

**2018 7th International Conference
on Reliability, Infocom
Technologies and Optimization
(Trends and Future Directions)
(ICRITO 2018)**

**Noida, India
29-31 August 2018**



**IEEE Catalog Number: CFP18RIS-POD
ISBN: 978-1-5386-4693-9**

**Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18RIS-POD
ISBN (Print-On-Demand):	978-1-5386-4693-9
ISBN (Online):	978-1-5386-4692-2

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

CONTENTS

Keynote Address / Invited Talk Speakers List	I
Acknowledgement	IV
ICRITO'2018 Conference Committees	V
Editorial Board	
Organizers	

KEYNOTE ADDRESSES/INVITED TALKS

1. The Progression of Image Engineering in This Century	1
<i>Yu-Jin ZHANG</i>	
2. Advances in Research on Recommender Systems	N/A
<i>YANG Bo</i>	
3. Fake News Filtering: Semantic Approaches	9
<i>Vitaly Klyuev</i>	
4. Diagnosing Spine Pathology using Medical Image Analysis	N/A
<i>Vipin Chaudhary</i>	
5. Applying the Real-Time Monitoring based on Wireless Sensor Networks: The Bajo Giuliani Project	18
<i>Mario Diván</i>	
6. Polystore Database Systems for Managing Large Scientific Dataset Archives	25
<i>Manoj Poudel, Shashank Shrestha, Yilang WU, Wanming CHU, Subhash Bhalla</i>	
7. Creative and Digital Economy: A New Fusion for Innovation	N/A
<i>Darelle van Greunen</i>	
8. Using UML-MARTE and TCOZ for AAL System Specifications: A Case Study	32
<i>Mohamed Bettaz, Mourad Maouche</i>	
9. Effort Analysis of OSS Project Based on Deep Learning Considering UI/UX Design	38
<i>Yoshinobu Tamura, Hironobu Sone, Kodai Sugisaki, Shigeru Yamada</i>	
10. Comparison of a Magnetically Geared PM Wind Generator with Radial Flux Generator	44
<i>Reza Zeinali, H. Büilent Ertan</i>	
11. Wearable Computing: Prospects and Challenges	N/A
<i>Syed Akhter Hossain</i>	
12. Software Implementation of LSFR-Based Stream Ciphers for GSM Cryptosystems	59
<i>Daniel Okunbor</i>	
13. Testing for Convergence in Microwave Breast Tumour Detection	66
<i>G.G. Senarame</i>	
14. An Overview on Formal Techniques for Understanding Digital Hardware Designs	75
<i>Görschwin Fey</i>	
15. Hybridization of Bio-inspired Metaheuristics for Optimization Applications	N/A
<i>Hanaa HACHIMI</i>	
16. Towards Self-explaining Intelligent Environments	82
<i>Serge Autexier, Rolf Drechsler</i>	
17. Five Decades of Software Reliability, Past, Present, Future and New Challenges	88

Nestor Ruben Barraza

- | | |
|---|------------|
| 18. Novel Applications of Computational Intelligence Techniques for Risk Analysis of E-Commerce Customer Satisfaction | N/A |
| <i>Masoud Mohammadian</i> | |
| 19. A Static-dynamic Approach for UI Model Generation for Mobile Applications | 96 |
| <i>Ibrahim Anka Salihu, Rosziati Ibrahim, Asmau Usman</i> | |
| 20. Circuit Model for Statistical Method Based Reliability Estimation of MOS Transistors and Analog CMOS Circuits | 101 |
| <i>Ayten Kuntman, Hakan Kuntman</i> | |
| 21. Signal Processing Challenges in Biohybrid System Design | 113 |
| <i>Zdenka Babic</i> | |
| 22. On Uncensored Mean First-Passage-Time Performance Experiments with Multi-Walk: A New Stochastic Optimization Algorithm | 118 |
| <i>Franc Brglez</i> | |
| 23. Adopting High-level Synthesis Approach to Accelerate Power Management Design | 124 |
| <i>Katarina Jelemenska, Dominik Macko</i> | |
| 24. Enabling Distributed Networks for Connected Vehicles | N/A |
| <i>Dhananjay Singh</i> | |
| 25. Towards IR 4.0: Internet-of-things and Its Applications | N/A |
| <i>Mohd Helmy Abd Wahab</i> | |
| 26. Effective Characterization of the Effect of Patient Characteristics and Weather on the Hospital Admission Patterns and Bed Occupancy | N/A |
| <i>Lalit Garg</i> | |

