Search for Anomaly-Based Intrusion Detection in High-Speed Networks ...... 169
Kanaka Raju Gariga, A. Rama Mohan Reddy and N. Sambasiva Rao

Evaluation of Barriers of Health Care Waste Management in India—A Gray Relational Analysis Approach ....................... 181
Suchismita Swain, Kamalakanta Muduli, Jitendra Narayan Biswal, Sushanta Tripathy and Tushar Kanti Panda

Privacy-Preserving Association Rule Mining Using Binary TLBO for Data Sharing in Retail Business Collaboration .......... 189
G. Kalyani, M.V.P. Chandra Sekhara Rao and B. Janakiramaiah

Performance Analysis of Compressed Sensing in Cognitive Radio Networks .............................................. 199
N. Swetha, Panyam Narahari Sastry, Y. Rajasree Rao and G. Murali Divya Teja

Robust Multiple Composite Watermarking Using LSB Technique ...... 209
S. Rashmi, Priyanka and Sushila Maheshkar

Dadabada Pradeepkumar and Vadlamani Ravi
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray Scale Image Compression Using PSO with Guided Filter and DWT</td>
<td>229</td>
</tr>
<tr>
<td>Namrata Vij and Jagjit Singh</td>
<td></td>
</tr>
<tr>
<td>Graph Partitioning Methods</td>
<td>241</td>
</tr>
<tr>
<td>Prabhu Dessai Tanvi, Rodrigues Okstynn and Fernandes Sonia</td>
<td></td>
</tr>
<tr>
<td>Smart and Accountable Water Distribution for Rural Development</td>
<td>251</td>
</tr>
<tr>
<td>Ishaani Priyadarshini and Jay Sarraf</td>
<td></td>
</tr>
<tr>
<td>Adaptive Huffman Coding-Based Approach to Reduce the Size of Power</td>
<td>259</td>
</tr>
<tr>
<td>System Monitoring Parameters</td>
<td></td>
</tr>
<tr>
<td>Subhra J. Sarkar, Nabendu Kumar Sarkar and Ipsita Mondal</td>
<td></td>
</tr>
<tr>
<td>Color Image Visual Cryptography Scheme with Enhanced Security</td>
<td>267</td>
</tr>
<tr>
<td>Prachi Khokhar and Debasish Jena</td>
<td></td>
</tr>
<tr>
<td>A Comparative Analysis of PWM Methods of Z-Source Inverters Used for</td>
<td>281</td>
</tr>
<tr>
<td>Photovoltaic System</td>
<td></td>
</tr>
<tr>
<td>Babita Panda, Bhagabat Panda and P.K. Hota</td>
<td></td>
</tr>
<tr>
<td>Fault Mitigation in Five-Level Inverter-Fed Induction Motor Drive</td>
<td>291</td>
</tr>
<tr>
<td>Using Redundant Cell</td>
<td></td>
</tr>
<tr>
<td>B. Madhu Kiran and B.V. Sanker Ram</td>
<td></td>
</tr>
<tr>
<td>A Web-of-Things-Based System to Remotely Configure Automated Systems</td>
<td>303</td>
</tr>
<tr>
<td>Using a Conditional Programming Approach</td>
<td></td>
</tr>
<tr>
<td>Debajyoti Mukhopadhyay, Sourabh Saha, Rajdeep Rao and Anish Paranjpe</td>
<td></td>
</tr>
<tr>
<td>On the Security of Chaos-Based Watermarking Scheme for Secure</td>
<td>313</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>Musheer Ahmad and Hamed D. AlSharari</td>
<td></td>
</tr>
<tr>
<td>Neighborhood Topology to Discover Influential Nodes in a Complex</td>
<td>323</td>
</tr>
<tr>
<td>Network</td>
<td></td>
</tr>
<tr>
<td>Chandni Saxena, M.N. Doja and Tanvir Ahmad</td>
<td></td>
</tr>
<tr>
<td>Venn Diagram-Based Feature Ranking Technique for Key Term Extraction</td>
<td>333</td>
</tr>
<tr>
<td>Neelotpal Chakraborty, Sambit Mukherjee, Ashes Ranjan Naskar, Samir</td>
<td></td>
</tr>
<tr>
<td>Malakar, Ram Sarkar and Mita Nasipuri</td>
<td></td>
</tr>
<tr>
<td>Bangla Handwritten City Name Recognition Using Gradient-Based Feature</td>
<td>343</td>
</tr>
<tr>
<td>Shilpi Barua, Samir Malakar, Showmik Bhowmik, Ram Sarkar and Mita</td>
<td></td>
</tr>
<tr>
<td>Nasipuri</td>
<td></td>
</tr>
<tr>
<td>Shortest Path Algorithms for Social Network Strengths</td>
<td>353</td>
</tr>
<tr>
<td>Amreen Ahmad, Tanvir Ahmad and Harsh Vijay</td>
<td></td>
</tr>
</tbody>
</table>
Improvised Symbol Table Structure ............................ 363
Narander Kumar and Shivani Dubey

