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Nota di contenuto	Skeletonization of Digital Objects -- Maximin Initialization for Cluster Analysis -- Case-Based Object Recognition with Application to Biological Images -- A New Method of Illumination Normalization for Robust Face Recognition -- A Fast Method for Localization of Local Illumination Variations and Photometric Normalization in Face Images -- Gender Classification Using Principal Geodesic Analysis and Gaussian Mixture Models -- Gender Classification of Faces Using Adaboost -- General Pose Face Recognition Using Frontal Face Model -- Approximating 3D Facial Shape from Photographs Using Coupled Statistical Models -- A Comparative Study of Face Representations in

the Frequency Domain -- Face Recognition with Region Division and Spin Images -- Extraction of Blood Vessels in Ophthalmic Color Images of Human Retinas -- A Fast Adaboosting Based Method for Iris and Pupil Contour Detection -- In-Vivo IVUS Tissue Classification: A Comparison Between RF Signal Analysis and Reconstructed Images -- Smoothing Segmented Lung Boundary in Chest CT Images Using Scan Line Search -- Automated Ultrasonic Measurement of Fetal Nuchal Translucency Using Dynamic Programming -- A Method for Detection and Modeling of the Human Spine Based on Principal Curvatures -- Linear Radial Patterns Characterization for Automatic Detection of Tonic Intestinal Contractions -- A Machine Learning Framework Using SOMs: Applications in the Intestinal Motility Assessment -- From Lossy to Lossless Wavelet Image Coding in a Tree-Based Encoder with Resolution Scalability -- 3D Mumford-Shah Based Active Mesh -- Fast 2D-3D Point-Based Registration Using GPU-Based Preprocessing for Image-Guided Surgery -- GA-SSD-ARC-NLM for Parametric Image Registration -- Eigenconjugation: An Approach for Computing Image Similarity -- Image Contrast Enhancement Based on Block-Wise Intensity-Pair Distribution with Two Expansion Forces -- Guiding a Bottom-Up Visual Attention Mechanism to Locate Specific Image Regions Using a Distributed Genetic Optimization -- ORIENT-CAM, A Camera That Knows Its Orientation and Some Applications -- Irregular Pyramid Segmentations with Stochastic Graph Decimation Strategies -- Color Texture Segmentation by Decomposition of Gaussian Mixture Model -- Texture Features and Segmentation Based on Multifractal Approach -- Object Segmentation Using Growing Neural Gas and Generalized Gradient Vector Flow in the Geometric Algebra Framework -- A Clustering Based Approach for Automatic Image Segmentation: An Application to Biplane Ventriculograms -- An Image Segmentation Algorithm Using Iteratively the Mean Shift -- A Robust Region Based Level Set Framework for Medical Image Segmentation -- Color Texture Segmentation Based on Quaternion-Gabor Features -- Corner Detection by Searching Two Class Pattern Substrings -- Model-Based Localization Method by Non-speech Sound Via Wavelet Transform and Dynamic Neural Network -- An Application of Neural Networks for Image Reconstruction in Electrical Capacitance Tomography Applied to Oil Industry -- Combining Neural Networks for Gait Classification -- Training of Multilayer Perceptron Neural Networks by Using Cellular Genetic Algorithms -- Combining Neural Networks and Clustering Techniques for Object Recognition in Indoor Video Sequences -- Evaluation of Time and Frequency Domain-Based Methods for the Estimation of Harmonics-to-Noise-Ratios in Voice Signals -- A Combined Classifier of Cry Units with New Acoustic Attributes -- Practical Considerations for Real-Time Implementation of Speech-Based Gender Detection -- On the Processing of Fuzzy Patterns for Text Independent Phonetic Speech Segmentation -- A RLS Filter for Nonuniformity and Ghosting Correction of Infrared Image Sequences -- Correlation Filters for Detection and Localization of Objects in Degraded Images -- Statistical Recursive Filtering Estimation of Detector Offset Nonuniformity in Infrared Imaging Systems -- 3D Vector Directional Filters to Process Video Sequences -- Object Recognition and Tracking in Video Sequences: A New Integrated Methodology -- Conceptual K-Means Algorithm Based on Complex Features -- Spatial Data Description by Means of Knowledge-Based System -- Search Method of Time Sensitive Frequent Itemsets in Data Streams -- Image Compression Algorithm Based on Morphological Associative Memories -- A Novel Approach to Automatic Color Matching -- The Associative Recall of Spatial Correlated Patterns --

