Contents

Part I  Cloud Computing, Distributed Systems, Social Networks, and Applications

Review of Elasticsearch Performance Variating the Indexing Methods ......................................... 3
Urvi Thacker, Manjusha Pandey and Siddharth S. Rautaray

Understanding Perception of Cache-Based Side-Channel Attack on Cloud Environment ................................. 9
Bharati S. Ainapure, Deven Shah and A. Ananda Rao

A Semantic Approach to Classifying Twitter Users ......................... 23
Rohit John Joseph, Prateek Narendra, Jashan Shetty and Nagamma Patil

Timeline-Based Cloud Event Reconstruction Framework for Virtual Machine Artifacts ......................... 31
B.K.S.P. Kumar Raju and G. Geethakumari

eCloud: An Efficient Transmission Policy for Mobile Cloud Computing in Emergency Areas ...................... 43
Bibudhendu Pati, Joy Lal Sarkar, Chhabi Rani Panigrahi and Shibendu Debbarma

A Multidimensional Approach to Blog Mining ...................... 51
K.S. Sandeep and Nagamma Patil

Medicinal Side-Effect Analysis Using Twitter Feed ....................... 59
Priyanka S. Mane, Manasi S. Patwardhan and Ankur V. Divekar

A Study of Opinion Mining in Indian Languages ....................... 71
Diana Terezinha Miranda and Maruska Mascarenhas
Part II  Applications of Informatics

A Pragmatics-Oriented High Utility Mining for Itemsets of Size Two for Boosting Business Yields .................................................. 81
Gaurav Gahlot and Nagamma Patil

ILC-PIV Design for Improved Trajectory Tracking of Magnetic Levitation System ................................................................. 91
Vinodh Kumar Elumalai, Joshua Sunder David Reddipogu, Santosh Kumar Vaddi and Gowtham Pasumarthy

Performance Analysis and Optimization of Spark Streaming Applications Through Effective Control Parameters Tuning .... 99
Bakshi Rohit Prasad and Sonali Agarwal

A Browser-Based Distributed Framework for Content Sharing and Student Collaboration ............................................................ 111
Shikhar Vashishth, Yash Sinha and K. Haribabu

Seed Point Selection Algorithm in Clustering of Image Data .......... 119
Kuntal Chowdhury, Debasis Chaudhuri and Arup Kumar Pal

Comparative Analysis of AHP and Its Integrated Techniques Applied for Stock Index Ranking ...................................................... 127
H.S. Hota, Vineet Kumar Awasthi and Sanjay Kumar Singhai

Rakesh Mohanty and Sudhansu Bala Das

Band Power Tuning of Primary Motor Cortex EEG for Continuous Bimanual Movements ......................................................... 143
Manikumar Tellamekala and Shaik Mohammad Rafi

Part III  Authentication Methods, Cryptography and Security Analysis

Probabilistically Generated Ternary Quasigroup Based Stream Cipher .......................................................................................... 153
Deepthi Haridas, K.C. Emmanuel Sanjay Raj, Venkataraman Sarma and Santanu Chowdhury

Dynamic Access Control in a Hierarchy with Constant Key Derivation Cost ............................................................................. 161
Nishat Koti and B.R. Purushothama