Digital Watermarking Using Enhanced LSB Technique .......... 373
Narander Kumar and Jaishree

Fuzzy-Based Adaptive IMC-PI Controller for Real-Time
Application on a Level Control Loop ............................ 387
Ujjwal Manikya Nath, Chanchal Dey and Rajani K. Mudi

Face Recognition Using PCA and Minimum Distance Classifier .... 397
Shalmoly Mondal and Soumen Bag

A Soft Computing Approach for Modeling of Nonlinear
Dynamical Systems ............................................... 407
Rajesh Kumar, Smriti Srivastava and J.R.P. Gupta

Optimization of Workload Scheduling in Computational Grid ...... 417
Sukalyan Goswami and Ajanta Das

Cloud Security and Jurisdiction: Need of the Hour ............. 425
Tamanna Jena and J.R. Mohanty

A Modified Genetic Algorithm Based FCM Clustering
Algorithm for Magnetic Resonance Image Segmentation .......... 435
Sunanda Das and Sourav De

Skill Set Development Model and Deficiency Diagnosis
Measurement Using Fuzzy Logic .................................. 445
Smita Banerjee and Rajeev Chatterjee

A Study on Various Training Programmes and Their Effects
Offered by the IT Firms ........................................... 455
Pattnaik Manjula and Pattnaik Balachandra

Analysis of Trustworthiness and Link Budget Power Under
Free Space Propagation Path Loss in Secured Cognitive Radio
Ad hoc Network ...................................................... 465
Ashima Rout, Anurupa Kar and Srinivas Sethi

A Secure and Lightweight Protocol for Mobile DRM
Based on DRM Community Cloud (DCC) ......................... 475
Hisham M. Alsaghier, Shaik Shakeel Ahamad, Siba K. Udgata
and L.S.S. Reddy

Cloud Based Malware Detection Technique ....................... 485
Sagar Shaw, Manish Kumar Gupta and Sanjay Chakraborty

Abnormal Network Traffic Detection Using Support
Vector Data Description .......................................... 497
Jyostna Devi Bodapati and N. Veeranjaneyulu
Real-Time Automotive Engine Fault Detection and Analysis Using BigData Platforms ........................................ 507
Yedu C. Nair, Sachin Kumar and K.P. Soman

Load Flow Analysis of Distribution System Using Artificial Neural Networks .................................................. 515
M. Suresh, T.S. Sirish, T.V. Subhashini and T. Daniel Prasanth

An Enhanced Bug Mining for Identifying Frequent Bug Pattern Using Word Tokenizer and FP-Growth ............. 525
K. Divyavarma, M. Remya and G. Deepa

Implementing Anti-Malware as Security-as-a-Service from Cloud ............................................................. 533
Deepak H. Sharma, C.A. Dhote and Manish M. Potey

Recognize Online Handwritten Bangla Characters Using Hausdorff Distance-Based Feature ................................. 541
Shibaprasad Sen, Ram Sarkar, Kaushik Roy and Naoto Hori

A Framework for Dynamic Malware Analysis Based on Behavior Artifacts .................................................. 551
T.G. Gregory Paul and T. Gireesh Kumar

Evaluation of Machine Learning Approaches for Change-Proneness Prediction Using Code Smells .................. 561
Kamaldeep Kaur and Shilpi Jain