Associative Memories Applied to Image Categorization -- Robustness Analysis of the Neural Gas Learning Algorithm -- Feature Selection Based on Mutual Correlation -- Oscillating Feature Subset Search Algorithm for Text Categorization -- Two Step Ant Colony System to Solve the Feature Selection Problem -- Simultaneous Features and Objects Selection for Mixed and Incomplete Data -- Selecting Objects for ALVOT -- Feature Extraction Using Clustering of Protein -- A Theoretical Comparison of Two Linear Dimensionality Reduction Techniques -- A New Approach to Multi-class Linear Dimensionality Reduction -- Automatic Band Selection in Multispectral Images Using Mutual Information-Based Clustering -- Orientation Invariant Features for Multiclass Object Recognition -- On the Design and Implementation of a High Performance Configurable Architecture for Testor Identification -- Proposal for a Unified Methodology for Evaluating Supervised and Non-supervised Classification Algorithms -- Monte Carlo Evaluation of the Hausdorff Distance for Shape Matching -- A Fast Probabilistic Model for Hypothesis Rejection in SIFT-Based Object Recognition -- Diagnosis of Chronic Idiopathic Inflammatory Bowel Disease Using Bayesian Networks -- Learning Variability of Image Feature Appearance Using Statistical Methods -- Probabilistic Shot Boundary Detection Using Interframe Histogram Differences -- A Probabilistic Approach to Build 2D Line Based Maps from Laser Scans in Indoor Environments -- Egomotion Estimation as an Appearance-Based Classification Problem -- Decoding of Ternary Error Correcting Output Codes -- Context-Based Gesture Recognition -- Spectral Median Graphs Applied to Graphical Symbol Recognition -- Deterministic Tourist Walks as an Image Analysis Methodology Based -- Approaches to Classification of Multichannel Images -- Fast Fingerprint Matching Based on the Novel Structure Combining the Singular Point with Its Neighborhood Minutiae -- A New Nearest Neighbor Rule for Text Categorization -- Alignment of Paragraphs in Bilingual Texts Using Bilingual Dictionaries and Dynamic Programming -- Document Mining Based on Semantic Understanding of Text -- Authorship Attribution Using Word Sequences -- Document Representation Based on Maximal Frequent Sequence Sets -- Building an Optimal WSD Ensemble Using Per-Word Selection of Best System -- Pixel-Wise Histograms for Visual Segment Description and Applications -- eVLBI Development in TIGO -- Satellite Tracks Removal in Astronomical Images -- Detection of Coding Regions in Large DNA Sequences Using the Short Time Fourier Transform with Reduced Computational Load -- Time Series Pattern Recognition Based on MAP Transform and Local Trend Associations -- System Classification by Using Discriminant Functions of Time-Frequency Features -- Gabor Kernels for Textured Image Representation and Classification -- Local Linear Approximation for Kernel Methods: The Railway Kernel -- Fusion of Gaussian Kernels Within Support Vector Classification -- Support Vector Machine with External Recurrences for Modeling Dynamic Cerebral Autoregulation -- An Approach to Automatic Target Recognition in Radar Images Using SVM -- Analysis of Algebraic Expressions Derived from Genetic Multivariate Polynomials and Support Vector Machines: A Case Study -- Image Compression by a Time Enhanced Self Organizing Map.

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## Sommario/riassunto

This book constitutes the refereed proceedings of the 11th Iberoamerican Congress on Pattern Recognition, CIARP 2006, held in Cancun, Mexico in November 2006. The 99 revised full papers presented together with three keynote articles were carefully reviewed and selected from 239 submissions. The papers cover ongoing research and mathematical methods.

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