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Nota di contenuto	Chapter 1. Background Modeling Using Temporal-local Sample Density Outlier Detection -- Chapter 2. Analysis of Framelets for the Microcalcification -- Chapter 3. Reconfigurable Architecture Based Implementation of Non-Uniformity Correction for Long Wave IR Sensors -- Chapter 4. Finger Knuckle Print Recognition Based on Wavelet and Gabor Filtering -- Chapter 5. Design of Advanced Correlation Filters for Finger Knuckle Print Authentication Systems.-Chapter 6. A Non-Linear Modified CONVEF-AD Based Approach for Low-Dose Sinogram Restoration -- Chapter 7. System Design for Tackling Blind Curves -- Chapter 8. A Novel Visual Word Assignment Model for Content Based Image Retrieval -- Chapter 9. Online Support Vector Machine Based on Minimum Euclidean Distance -- Chapter 10. Design and Development of 3D Urban Geographical Information Retrieval Application Employing only Open Source Instruments -- Chapter 11. A Textural

Characterization of Coal SEM Images Using Functional Link Artificial Neural Network -- Chapter 12. Template-based Automatic High-speed Relighting of Faces -- Chapter 13. An Improved Contextual Information Based Approach for Anomaly Detection via Adaptive Inference for Surveillance Application -- Chapter 14. A Novel Approach of an (n; n) Multi Secret Image Sharing Scheme Using Additive Modulo -- Chapter 15. Scheimpflug Camera Calibration Using Lens Distortion Model -- Chapter 16. Microscopic Image Classification Using DCT for the Detection of Acute Lymphoblastic Leukemia (ALL) -- Chapter 17. Robust Hash Generation Technique for Image Authentication Using DWT -- Chapter 18. Robust Parametric Twin Support Vector Machine and Its Application in Human Activity Recognition -- Chapter 19. Separating Indic Scripts with 'Matra' — A Precursor to Script Identification in Multi-script Documents -- Chapter 20. Efficient Multimodal Biometric Feature Fusion Using Block-sum and Minutiae Techniques -- Chapter 21. Video Synopsis for IR Imagery Considering Video as a 3D Data Cuboid -- Chapter 22. Performance Analysis of Texture Image Retrieval in Curvelet, Contourlet and Local Ternary Pattern Using DNN and ELM Classifiers for MRI Brain Tumor Images -- Chapter 23. ROI Segmentation from Brain MR Images with a Fast Multi-Level Thresholding -- Chapter 24. Surveillance Scene Segmentation Based on Trajectory Classification Using Supervised -- Chapter 25. Classification of Object Trajectories Represented by High-level Features using Unsupervised Learning -- Chapter 26. A Hybrid Method for Image Categorization Using Shape Descriptors and Histogram of Oriented Gradients -- Chapter 27. Local Binary Pattern and Its Variants for Target Recognition in Infrared Imagery -- Chapter 28. Applicability of Self Organizing Maps in Content Based Image Classification -- Chapter 29. Road Surface Classification Using Texture Synthesis Based on Grey-Level Co-occurrence Matrix -- Chapter 30. Electroencephalography Based Emotion Recognition Using Gray Level Co-occurrence Matrix Features -- Chapter 31. Quick Reaction Target Acquisition and Tracking System -- Chapter 32. Low-complexity Non-rigid Image Registration Using Feature-based Diffeomorphic Log-Demons -- Chapter 33. Spotting of Keyword Directly in Run-length Compressed Documents -- Chapter 34. Design and Implementation of a Real Time Auto Focus Algorithm for Thermal Imagers -- Chapter 35. Parameter Free Clustering Approach for Event Summarization in Videos -- Chapter 36. Connected Operators for Non-text Object Segmentation in Grayscale Document Images -- Chapter 37. Non-Regularized State Preserving Extreme Learning Machine for Natural Scene Classification -- Chapter 38. A Local Correlation and Directive Contrast Based Image Fusion -- Chapter 39. Multi-exposure Image Fusion Using Propagated Image Filtering -- Chapter 40. Tone Mapping HDR Images Using Local Texture and Brightness Measures -- Chapter 41. Pre and Post Fingerprint Skeleton Enhancement for Minutiae Extraction -- Chapter 42. Content Aware Image Size Reduction Using Low Energy Maps for Reduced Distortion -- Chapter 43. Artificial Immune Hybrid Photo Album Classifier -- Chapter 44. Crowd Disaster Avoidance System (CDAS) by Deep Learning Using eXtended Center Symmetric Local Binary Pattern (XCS-LBP) Texture Features -- Chapter 45. A Novel Visualization and Tracking Framework for Analyzing the Inter/Intra Cloud Pattern Formation to Study their Impact on Climate -- Chapter 46. Cancelable Biometric Template Security Using Segment-Based Visual Cryptography -- Chapter 47. PCB Defect Classification Using Logical Combination of Segmented Copper and Non-Copper Part -- Chapter 48. Gait Recognition Based Human Identification and Gender Classification -- Chapter 49. A Novel Approach to Corner Detection

Using Random Forests -- Chapter 50. Symbolic Representation and Classification of Logos -- Chapter 51. A Hybrid Method Based CT Image Denoising using Non-subsampled Contourlet and Curvelet Transforms -- Chapter 52. Using Musical Beats to Segment Videos of Bharatanatyam Adavu's -- Chapter 53. Parallel Implementation of RSA 2D-DCT Steganography and Chaotic 2D-DCT Steganography -- Chapter 54. Thermal Face Recognition Using Face Localized Scale Invariant Feature Transform -- Chapter 55. Integrating Geometric and Textural Features for Facial Emotion Classification Using SVM Frameworks -- Chapter 56. Fast Non-blind Image De-blurring with Sparse Priors.

Sommario/riassunto

This edited volume contains technical contributions in the field of computer vision and image processing presented at the First International Conference on Computer Vision and Image Processing (CVIP 2016). The contributions are thematically divided based on their relation to operations at the lower, middle and higher levels of vision systems, and their applications. The technical contributions in the areas of sensors, acquisition, visualization and enhancement are classified as related to low-level operations. They discuss various modern topics – reconfigurable image system architecture, Scheimpflug camera calibration, real-time autofocusing, climate visualization, tone mapping, super-resolution and image resizing. The technical contributions in the areas of segmentation and retrieval are classified as related to mid-level operations. They discuss some state-of-the-art techniques – non-rigid image registration, iterative image partitioning, egocentric object detection and video shot boundary detection. The technical contributions in the areas of classification and retrieval are categorized as related to high-level operations. They discuss some state-of-the-art approaches – extreme learning machines, and target, gesture and action recognition. A non-regularized state preserving extreme learning machine is presented for natural scene classification. An algorithm for human action recognition through dynamic frame warping based on depth cues is given. Target recognition in night vision through convolutional neural network is also presented. Use of convolutional neural network in detecting static hand gesture is also discussed. Finally, the technical contributions in the areas of surveillance, coding and data security, and biometrics and document processing are considered as applications of computer vision and image processing. They discuss some contemporary applications. A few of them are a system for tackling blind curves, a quick reaction target acquisition and tracking system, an algorithm to detect for copy-move forgery based on circle block, a novel visual secret sharing scheme using affine cipher and image interleaving, a finger knuckle print recognition system based on wavelet and Gabor filtering, and a palmprint recognition based on minutiae quadruplets.