Snort Rule Detection for Countering in Network Attacks ............................................................................. 573
Venkateswarlu Somu, D.B.K. Kamesh, J.K.R. Sastry and S.N.M. Sitara

Trust and Energy-Efficient Routing for Internet of Things—Energy Evaluation Model ......................................... 585
Carynthia Kharkongor, T. Chithralekha and Reena Varghese

READ—A Bangla Phoneme Recognition System ......................................................................................... 599
Himadri Mukherjee, Chayan Halder, Santanu Phadikar and Kaushik Roy

Information Fusion in Animal Biometric Identification .......................................................... 609
Gopal Chaudhary, Smriti Srivastava, Saurabh Bhardwaj and Shefali Srivastava

Small World Network Formation and Characterization of Sports Network .................................................... 619
Paramita Dey, Maitreyee Ganguly, Priya Sengupta and Sarbani Roy

UWB BPF with Notch Band for Satellite Communication Using Pseudo-Interdigital Structure ......................... 629
Yatindra Gaurav and R.K. Chauhan

Finding Clusters of Data: Cluster Analysis in R ......................................................................................... 635
Tulika Narang
A Quality-Concordance Metric Based Contour Detection by Utilizing Composite-Cue Information and Particle Swarm Optimisation ........ 641
Sandipan Choudhuri, Nibaran Das and Mita Nasipuri

Analysis of Pancreas Histological Images for Glucose Intolerance Identification Using Wavelet Decomposition ...................... 653
Tathagata Bandyopadhyay, Sreetama Mitra, Shyamali Mitra, Luis Miguel Rato and Nibaran Das

A Systematic Review on Materialized View Selection ................ 663
Anjana Gosain and Kavita Sachdeva

SQLI Attacks: Current State and Mitigation in SDLC ................. 673
Daljit Kaur and Parminder Kaur

Theoretical Validation of Object-Oriented Metrics for Data Warehouse Multidimensional Model ......................... 681
Anjana Gosain and Rakhi Gupta

Paving the Future of Vehicle Maintenance, Breakdown Assistance and Weather Prediction Using IoT in Automobiles ............... 693
B.J. Sowmya, Chetan, D. Pradeep Kumar and K.G. Srinivasa

Cognitive Architectural Model for Solving Clustering Problem ...... 703
Meenakshi Sahu and Hima Bindu Maringanti

Action Classification Based on Mutual Difference Score ............ 711
Shamama Anwar and G. Rajamohan

Preprocessing and Feature Selection Approach for Efficient Sentiment Analysis on Product Reviews ....................... 721
Monalisa Ghosh and Gautam Sanyal

BDN: Biodegradable Node, Novel Approach for Routing in Delay Tolerant Network ..................................................... 731
Afreen Fatimah and Rahul Johari

Minimization of Energy Consumption Using X-Layer Network Transformation Model for IEEE 802.15.4-Based MWSNs .......... 741
Md. Khaja Mohiddin and V.B.S. Srilatha Indra Dutt

An Automated Approach to Prevent Suicide in Metro Stations ...... 753
Anindya Mukherjee and Bavrabi Ghosh

B-Secure: A Dynamic Reputation System for Identifying Anomalous BGP Paths ......................................................... 767
A.U. Prem Sankar, Prabaharan Poornachandran, Aravind Ashok, R.K. Manu and P. Hrudya

Active Steganalysis on SVD-Based Embedding Algorithm .......... 777
P.P. Amritha, Rithu P. Ravi and M. Sethumadhavan
Handwritten Mixed-Script Recognition System:
A Comprehensive Approach ........................................ 787
Pawan Kumar Singh, Supratim Das, Ram Sarkar and Mita Nasipuri

A Rule-Based Approach to Identify Stop Words
for Gujarati Language .............................................. 797
Rajnish M. Rakholia and Jatinderkumar R. Saini

Author Index ........................................................ 807
Proceedings of the 5th International Conference on Frontiers in Intelligent Computing: Theory and Applications
FICTA 2016, Volume 1
Satapathy, S.C.; Bhatija, V.; Udgata, S.K.; Pattnaik, P.K. (Eds.)
2017, XXIV, 809 p. 335 illus., Softcover
ISBN: 978-981-10-3152-6