An Efficient LWE-Based Additively Homomorphic Encryption with Shorter Public Keys ......................................................... 171
Ratnakumari Challa and VijayaKumari Gunta
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Enhanced Remote User Authentication Scheme for Multi-server Environment Using Smartcard</td>
<td>179</td>
</tr>
<tr>
<td>Ashish Kumar and Hari Om</td>
<td></td>
</tr>
<tr>
<td>A Proposed Bucket Based Feature Selection Technique (BBFST) for Phishing e-Mail Classification</td>
<td>189</td>
</tr>
<tr>
<td>H.S. Hota, Akhilesh Kumar Shrivas and Rahul Hota</td>
<td></td>
</tr>
<tr>
<td>A Novel Security Mechanism in Symmetric Cryptography Using MRGA</td>
<td>195</td>
</tr>
<tr>
<td>Bhoomika Modi and Vinitkumar Gupta</td>
<td></td>
</tr>
<tr>
<td>Techniques for Enhancing the Security of Fuzzy Vault: A Review</td>
<td>205</td>
</tr>
<tr>
<td>Abhay Panwar, Parveen Singla and Manvjeet Kaur</td>
<td></td>
</tr>
<tr>
<td>An Efficient Vector Quantization Based Watermarking Method for Image Integrity Authentication</td>
<td>215</td>
</tr>
<tr>
<td>Archana Tiwari and Manisha Sharma</td>
<td></td>
</tr>
<tr>
<td>XSS Attack Prevention Using DOM-Based Filter</td>
<td>227</td>
</tr>
<tr>
<td>Asish Kumar Dalai, Shende Dinesh Ankush and Sanjay Kumar Jena</td>
<td></td>
</tr>
<tr>
<td>Part IV Big Data and Recommendation Systems</td>
<td></td>
</tr>
<tr>
<td>Friendship Recommendation System Using Topological Structure of Social Networks</td>
<td>237</td>
</tr>
<tr>
<td>Praveen Kumar and G. Ram Mohana Reddy</td>
<td></td>
</tr>
<tr>
<td>Personalized Recommendation Approach for Academic Literature Using High-Utility Itemset Mining Technique</td>
<td>247</td>
</tr>
<tr>
<td>Mahak Dhanda and Vijay Verma</td>
<td></td>
</tr>
<tr>
<td>An Estimation of User Preferences for Search Engine Results and its Usage Patterns</td>
<td>255</td>
</tr>
<tr>
<td>Nidhi Bajpai and Deepak Arora</td>
<td></td>
</tr>
<tr>
<td>A Comparative Analysis of Various Spam Classifications</td>
<td>265</td>
</tr>
<tr>
<td>Nasir Fareed Shah and Pramod Kumar</td>
<td></td>
</tr>
<tr>
<td>Review Spam Detection Using Opinion Mining</td>
<td>273</td>
</tr>
<tr>
<td>Rohit Narayan, Jitendra Kumar Rout and Sanjay Kumar Jena</td>
<td></td>
</tr>
<tr>
<td>Review Spam Detection Using Semi-supervised Technique</td>
<td>281</td>
</tr>
<tr>
<td>Rohit Narayan, Jitendra Kumar Rout and Sanjay Kumar Jena</td>
<td></td>
</tr>
</tbody>
</table>
Part V  Emerging Techniques in Computing

Dimensionality Reduction Using Decision-Based Framework for Classification: Sky and Ground ................................. 289
Ramesh Ashok Tabib, Ujwala Patil, T. Naganandita, Vinita Gathani and Uma Mudenagudi

A Decision Tree-Based Middle Ware Platform for Deploying Fog Computing Services ................................. 299
Mahesh Sunkari and Raghu Kisore Neelisetti

Development of 3D FULL HD Endoscope Capable of Scaling View of the Selected Region ........................................ 311
Dhiraj, Priyanka Soni and Jagdish Lal Raheja

An ℓ1-Norm Based Optimization Approach for Power Line Interference Removal in ECG Signals ......................... 319
Neethu Mohan, S. Sachin Kumar and K.P. Soman

Exploration of Many-Objective Feature Selection for Recognition of Motor Imagery Tasks ............................... 331
Monalisa Pal and Sanghamitra Bandyopadhay

Euler-Time Diagrams: A Set Visualisation Technique Analysed Over Time ......................................................... 339
Mithilesh Sathiyanarayanan and Mohammad Alsaffar

A Framework for Goal Compliance of Business Process Model ....... 345
Dipankar Deb and Nabendu Chaki

Comparative Analysis of Adaptive Beamforming Techniques ........ 357
Smita Banerjee and Ved Vyas Dwivedi

Part VI  Internet, Web Technology, Web Security, and IoT

Securing an External Drive Using Internet with IOT Concept ........ 367
Rajneesh Tanwar, K. Krishnakanth Gupta and Purushottam Sharma

An Intelligent Algorithm for Automatic Candidate Selection for Web Service Composition .......................... 373
Ashish Kedia, Ajith Pandel, Adarsh Mohata and S. Sowmya Kamath