TECHNICAL SESSIONS

RELIABILITY ENGINEERING

- | | |
|--|------------|
| 1. High Switching Beam Focusing Electrode Circuit Mosfets Reliability Analysis | 134 |
| <i>Khilawan Choudhary, Neeraj Kumar, Monisha S.</i> | |
| 2. Smart Management Perspective for Sustainable Society/ Business Sustainability, Environmental Sustainability, and Resource Sustainability | N/A |
| <i>Ajay Vikram Singh, Jitendra Pandey, Anwaar Abdullah Alabri</i> | |
| 3. Proposing a Hybrid Methodology for Game Development | 142 |
| <i>Jitendra Pandey, Ajay Vikram Singh, Anwaar Abdullah Al-Abri</i> | |
| 4. Model-Driven Method for Performance Testing | 147 |
| <i>Z. Javed, Masoud Mohammadian</i> | |
| 5. Accelerated Life Testing and Performance Evaluation of Smart Pressure Transmitters for use in Nuclear Power Plants | 156 |
| <i>Yashasvi Chauhan, N.B. Shrestha, T.V. Santhosh, Vivek Shrivastava, P.K. Ramteke, Gopika Vinod, J. Chattopadhyay</i> | |
| 6. Prioritizing Types of Vulnerability on the Basis of their Severity in Multi-version Software Systems using DEMATEL Technique | 162 |
| <i>Swati Narang, P.K. Kapur, D. Damodaran, R. Majumdar</i> | |
| 7. Influence of Junction Temperature on Reliability of an Insulated Gate Bipolar Transistor | 168 |
| <i>Sai Sarath Kruthiventi, Meghana Chowdary Rayedi, Sivateja Nallamothu</i> | |

QUALITY & RISK ANALYSIS

8. On the Application of Cross-Project Validation for Predicting Maintainability of Open Source Software using Machine Learning Techniques	175
<i>Ruchika Malhotra, Kusum Lata</i>	
9. Verification of On-board Software of ISRO Launch Vehicles Using Polyspace - A Case Study	182
<i>Sherine K., Prashant Ranjan, Jayalal N., Gopalakrishnan T., Valsa B.</i>	
10. Energy Audit-A Clean, Alternative and Cost-Effective Way to Replace Conventional Energy	188
<i>Sujit Dhar, Debabrata Roy, Biswajit Dutta, Ankur Ganguly, Pradip Kumar Sadhu, Diganta Sengupta</i>	
11. A Radiation-Hardened 12-bit SAR ADC Design	198
<i>Honghui Tang, Haibin Wang, Zhijian Hui, Tao Qin, Xinyi Hu, Younis Ibrahim, Xixi Dai, Yangsheng Wang, Li Cai, Gang Guo, Zicai Shen</i>	
12. Laboratory Health and Safety Infrastructure in University - A Benchmarking in UAE	N/A
<i>Hardeep Kumar, Ved P. Mishra</i>	
13. Study of Security Features of Bank Cheques and Credit Cards and Decipherment	207
<i>Anju Annie Thomas, Emna Jeridi, Bhoopesh Kumar Sharma, Ved P. Mishra, Mohamamad Al Shamsi, Mohammad Al Khalloufi</i>	

