

Contents

Part I Soft Computing Techniques for Advanced Computing

Fuzzy Logic Based UPFC Controller for Voltage Stability and Reactive Control of a Stand-Alone Hybrid System	3
Asit Mohanty, Meera Viswavandya, Sthitapragyan Mohanty and Dillip Mishra	
APSO Based Weighting Matrices Selection of LQR Applied to Tracking Control of SIMO System	11
S. Karthick, Jovitha Jerome, E. Vinodh Kumar and G. Raaja	
Application of Fuzzy Soft Multi Sets in Decision-Making Problems . . .	21
Anjan Mukherjee and Ajoy Kanti Das	
Fuzzy kNN Adaptation to Learning by Example in Activity Recognition Modeling	29
Vijay Borges and Wilson Jeberson	
Plant Leaf Recognition Using Ridge Filter and Curvelet Transform with Neuro-Fuzzy Classifier	37
Jyotismita Chaki, Ranjan Parekh and Samar Bhattacharya	
An Effective Prediction of Position Analysis of Industrial Robot Using Fuzzy Logic Approach	45
P. Kesaba, B.B. Choudhury and M.K. Muni	
Pitch Angle Controlling of Wind Turbine System Using Proportional-Integral/Fuzzy Logic Controller	55
Rupendra Kumar Pachauri, Harish Kumar, Ankit Gupta and Yogesh K. Chauhan	

Recognition of Repetition and Prolongation in Stuttered Speech Using ANN	65
P.S. Savin, Pravin B. Ramteke and Shashidhar G. Koolagudi	
 Part II Computational Intelligence: Algorithms, Applications and Future Directions	
Primary Health Centre ATM: PHCATM See Healthcare Differently	75
Priyabrata Sundaray	
Hybrid Model with Fusion Approach to Enhance the Efficiency of Keystroke Dynamics Authentication	85
Ramu Thanganayagam and Arivoli Thangadurai	
Multi-class Twin Support Vector Machine for Pattern Classification	97
Divya Tomar and Sonali Agarwal	
Multi-label Classifier for Emotion Recognition from Music	111
Divya Tomar and Sonali Agarwal	
Visibility Enhancement in a Foggy Road Along with Road Boundary Detection	125
Dibyasree Das, Kyamelia Roy, Samiran Basak and Sheli Sinha Chaudhury	
Artificial Neural Network Based Prediction Techniques for Torch Current Deviation to Produce Defect-Free Welds in GTAW Using IR Thermography	137
N.M. Nandhitha	
A Study on Cloud Based SOA Suite for Electronic Healthcare Records Integration	143
Sreekanth Rallapalli and R.R. Gondkar	
Hap: Protecting the Apache Hadoop Clusters with Hadoop Authentication Process Using Kerberos	151
V. Valliyappan and Parminder Singh	
Image Analysis for Efficient Surface Defect Detection of Orange Fruits	163
Thendral Ravi and Suhasini Ambalavanan	

Segregation of Rare Items Association	171
Dipti Rana, Rupa Mehta, Prateek Somkunwar, Naresh Mistry and Mukesh Raghuwanshi	
Local Gabor Wavelet-Based Feature Extraction and Evaluation	181
T. Malathi and M.K. Bhuyan	
Human Interaction Recognition Using Improved Spatio-Temporal Features	191
M. Sivarathinabala and S. Abirami	
Common Coupled Fixed Point Results in Fuzzy Metric Spaces Using JCLR Property	201
Vishal Gupta, Ashima Kanwar and Naveen Gulati	
Speech Based Arithmetic Calculator Using Mel-Frequency Cepstral Coefficients and Gaussian Mixture Models	209
Moula Husain, S.M. Meena and Manjunath K. Gonal	
Comparative Analysis on Optic Cup and Optic Disc Segmentation for Glaucoma Diagnosis	219
Niharika Thakur and Mamta Juneja	
 Part III Advanced Image Processing Methodologies	
A Secure Image Encryption Algorithm Using LFSR and RC4 Key Stream Generator	227
Bhaskar Mondal, Nishith Sinha and Tarni Mandal	
An Improved Reversible Data Hiding Technique Based on Histogram Bin Shifting	239
Smita Agrawal and Manoj Kumar	
A Novel Approach Towards Detection and Identification of Stages of Breast Cancer	249
M. Varalatchoumy and M. Ravishankar	
Analysis of Local Descriptors for Human Face Recognition	263
Radhey Shyam and Yogendra Narain Singh	
Implementation and Comparative Study of Image Fusion Methods in Frequency Domain	271
Keyur N. Brahmbhatt and Ramji M. Makwana	

Iris Recognition Using Textural Edginess Features	279
Saiyed Umer, Bibhas Chandra Dhara and Bhabatosh Chanda	
Z-Transform Based Digital Image Watermarking Scheme with DWT and Chaos	289
N. Jayashree and R.S. Bhuvaneswaran	
Panoramic Image Mosaicing: An Optimized Graph-Cut Approach . . .	299
Achala Pandey and Umesh C. Pati	
Spatial Resolution Assessment in Low Dose Imaging	307
Akshata Navalli and Shrinivas Desai	
A Probabilistic Patch Based Hybrid Framework for CT/PET Image Reconstruction	315
Shailendra Tiwari, Rajeev Srivastava and Arvind Kumar Tiwari	
Low Cost Eyelid Occlusion Removal to Enhance Iris Recognition . . .	327
Beeren Sahu, Soubhagya S. Barpanda and Sambit Bakshi	
 Part IV Next Generation Optical Systems	
On Improving Static Routing and Wavelength Assignment in WDM All-Optical Mesh Networks	337
Abhishek Bandyopadhyay, Debdutto Chakraborty, Uma Bhattacharya and Monish Chatterjee	
A Randomized N-Policy Queueing Method to Prolong Lifetime of Wireless Sensor Networks.	347
Maneesha Nidhi and Veena Goswami	
Overview on Location Management in PCS Network: A Survey	359
Abantika Choudhury, Abhijit Sharma and Uma Bhattacharya	
Self-Organized Node Placement for Area Coverage in Pervasive Computing Networks.	365
Dibakar Saha and Nabanita Das	
SNR Enhancement of Brillouin Distributed Strain Sensor Using Optimized Receiver	377
Himansu Shekhar Pradhan and P.K. Sahu	

