Contents

Background Modeling Using Temporal-Local Sample Density Outlier Detection ......................................................... 1
Wei Zeng, Mingqiang Yang, Feng Wang and Zhenxing Cui

Analysis of Framelets for the Microcalcification ..................... 11
K.S. Thivya and P. Sakthivel

Reconfigurable Architecture-Based Implementation of Non-uniformity Correction for Long Wave IR Sensors .............. 23
Sudhir Khare, Brajesh Kumar Kaushik, Manvendra Singh, Manoj Purohit and Himanshu Singh

Finger Knuckle Print Recognition Based on Wavelet and Gabor Filtering ................................................................. 35
Gaurav Verma and Aloka Sinha

Design of Advanced Correlation Filters for Finger Knuckle Print Authentication Systems ........................................... 47
Gaurav Verma and Aloka Sinha

A Nonlinear Modified CONVEF-AD Based Approach for Low-Dose Sinogram Restoration ..................................... 57
Shailendra Tiwari, Rajeev Srivastava and K.V. Arya

System Design for Tackling Blind Curves ........................................ 69
Sowndarya Lakshmi Sadasivam and J. Amudha

A Novel Visual Word Assignment Model for Content-Based Image Retrieval ............................................................ 79
Anindita Mukherjee, Soman Chakraborty, Jaya Sil and Ananda S. Chowdhury

Online Support Vector Machine Based on Minimum Euclidean Distance ................................................................. 89
Kalpana Dahiya, Vinod Kumar Chauhan and Anuj Sharma
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and Development of 3-D Urban Geographical Information Retrieval Application Employing Only Open Source Instruments</td>
<td>101</td>
</tr>
<tr>
<td>Ajaze Parvez Khan, Sudhir Porwal and Sangeeta Khare</td>
<td></td>
</tr>
<tr>
<td>A Textural Characterization of Coal SEM Images Using Functional Link Artificial Neural Network</td>
<td>109</td>
</tr>
<tr>
<td>Alpana and Subrajeet Mohapatra</td>
<td></td>
</tr>
<tr>
<td>Template-Based Automatic High-Speed Relighting of Faces</td>
<td>119</td>
</tr>
<tr>
<td>Ankit Jalan, Mynepalli Siva Chaitanya, Arko Sabui, Abhijeet Singh, Viswanath Veera and Shankar M. Venkatesan</td>
<td></td>
</tr>
<tr>
<td>An Improved Contextual Information Based Approach for Anomaly Detection via Adaptive Inference for Surveillance Application</td>
<td>133</td>
</tr>
<tr>
<td>T.J. Narendra Rao, G.N. Girish and Jeny Rajan</td>
<td></td>
</tr>
<tr>
<td>A Novel Approach of an ((n, n)) Multi-Secret Image Sharing Scheme Using Additive Modulo</td>
<td>149</td>
</tr>
<tr>
<td>Maroti Deshmukh, Neeta Nain and Mushtaq Ahmed</td>
<td></td>
</tr>
<tr>
<td>Scheimpflug Camera Calibration Using Lens Distortion Model</td>
<td>159</td>
</tr>
<tr>
<td>Peter Fasogbon, Luc Duvieubourg and Ludovic Macaire</td>
<td></td>
</tr>
<tr>
<td>Microscopic Image Classification Using DCT for the Detection of Acute Lymphoblastic Leukemia (ALL)</td>
<td>171</td>
</tr>
<tr>
<td>Sonali Mishra, Lokesh Sharma, Bansidhar Majhi and Pankaj Kumar Sa</td>
<td></td>
</tr>
<tr>
<td>Robust Image Hashing Technique for Content Authentication based on DWT</td>
<td>181</td>
</tr>
<tr>
<td>Lokanadham Naidu Vadlamudi, Rama Prasad V. Vaddella and Vasumathi Devara</td>
<td></td>
</tr>
<tr>
<td>Robust Parametric Twin Support Vector Machine and Its Application in Human Activity Recognition</td>
<td>193</td>
</tr>
<tr>
<td>Reshma Khemchandani and Sweta Sharma</td>
<td></td>
</tr>
<tr>
<td>Separating Indic Scripts with ‘matra’—A Precursor to Script Identification in Multi-script Documents</td>
<td>205</td>
</tr>
<tr>
<td>Sk.Md. Obaidullah, Chitrita Goswami, K.C. Santosh, Chayan Halder, Nibaran Das and Kaushik Roy</td>
<td></td>
</tr>
<tr>
<td>Efficient Multimodal Biometric Feature Fusion Using Block Sum and Minutiae Techniques</td>
<td>215</td>
</tr>
<tr>
<td>Ujwalla Gawande, Kamal Hajari and Yogesh Golhar</td>
<td></td>
</tr>
<tr>
<td>Video Synopsis for IR Imagery Considering Video as a 3D Data Cuboid</td>
<td>227</td>
</tr>
<tr>
<td>Nikhil Kumar, Ashish Kumar and Neeta Kandpal</td>
<td></td>
</tr>
</tbody>
</table>
Performance Analysis of Texture Image Retrieval in Curvelet, Contourlet, and Local Ternary Pattern Using DNN and ELM Classifiers for MRI Brain Tumor Images ........................................... 239
A. Anbarasa Pandian and R. Balasubramanian

ROI Segmentation from Brain MR Images with a Fast Multilevel Thresholding ................................................................. 249
Subhashis Banerjee, Sushmita Mitra and B. Uma Shankar

Surveillance Scene Segmentation Based on Trajectory Classification Using Supervised Learning ............................................. 261
Rajkumar Saini, Arif Ahmed, Debi Prosad Dogra and Partha Pratim Roy