DATA ANALYTICS, DATA MINING AND DATA WAREHOUSING

14. Understanding Relation between Public Sentiments and Government Policy Reforms	213
<i>Mansi Srivastava, Sunil Kumar Khatri, Sapna Sinha, Armaan Singh Ahluwalia, Prashant Johri</i>	
15. Get-a-Doc: A Doctor Recommender System	219
<i>Abhinav Singh, Isha Goyal Parmeet Kaur, Chetna Dabas</i>	
16. Clustering Techniques for Traffic Classification: A Comprehensive Review	224
<i>Kate Takyi, Amandeep Bagga, Pooja Goopta</i>	
17. Fostering the Interoperability of the Measurement and Evaluation Project Definitions in PAbMM	231
<i>Mario Diván, María Laura Sánchez Reynoso</i>	
18. Improving Classification Accuracy of Automated Text Classifiers	239
<i>Shivam Rastogi</i>	
19. Design Pattern Detection using Machine Learning Techniques	246
<i>Shivam Chaturvedi, Amrita Chaturvedi, Anurag Tiwari, Shalini Agarwal</i>	
20. Analogizing of Evolutionary and Machine Learning Algorithms for Prognosis of Breast Cancer	252
<i>Anubha Sethi</i>	
21. The Role of Big Data Mining in Healthcare Applications	256
<i>Laura Elezabeth, Ved P. Mishra, Joanita Dsouza</i>	
22. Analysis of Audio Features for Music Representation	261
<i>Rhythm Bhatia, Saumya Srivastava, Vandan Bhatia, Manpreet Singh</i>	
23. Information Retrieval on Tweets collected during Disaster Situations	267
<i>Saumya Srivastava, Manpreet Singh, Kripabandhu Ghosh</i>	
24. Dynamic Clustering of n-Dimensional Data on Tangential Space	272
<i>Mayank Sharma, Amit Srivastava, Sudhanshu Shankar, Sunil Kumar Khatri</i>	
25. Graph Database for Recipe Recommendations	276
<i>Vasvi Bajaj, Rajat Bhusan Panda, Chetna Dabas, Parmeet Kaur</i>	
26. Analysing the 1997 Chandmari Landslide	N/A
<i>Kaushik Ramanathan, Nirmala Vasudevan, Drisya R.</i>	
27. Business Intelligence Development by Analysing Customer Sentiment	287
<i>Partha Ghosh, Subhranil Som, Soumya Sen</i>	

MOBILE COMPUTING AND WIRELESS NETWORKING

28. Implementation of Energy Constraints of S-MAC Protocol	291
<i>Meena Malik, Mukesh Sharma</i>	
29. Analyzing the Internal Parameters of Free Space Optical Communication	298
<i>Manpreet Kaur, Anuranjana, Sanmukh Kaur, Aditya Kesarwani, Pawan Singh Vohra</i>	
30. Traffic Prediction in Telecom Systems Using Deep Learning	302
<i>Prashant Kaushik, Sajal Singh, Pankaj Yadav</i>	
31. Cross Layer Optimization for Wireless Video Transmission Using Machine Learning	308
<i>Madhushree Basavarajaiah, Priyanka Sharma</i>	
32. Lifetime Enhancement of Wireless Sensor Networks by using Sine Cosine Optimization Algorithm	313
<i>Ashish Pandey, Abhishek Rajan, Arnab Nandi</i>	
33. Avoidance of Energy Holes in Wireless Sensor Networks: A Review	320
<i>Ranjita Joon, Parul Tomar</i>	
34. Reliable Lifetime Assessment for Routing in Heterogeneous Wireless Sensor Network with Energy Harvesting Nodes Placement	327
<i>Priyanka, Deepak Sharma, Amarendra Goap*, A K Shukla, Amol P. Bhondekar</i>	
35. Artificial Intelligence Based Energy Efficient Grid PEGASIS Routing Protocol in WSN	336
<i>Shokat Ali, Rakesh Kumar</i>	
36. Smart Vehicle System for Road Safety During Foggy Weather	343
<i>Ravinder Kaur, Rydhn Beri, Mithilesh Kr. Dubey</i>	
37. Estimation of Outage Duration for a Mobile Sensor Node	347
<i>Ritwik Haldar, Kirtan Gopal Panda, Ashraf Hossain</i>	
38. Remote Node Battery Monitoring and Diagnostic System for Wireless Sensor Networks using Xbee and Java	351
<i>R.K. Dhammi, K.M. Soni, S. Selvam, Prabhdoyal Singh</i>	
39. Optimization of Cluster Head Selection in Hierarchical Clustered Sensor Networks	357
<i>Japman Kaur Dhaliwal, Sharad Saxena</i>	