A Quality-Centric Scheme for Web Service Ranking Using Fuzzified QoS Parameters ......................................... 383
Mandar Shaha and S. Sowmya Kamath

Enhancing Web Service Discovery Using Meta-heuristic CSO and PCA Based Clustering ............................... 393
Sunaina Kotekar and S. Sowmya Kamath
Advancement in Personalized Web Search Engine with Customized Privacy Protection ........................................ 405
Jeena Mariam Saji, Kalyani Bhongle, Sharayu Mahajan, Soumya Shrivastava and Ashwini Jarali

Part VII Research on Optical Networks, Wireless Sensor Networks, VANETs, and MANETs

Traffic Classification Analysis Using OMNeT++ ..................................... 417
Deeraj Achunala, Mithilesh Sathiyanarayanan and Babangida Abubakar

Irregular-Shaped Event Boundary Estimation in Wireless Sensor Networks ............................................. 423
Srabani Kundu, Nabanita Das, Sasanka Roy and Dibakar Saha

A New Two-Dimensional Mesh Topology with Optical Interlinks .......... 437
Amritanjali

Enhanced TCP NCE: A Modified Non-Congestion Events Detection, Differentiation and Reaction to Improve the End-to-End Performance Over MANET ................................................................. 443
J. Govindarajan, N. Vibhurani and G. Kousalya

Anindita Mondal, Sagar Bose and Iti Saha Misra

Security Framework for Opportunistic Networks .................................... 465
Prashant Kumar, Naveen Chauhan and Narottam Chand

Replica-Based Efficient Data Accessibility Technique for Vehicular Ad Hoc Networks ................................ 473
Brij Bihari Dubey, Rajeev Kumar, Naveen Chauhan and Narottam Chand

Reinforcement Based Optimal Routing Algorithm for Multiple Sink Based Wireless Sensor Networks ................ 481
Suraj Sharma, Azad Kumar Patel, Ratijit Mitra and Reeti Jauhari

Study and Impact of Relay Selection Schemes on Performance of an IEEE 802.16j Mobile Multihop Relay (MMR) WiMAX Network ................................................................. 491
Chaudhuri Manoj Kumar Swain and Susmita Das
Predicting Link Failure in Vehicular Communication System Using Link Existence Diagram (LED).......................... 501
Sourav Kumar Bhoi, Munesh Singh and Pabitra Mohan Khilar

Part VIII Communication Systems, Antenna Research, and Cognitive Radio

An M-Shaped Microstrip Antenna Array for WLAN, WiMAX and Radar Applications ....................................... 509
Aastha Gupta, Vipin Choudhary and Malay Ranjan Tripathy

Gain Enhancement of Microstrip Patch Antenna Using H-Shaped Defected Ground Structure ................................ 517
Asmita Rajawat, P.K. Singhal, Sindhu Hak Gupta, Chavi Jain, Praneet Tomar and Kartik Kapur

Robust Acoustic Echo Suppression in Modulation Domain .......... 527
P.V. Muhammed Shifas, E.P. Jayakumar and P.S. Sathidevi

FPGA-Based Equalizer Design Using a Novel Adaptive Reward-Punishment VSSLMS Algorithm for Rayleigh Fading Channel 539
Sudipta Bose and Iti Saha Misra

Phase Reversal and Suppressed Carrier Characteristics of Neo-Cortical Electroencephalography Signals ............... 551
Manikumar Tellamekala and Shaik Mohammad Rafi

Short-Range Frequency-Modulated Continuous Wave (FMCW) Radar Using Universal Software-Defined Radio Peripheral (USRP).... 559
Munesh Singh, Sourav Kumar Bhoi and Pabitra Mohan Khilar

Erratum to: A Browser-Based Distributed Framework for Content Sharing and Student Collaboration E1
Shikhar Vashisht, Yash Sinha and K. Haribabu

Author Index ................................................ 567
Progress in Intelligent Computing Techniques: Theory, Practice, and Applications
Proceedings of ICACNI 2016, Volume 2
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2018, XXII, 568 p. 179 illus., 106 illus. in color., Softcover