Comparative Performance Analysis of Different Segmentation Dropping Schemes Under JET Based Optical Burst Switching (OBS) Paradigm	385
Manoj Kumar Dutta	
Free-Space Optical Communication Channel Modeling	391
G. Eswara Rao, Hara Prasana Jena, Aditya Shaswat Mishra and Bijayananda Patnaik	
Wavelet Based RTL-SDR Real Time Signal Denoising in GNU Radio	397
U. Reshma, H.B. Barathi Ganesh, J. Jyothi, R. Gandhiraj and K.P. Soman	
 Part V Emerging Techniques in Computing	
A New Way for Combining Filter Feature Selection Methods	411
Waad Bouaguel and Mohamed Limam	
Design and Implementation of Interactive Speech Recognizing English Dictionary	421
Dipayan Dev and Pradipta Banerjee	
On Careful Selection of Initial Centers for K-means Algorithm	435
R. Jothi, Sraban Kumar Mohanty and Aparajita Ojha	
Rule Based Machine Translation: English to Malayalam: A Survey	447
V.C Aasha and Amal Ganesh	
Time Series Forecasting Through a Dynamic Weighted Ensemble Approach	455
Ratnadip Adhikari and Ghanshyam Verma	
A Novel Graph Clustering Algorithm Based on Structural Attribute Neighborhood Similarity (SANS)	467
M. Parimala and Daphne Lopez	
Change-Point Detection in Enterprise Attack Surface for Network Hardening	475
Ghanshyam S. Bopche and Babu M. Mehtre	

Efficient Quality of Multimedia Experience Using Perceptual Quality Metrics	487
Rahul Gaurav and Hasan F. Ates	
Unsupervised Machine Learning Approach for Gene Expression Microarray Data Using Soft Computing Technique	497
Madhurima Rana, Prachi Vijayeeta, Utsav Kar, Madhabananda Das and B.S.P. Mishra	
Phase Correlation Based Algorithm Using Fast Fourier Transform for Fingerprint Mosaicing	507
Satish H. Bhati and Umesh C. Pati	
An LSB Substitution with Bit Inversion Steganography Method	515
Nadeem Akhtar	
Image Quality Assessment with Structural Similarity Using Wavelet Families at Various Decompositions.	523
Jayesh Deorao Ruikar, A.K. Sinha and Saurabh Chaudhury	
 Part VI Applications of Informatics	
Modelling the Gap Acceptance Behavior of Drivers of Two-Wheelers at Unsignalized Intersection in Case of Heterogeneous Traffic Using ANFIS.	533
Harsh Jigish Amin and Akhilesh Kumar Maurya	
Optimizing the Objective Measure of Speech Quality in Monaural Speech Separation	545
M. Dharmalingam, M.C. John Wiselin and R. Rajavel	
Automated Segmentation Scheme Based on Probabilistic Method and Active Contour Model for Breast Cancer Detection	553
Biswajit Biswas, Ritamshirsa Choudhuri and Kashi Nath Dey	
Disease Detection and Identification Using Sequence Data and Information Retrieval Methods	565
Sankranti Joshi, Pai M. Radhika and Pai M.M. Manohara	
Advance Teaching–Learning Based Optimization for Global Function Optimization	573
Anand Verma, Shikha Agrawal, Jitendra Agrawal and Sanjeev Sharma	

Analysis of Online Product Purchase and Predicting Items for Co-purchase.	581
Sohom Ghosh, Angan Mitra, Partha Basuchowdhuri and Sanjoy Kumar Saha	
Fingerprint Template Protection Using Multiple Spiral Curves	593
Munaga V.N.K. Prasad, Jaipal Reddy Anugu and C.R. Rao	
Rhythm and Timbre Analysis for Carnatic Music Processing	603
Rushiraj Heshi, S.M. Suma, Shashidhar G. Koolagudi, Smriti Bhandari and K.S. Rao	
Repetition Detection in Stuttered Speech.	611
Pravin B. Ramteke, Shashidhar G. Koolagudi and Fathima Afroz	
Removal of Artifacts from Electrocardiogram Using Efficient Dead Zone Leaky LMS Adaptive Algorithm.	619
T. Gowri, P. Rajesh Kumar, D.V.R. Koti Reddy and Ur Zia Rahman	
Detecting Tampered Cheque Images Using Difference Expansion Based Watermarking with Intelligent Pairing of Pixels	631
Mahesh Tejawat and Rajarshi Pal	
Printed Odia Digit Recognition Using Finite Automaton	643
Ramesh Kumar Mohapatra, Banshidhar Majhi and Sanjay Kumar Jena	
Author Index	651

Proceedings of 3rd International Conference on
Advanced Computing, Networking and Informatics
ICACNI 2015, Volume 1

Nagar, A.K.; Mohapatra, D.P.; Chaki, N. (Eds.)

2016, XXII, 653 p., Hardcover

ISBN: 978-81-322-2537-9