CLOUD COMPUTING

40. A Survey on QOS and Fault Tolerance based Service Scheduling Techniques in Fog Computing Environment	365
<i>M. Sri Raghavendra, Priyanka Chawla</i>	
41. A Novel Approach for Water Leakage Detection and Localization	373
<i>Anuj Purwar, Mohit Patel, Mohit Garg, Karan Ahuja</i>	
42. A Review on Container-Based Lightweight Virtualization for Fog Computing	378
<i>M. Sri Raghavendra, Priyanka Chawla</i>	
43. Comparative Analysis of Security Threats in Mobile Cloud Computing Environment	385
<i>Vishal, Bikrampal Kaur, Surender Jangra</i>	
44. Leveraging the Power of Cloud Computing for Technology Enhanced Learning (TEL)	391
<i>Deepshikha Aggarwal</i>	
45. Comparative Study of Task Scheduling Algorithms through Cloudsim	397
<i>Ram Pratap, Taskeen Zaidi</i>	
46. Remote Online Voting System using Aneka Platform	401
<i>Karishma Varshney, Rahul Johari, R. L. Ujjwal</i>	
47. Truncated Wallace Based Single Precision Floating Point Multiplier	407
<i>Abhay Sharma, Tarun Kumar Rawat</i>	

IMAGE PROCESSING TECHNIQUES

48. A Comparative Approach of Segmentation Methods Using Thermal Images of Apple	412
<i>Yogesh, Ashwani Kumar Dubey, Rajeev Ratan Arora</i>	
49. Edge Detection in Dermoscopic Images by Linear Structuring Element	419
<i>Sudhriti Sengupta, Neetu Mittal, Megha Modi</i>	
50. A Two-Way Image Quality Enhancement for Iris Recognition System Using Modified Enhanced Histogram Equalization for Normalization	425
<i>Samuel Enseriban Belanda, Abdulrahman Aminu Ghali, Sapiee Jamel, Mustafa Mat Deris</i>	
51. Detecting Future Terrorism Trend in India Using Clustering Analysis	431
<i>Shivali Baghel, Yogesh</i>	
52. Non-Destructive Analysis of Defected Portions of Fruits Using Integrated Segmentation Process	433
<i>Yogesh, Ashad Ahmed, Iman Ali</i>	
53. Segmentation of Different Fruits Using Image Processing Based on Fuzzy C-means Method	441
<i>Yogesh, Iman Ali, Ashad Ahmed</i>	
54. UMLBP - A Novel Approach for Face Recognition System using OPENCV	448
<i>Manish Kumar, Rahul Gupta, Dinesh Kumar, Kota Solomon Raju</i>	

ADVANCES ON COMPUTING MECHANISMS

55. A Hybrid Nonlinear Manifold Detection Approach for Software Defect Prediction	453
<i>Soumi Ghosh, Ajay Rana, Vineet Kansal</i>	
56. Modelling and Forecasting Bus Passenger Demand using Time Series Method	460
<i>Anila Cyril, Raviraj H. Mulangi, Varghese George</i>	
57. Development of Web Based Light Intensity Control of LED Using LabVIEW	467
<i>Neeraj Khera, Prateekshya Biswal, Chintalapudi Likhith</i>	
58. Response Time Based Balancing of Load in Web Server Clusters	471
<i>Deepti Sharma</i>	
59. Predicting Fluctuations in Cryptocurrencies' Price using users' Comments and Real-time Prices	477
<i>Pavitra Mohanty, Darshan Patel, Parth Patel, Sudipta Roy</i>	
60. A Comparative Study of Machine Learning and Deep Learning Techniques for Sentiment Analysis	483
<i>Krutika Jain, Shivani Kaushal</i>	
61. Quantitative Ultrasound for Investigation of Cancellous Bone Properties in Osteoporosis Management	N/A
<i>Kiran Kale, Apurva Naik</i>	