Classification of Object Trajectories Represented by High-Level Features Using Unsupervised Learning ................................... 273
Rajkumar Saini, Arif Ahmed, Debi Prosad Dogra and Partha Pratim Roy

A Hybrid Method for Image Categorization Using Shape Descriptors and Histogram of Oriented Gradients .......................... 285
Subhash Chand Agrawal, Anand Singh Jalal and Rajesh Kumar Tripathi

Local Binary Pattern and Its Variants for Target Recognition in Infrared Imagery ................................................................. 297
Aparna Akula, Ripul Ghosh, Satish Kumar and H.K. Sardana

Applicability of Self-Organizing Maps in Content-Based Image Classification ................................................................. 309
Kumar Rohit, R.K. Sai Subrahmanyam Gorthi and Deepak Mishra

Road Surface Classification Using Texture Synthesis Based on Gray-Level Co-occurrence Matrix ........................................... 323
Somnath Mukherjee and Saurabh Pandey

Electroencephalography-Based Emotion Recognition Using Gray-Level Co-occurrence Matrix Features .......................... 335
Narendra Jadhav, Ramchandra Manthalkar and Yashwant Joshi

Quick Reaction Target Acquisition and Tracking System ............ 345
Zahir Ahmed Ansari, M.J. Nigam and Avnish Kumar

Low-Complexity Nonrigid Image Registration Using Feature-Based Diffeomorphic Log-Demons ........................................... 357
Md. Azim Ullah and S.M. Mahbubur Rahman

Spotting of Keyword Directly in Run-Length Compressed Documents ....... 367
Mohammed Javed, P. Nagabhushan and Bidyut Baran Chaudhuri
Design and Implementation of a Real-Time Autofocus Algorithm for Thermal Imagers .......................... 377
Anurag Kumar Srivastava and Neeta Kandpal

Parameter Free Clustering Approach for Event Summarization in Videos ........................................ 389
Deepak Kumar Mishra and Navjot Singh

Connected Operators for Non-text Object Segmentation in Grayscale Document Images ....................... 399
Sheshera Mysore, Manish Kumar Gupta and Swapnil Belhe

Non-regularized State Preserving Extreme Learning Machine for Natural Scene Classification ................. 409
Paheding Sidike, Md. Zahangir Alom, Vijayan K. Asari and Tarek M. Taha

A Local Correlation and Directive Contrast Based Image Fusion .......................................................... 419
Sonam and Manoj Kumar

Multi-exposure Image Fusion Using Propagated Image Filtering ......................................................... 431
Diptiben Patel, Bhoomika Sonane and Shanmuganathan Raman

Tone Mapping HDR Images Using Local Texture and Brightness Measures ............................................. 443
Akshay Gadi Patil and Shanmuganathan Raman

Pre- and Post-fingerprint Skeleton Enhancement for Minutiae Extraction ............................................. 453
Geevar C. Zacharias, Madhu S. Nair and P. Sojan Lal

Content Aware Image Size Reduction Using Low Energy Maps for Reduced Distortion ......................... 467
Pooja Solanki, Charul Bhatnagar, Anand Singh Jalal and Manoj Kumar

Artificial Immune Hybrid Photo Album Classifier .................................................... 475
Vandna Bhalla and Santanu Chaudhury

Crowd Disaster Avoidance System (CDAS) by Deep Learning Using eXtended Center Symmetric Local Binary Pattern (XCS-LBP) Texture Features ...................................................... 487
C. Nagananthini and B. Yogameena

A Novel Visualization and Tracking Framework for Analyzing the Inter/Intra Cloud Pattern Formation to Study Their Impact on Climate ................................................................. 499
Bibin Johnson, J. Sheeba Rani and Gorthi R.K.S.S. Manyam
Cancelable Biometric Template Security Using Segment-Based
Visual Cryptography ........................................... 511
P. Punithavathi and S. Geetha

PCB Defect Classification Using Logical Combination of Segmented
Copper and Non-copper Part ................................... 523
Shashi Kumar, Yuji Iwahori and M.K. Bhuyan

Gait Recognition-Based Human Identification and Gender
Classification .................................................. 533
S. Arivazhagan and P. Induja

Corner Detection Using Random Forests ....................... 545
Shubham Pachori, Kshitij Singh and Shanmuganathan Raman

Symbolic Representation and Classification of Logos .......... 555
D.S. Guru and N. Vinay Kumar

A Hybrid Method Based CT Image Denoising Using Nonsubsampled
Contourlet and Curvelet Transforms .............................. 571
Manoj Diwakar and Manoj Kumar

Using Musical Beats to Segment Videos of Bharatanatyam Adavus .... 581
Tanwi Mallick, Akash Anuj, Partha Pratim Das
and Arun Kumar Majumdar

Parallel Implementation of RSA 2D-DCT Steganography
and Chaotic 2D-DCT Steganography .............................. 593
G. Savithri, Vinupriya, Sayali Mane and J. Saira Banu

Thermal Face Recognition Using Face Localized Scale-Invariant
Feature Transform ........................................... 607
Shruti R. Uke and Abhijeet V. Nandedkar

Integrating Geometric and Textural Features for Facial Emotion
Classification Using SVM Frameworks ........................ 619
Samyak Datta, Debasis Sen and R. Balasubramanian

Fast Non-blind Image Deblurring with Sparse Priors ............. 629
Rajshekhar Das, Anurag Bajpai and Shankar M. Venkatesan

Author Index .................................................. 643
Proceedings of International Conference on Computer Vision and Image Processing
CVIP 2016, Volume 1
Raman, B.; Kumar, S.; Roy, P.P.; Sen, D. (Eds.)
2017, XIV, 645 p. 308 illus., Softcover