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Titolo	Structural, Syntactic, and Statistical Pattern Recognition [[electronic resource]] : Joint IAPR International Workshop, SSPR & SPR 2012, Hiroshima, Japan, November 7-9, 2012, Proceedings / / edited by Georgy Gimel´farb, Edwin Hancock, Atsushi Imiya, Arjan Kuijper, Mineichi Kudo, Shinichiro Omachi, Terry Windeatt, Keiji Yamada
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Nota di contenuto	Estimation, Learning, and Adaptation: Systems That Improve with Use -- Optimization Techniques for Geometric Estimation: Beyond Minimization -- Hierarchical Compositional Representations of Object Structure -- Information Theoretic Prototype Selection for Unattributed Graphs -- Graph Kernels: Crossing Information from Different Patterns

Using Graph Edit Distance -- Mode Seeking Clustering by KNN and Mean Shift Evaluated -- Learning Sparse Kernel Classifiers in the Primal -- EvolutionaryWeighted Mean Based Framework for Generalized Median Computation with Application to Strings -- Graph Complexity from the Jensen-Shannon Divergence -- Complexity of Computing Distances between Geometric Trees -- Active Graph Matching Based on Pairwise Probabilities between Nodes -- On the Relation between the Common Labelling and the Median Graph -- A Hierarchical Image Segmentation Algorithm Based on an Observation Scale -- A Discrete Scale Space Neighborhood for Robust Deep Structure Extraction -- On the Correlation of Graph Edit Distance and L1 Distance in the Attribute Statistics Embedding Space -- Approximate Axial Symmetries from Continuous Time Quantum Walks -- A Clustering-Based Ensemble Technique for Shape Decomposition -- Laplacian Eigenimages in Discrete Scale Space -- A Relational Kernel-Based Framework for Hierarchical Image Understanding -- A Jensen-Shannon Kernel for Hypergraphs -- Heat Flow-Thermodynamic Depth Complexity in Directed Networks -- Shape Similarity Based on a Treelet Kernel with Edition -- 3D Shape Classification Using Commute Time -- Conditional Random Fields for Land Use/Land Cover Classification and Complex Region Detection -- Recognition of Long-Term Behaviors by Parsing Sequences of Short-Term Actions with a Stochastic Regular Grammar -- A Comparison between Structural and Embedding Methods for Graph Classification -- Improving Fuzzy Multilevel Graph Embedding through Feature Selection Technique -- Dynamic Learning of SCRF for Feature Selection and Classification of Hyperspectral Imagery -- Entropic Selection of Histogram Features for Efficient Classification -- 2D Shapes Classification Using BLAST -- A New Random Forest Method for One-Class Classification -- A New Index Based on Sparsity Measures for Comparing Fuzzy Partitions -- Polichotomies on Imbalanced Domains by One-per-Class Compensated Reconstruction Rule -- The Dipping Phenomenon -- Colour Matching Function Learning -- Constrained Log-Likelihood-Based Semi-supervised Linear Discriminant Analysis -- Out-of-Sample Embedding by Sparse Representation -- Extended Analyses for an Optimal Kernel in a Class of Kernels with an Invariant Metric -- Simultaneous Learning of Localized Multiple Kernels and Classifier with Weighted Regularization -- Change-Point Detection in Time-Series Data by Relative Density-Ratio Estimation -- Online Metric Learning Methods Using Soft Margins and Least Squares Formulations -- Shape Analysis Using the Edge-Based Laplacian -- One-Sided Prototype Selection on Class Imbalanced Dissimilarity Matrices -- Estimating Surface Characteristics and Extracting Features from Polarisation -- Extended Fisher Criterion Based on Auto-correlation Matrix Information -- Poisoning Adaptive Biometric Systems -- Modified Divergences for Gaussian Densities -- Graph Database Retrieval Based on Metric-Trees -- Validation of Network Classifiers -- Alignment and Morphing for the Boundary Curves of Anatomical Organs -- Unsupervised Clustering of Human Pose Using Spectral Embedding -- Human Action Recognition in Video by Fusion of Structural and Spatio-temporal Features -- An Incremental Structured Part Model for Image Classification -- Top-Down Tracking and Estimating 3D Pose of a Die -- Large Scale Experiments on Fingerprint Liveness Detection -- Implicit and Explicit Graph Embedding: Comparison of Both Approaches on Chemoinformatics Applications -- Modeling Spoken Dialog Systems under the Interactive Pattern Recognition Framework -- Hierarchical Graph Representation for Symbol Spotting in Graphical Document Images -- Compact Form of the Pseudo–inverse Matrix in the Approximation of a Star Graph

Using the Conductance Electrical Model (CEM) -- A Heuristic Based on the Intrinsic Dimensionality for Reducing the Number of Cyclic DTW Comparisons in Shape Classification and Retrieval Using AESA -- Support Vector Machines Training Data Selection Using a Genetic Algorithm -- A Unified View of Two-Dimensional Principal Component Analyses -- Automatic Dimensionality Estimation for Manifold Learning through Optimal Feature Selection -- Novel Gabor-PHOG Features for Object and Scene Image Classification -- Binary Gabor Statistical Features for Palmprint Template Protection -- Class-Dependent Dissimilarity Measures for Multiple Instance Learning -- Bidirectional Language Model for Handwriting Recognition -- Hypergraph Spectra for Unsupervised Feature Selection -- Feature Selection Using Counting Grids: Application to Microarray Data -- Infinite Sparse Factor Analysis for Blind Source Separation in Reverberant Environments -- Sparse Discriminant Analysis Based on the Bayesian Posterior Probability Obtained by L1 Regression -- Conditional Variance of Differences: A Robust Similarity Measure for Matching and Registration -- A Class Centric Feature and Classifier Ensemble Selection Approach for Music Genre Classification -- A Local Adaptation of the Histogram Radon Transform Descriptor: An Application to a Shoe Print Dataset -- A Multiple Classifier System for Classification of Breast Lesions Using Dynamic and Morphological Features in DCE-MRI -- A Comparative Analysis of Forgery Detection Algorithms -- Low Training Strength High Capacity Classifiers for Accurate Ensembles Using Walsh Coefficients -- A Novel Shadow-Assistant Human Fall Detection Scheme Using a Cascade of SVM Classifiers -- Analysis of Co-training Algorithm with Very Small Training Sets -- Classification of High-Dimension PDFs Using the Hungarian Algorithm -- Face Recognition Using Multilinear Manifold Analysis of Local Descriptors -- A Genetic Inspired Optimization for ECOC.

Sommario/riassunto

This volume constitutes the refereed proceedings of the Joint IAPR International Workshops on Structural and Syntactic Pattern Recognition (SSPR 2012) and Statistical Techniques in Pattern Recognition (SPR 2012), held in Hiroshima, Japan, in November 2012 as a satellite event of the 21st International Conference on Pattern Recognition, ICPR 2012. The 80 revised full papers presented together with 1 invited paper and the Pierre Devijver award lecture were carefully reviewed and selected from more than 120 initial submissions. The papers are organized in topical sections on structural, syntactical, and statistical pattern recognition, graph and tree methods, randomized methods and image analysis, kernel methods in structural and syntactical pattern recognition, applications of structural and syntactical pattern recognition, clustering, learning, kernel methods in statistical pattern recognition, kernel methods in statistical pattern recognition, as well as applications of structural, syntactical, and statistical methods.