ARTIFICIAL INTELLIGENCE AND EXPERTS SYSTEMS

62. Modelling and Adaptive Systems for Smart Cities	495
<i>Masoud Mohammadian</i>	
63. Epileptic Data Classification Using Frequency Power Estimation of Channel (FP1-F7) in Children	501
<i>Alpika Tripathi, Geetika Srivastava, P.K. Maurya</i>	
64. Intrusion Detection System Providing Security with Machine Learning Technique	N/A
<i>Vaibhav, Sunil Kumar Khatri, Subhranil Som</i>	
65. Redaction of Protected Health Information in EHRs using CRFs and Bi-directional LSTMs	513
<i>Apar Madan, Ann Mary George, Apurva Singh, M.P.S. Bhatia</i>	
66. Advanced Plant Leaf Classification Through Image Enhancement and Canny Edge Detection	518

Jibi G. Thanikkal, Ashwani Kumar Dubey, Thomas M.T.

- 67. Gene Ranking: A Novel Approach Using Multi-Objective Genetic Algorithm** 523
Priyojit Das, Sujay Saha, Anupam Ghosh, Kashi Nath Dey
- 68. Enhancing the Ability to Communicate by Synthesizing American Sign Language using Image Recognition in A Chatbot for Differently Abled** 529
Arjun Pardasani, Ajay Kumar Sharma, Sashwata Banerjee, Vaibhav Garg, Debdutta Singha Roy
- 69. Forecasting Direction of Stock Index Using Two Stage Hybridization of Machine Learning Models** 533
Puneet Misra, Siddharth Chaurasia
- 70. Feature Selection using Mutual Information and Adaptive Particle Swarm Optimization for Image Steganalysis** 538
Jasmanpreet Kaur, Singara Singh
- 71. Low Cost Herbal Mosquito Repellent Using Arm Based Device** 545
Prabhjyot Singh Sodhi, Neelam Rawat, Utkarsh Saxena
- 72. An Integrated Automatic Number Plate Recognition for Recognizing Multi Language Fonts** 551
Arun Vaishnav, Manju Mandot
- 73. An Intelligent Bin Management System Design for Smart City using GSM Technology** 557
Bandana Prasad, Sidhant Dalmia, Sindhu Dasari, Namita Arya
- 74. Analysis of Process Scheduling Algorithm for Multiprocessor System** 564
Chandresh Suman, Gaurav Kumar

NETWORKS, COMMUNICATIONS AND CYBER SECURITY

- 75. Digital Image Security Using Hybrid Visual Cryptography** 570
Shradha Bhatia, Sunil Kumar Khatri, Ajay Vikram Singh
- 76. A Novel Approach to Hide Text Data in Colour Image** 577
Suraj Kumar, Santosh Kumar, Neeraj Kumar Singh, Anandapova Majumder, Suvamoy Changder
- 77. Dynamic Channel Allocation in Small Cells** 582
Gadiraju Divija Swetha, Jitender Grover, Garimella Rama Murthy
- 78. Circularly Polarized Stub Integrated Rectangular Slotted Patch Antenna for WLAN Application** 589
Tejpal Jhajharia, Vivekanand Tiwari, Deepak Bhatnagar
- 79. Performance Evaluation of Content Addressable Memories** 596
Venkata Ramana Datti, P.V. Sridevi
- 80. A Generalized Model of Text Steganography by Summary Generation using Frequency Analysis** 599
Anandapova Majumder, Suvamoy Changder
- 81. A Hybrid Approach for Energy Efficient Network Design** 606
Varsha Singh, Abhishek Srivastava, Rana Majumdar, Sunil Kumar Chowdhary
- 82. Analysis and Comparison of Process Mining Algorithms with Application of Process Mining in Intrusion Detection System** 613
Ved Prakash Mishra, Joanita Dsouza, Laura Elizabeth
- 83. 4QAM OFDM Visible Light Communication using Laser** 618
Chetna Verma, Chetan Selwal
- 84. A Single Segment Generation Technique for the Design of DCSK System (Differential Chaos Shift Keying System)** 624
Khamis Salim Said Al Nayari, Nizar Al Bassam, Shaik Mazhar Hussain, Kamaluddin Mohamed Yosof, Sumesh Eratt Parameswaran, Shaik Ashfaq Hussain
- 85. The Optimal Design of Wideband Second-order Microwave Differentiator** 632
Usha Gautam, Tarun K. Rawat, D. K. Upadhyay
- 86. Evaluation of Different Selfish Node Detection Techniques in DTN** 636

Atul Sharma, Lakshay

INTERNET-OF-THINGS

- 87. Security Issues and Challenges in Perception Layer of Smart Healthcare** 639
Anjali Mahanty, Gurinder Singh, Subhranil Som, Sunil Kumar Khatri
- 88. Accurate Real-Time Location Map Matching Algorithm for Large Scale Trajectory Data** 646
Kanta Prasad Sharma, Ramesh C. Poonia, Surendra Sunda
- 89. IoT based Health Monitoring System for Critical Patients and Communication through Think Speak Cloud Platform** 652
Zahir bin Sulaiman Al Brashdi, Shaik Mazhar Hussain, Kamaluddin Mohammad Yosof, Shaik Ashfaq Hussain, Ajay Vikram Singh
- 90. Smart Security Surveillance using IoT** 659
Sharmin Akter, Rehana Afroz Sima, Md. Sohid Ullah, Syed Akhter Hossain
- 91. Threats Paradigmin IoT Ecosystem** 664
Anshul Jain, Tanya Singh, Satyendra K. Sharma
- 92. IoT based Street Light Visibility and Water Logging Monitoring for Development of a Smart City** 671
Suman Kumar Laha, Ankur Ganguly, Rishav Bhattacharya, Pradip Kumar Sadhu, Ashok Kumar Naskar
- 93. Prototype Proposal for IoT based Two-Wheeler Ignition and Security Enhancements** 678
Sanjoy Banerjee, Abhijit Kumar Pal, Diganta Sengupta
- 94. Power-aware Aggregated SEARCH: Enhancing Spectrum and Energy Efficiency of Sensor Networks** 682
Neeti Gupta, Vidushi Sharma
- 95. Security Implications in IoT using Authentication and Access Control** 689
Danish Showkat, Shubranil Som, Sunil Kumar Khatri, Armaan Singh Ahluwalia
- 96. Barricades in Network Transformation from 4G to 5G in India** 695
Sorabh Puri, R.S. Rai, Karunesh Saxena
- 97. Development of an App Enabled Smart Helmet for Real Time Detection and Reporting of Accidents** 703
Joyendra Roy Biswas, Shubham Kachroo, Parth Chopra, Shubham Sharma
- 98. Proposing an Encryption/ Decryption Scheme for IoT Communications using Binary-bit Sequence and Multistage Encryption** 709
Iqra Hussain, Mukesh Chandra Negi, Nitin Pandey
- 99. IOT Based Fire Fighting Robot** 718
Megha Kanwar, Agilandeewari L.
- 100. Smart Traffic Management System using IoT in India** N/A
Aditya Singh, Ajay Vikram Singh, Sunil Kumar Khatri
- 101. IoT Based Smart Network for Blood Bank** 732
Ahmed AL-Kalbani, Syed Imran Ali Kazmi, Jitendra Pandey
- 102. Accidents Detection and Prevention System to reduce Traffic Hazards using IR Sensors** 737
Naji Taaib Said Al Wadhahi, Shaik Mazhar Hussain, Kamaluddin Mohammad Yosof; Shaik Ashfaq Hussain, Ajay Vikram Singh
- 103. An Encryption-based Secure Framework for Data Transmission in IoT** 743
Shikha Chaudhry

NATURAL LANGUAGE PROCESSING

- 104. Cyberbullying Detection using Recursive Neural Network through Offline Repository** 748
Nidhi Chandra, Sunil Kumar Khatri, Subhranil Som

105. An Event-local View: Emotion Interplay in the Underlying Social Graph of a Literary Text	755
<i>Ramadas S. Mahale, Sunil Pai G., Sai Tejaswini M.V., Bhaskarjyoti Das</i>	
106. Word Sense Disambiguation: Supervised Program Interpretation Methodology for Punjabi Language	762
<i>Himdweep Walia, Ajay Rana, Vineet Kansal</i>	
107. An Ensemble-Classifer Based Approach for Multi-class Emotion Classification of Short Text	768
<i>Shivangi Chawla, Monica Mehrotra</i>	
108. English-Maithili Machine Translation and Divergence	775
<i>Ritu Nidhi, Tanya Singh</i>	

SOFTWARE ENGINEERING

109. Effort Estimation of Agile Development using Fuzzy Logic	779
<i>Abhishek Saini, Laxmi Ahuja, Sunil Kumar Khatri</i>	
110. Saving and Loan Information System of Cempaka Cooperative Web Based	784
<i>Elena Caroline, Mira Ziveria</i>	
111. UX Engagement and Interaction	792
<i>Yemisi Oyedele, Darelle van Greunen, Alida Veldsman</i>	
112. 800 kWh Waste to Energy Power System using Fruit, Vegetable and Cooked Waste Fraction of Municipal Solid Waste	N/A
<i>Neena Ahuja, Dipali Bansal, Khwaja M. Rafi</i>	
113. Design and Development of a Tool for Analyzing the Effect of Refactoring on Maintainability	807
<i>Ruchika Malhotra, Shweta Meena</i>	
114. The Impact of Agile Software Development Process on the Quality of Software Product	812
<i>Parita Jain, Arun Sharma, Laxmi Ahuja</i>	
115. Importance of RTM for Testing a Web-based Project	816
<i>Mamta Madan, Meenu Dave, Anisha Tandon</i>	
116. Effect of Run-Time Triggered Multinet Trojan on Max-log-MAP Decoder	819
<i>Aiswarya M.S., B. Yamuna, Karthi Balasubramanian</i>	
117. Effect of Hardware Trojans on a Low Power and Area Efficient Max-log-MAP Decoder	824
<i>Arul Jothi V., Karthi Balasubramanian, B. Yamuna</i>	
118. Incorporating Autonomic Capability as Quality Attribute for a Software System	829
<i>Puneet Kumar Aggarwal, P.S. Grover, Laxmi Ahuja</i>	
119. Smart LED with Power Allocation Algorithm for Indoor Visible Light Communication System	834
<i>Shashikant, Parul Garg</i>	
120. Design and Development of Graphical User Interface (GUI) with MATLAB for Early Detection of Diabetic Foot Ulcers using Infrared Imaging	840
<i>Nasira Said Juma Mahil Al Qalhati, Shaik Asif Hussain, Ajay Vikram Singh</i>	
121. ERP Implementation in the Oil and Gas Sector: A Case Study in Sultanate of Oman	848
<i>Ashraf AL Jafari, Smitha Sunil Kumaran Nair</i>	

MATHEMATICAL MODELLING & OPTIMIZATION

122. Return-Maximizing in Fuzzy Portfolio Processes under Average Value-at-Risk Constraints	855
<i>Yuji Yoshida</i>	
123. Modelling and Development of Compressed Air Powered Human Exoskeleton Suit Human Exoskeleton	861
<i>Manthan V. Pawar, S.S. Ohol, Ashutosh Patil</i>	
124. Identification of Optimum Locations for Charging of Electric Vehicles	867

Siddharth Gupta, Gunjar Ahuja, Girish Kumar

125. Simultaneous Image Segmentation and Object Recognition	873
<i>Gaurav Bansal</i>	
126. Model-Order Reduction Usage of Stability Equation Method Designed for Discrete-Time Systems	877
<i>D. K. Sambariya, Trishla Sharma</i>	
127. An Effective Approach for Reduction of Discrete Time System using Modified Cauer Form	883
<i>D. K. Sambariya, Trishla Sharma</i>	
128. Effect of Sensing Duration Optimization in Cooperative Spectrum Sensing Game	889
<i>Suddhendu Das Mahapatra, Shivendra Nath Sharan</i>	
129. Genetic Algorithm based Optimization of Travel Time from Source to Destination	893
<i>Saima Ali, Afzal Qureshi, Rajeev Kumar Gupta</i>	
130. Model Based Controller for Nonlinear Process	902
<i>G. Manisha, T. Anitha, M. Nagarajapandian</i>	
131. Implementation of Closed Loop Pressure Control Using Virtual Instrumentation	907
<i>R. Shanmugapriya, P. Preethi, P.S. Ajeeth Balaji, M. Prabhakaran, M. Nagarajapandian, T. Anitha</i>	