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Nota di contenuto	Graph-Based Representation and Recognition -- Matching Hierarchies of Deformable Shapes -- Edition within a Graph Kernel Framework for Shape Recognition -- Coarse-to-Fine Matching of Shapes Using Disconnected Skeletons by Learning Class-Specific Boundary Deformations -- An Optimisation-Based Approach to Mesh Smoothing: Reformulation and Extensions -- Graph-Based Representation of Symbolic Musical Data -- Graph-Based Analysis of Nasopharyngeal Carcinoma with Bayesian Network Learning Methods -- Computing and Visualizing a Graph-Based Decomposition for Non-manifold Shapes -- A Graph Based Data Model for Graphics Interpretation -- Tracking Objects beyond Rigid Motion -- Graph-Based Registration of Partial Images of City Maps Using Geometric Hashing -- Graph Matching -- A Polynomial Algorithm for Submap Isomorphism -- A Recursive Embedding Approach to Median Graph Computation -- Efficient Suboptimal Graph Isomorphism -- Homeomorphic Alignment of Edge-Weighted Trees -- Inexact Matching of Large and Sparse Graphs Using Laplacian Eigenvectors -- Graph Matching Based on Node Signatures --

A Structural and Semantic Probabilistic Model for Matching and Representing a Set of Graphs -- Arc-Consistency Checking with Bilevel Constraints: An Optimization -- Graph Clustering and Classification -- Pairwise Similarity Propagation Based Graph Clustering for Scalable Object Indexing and Retrieval -- A Learning Algorithm for the Optimum-Path Forest Classifier -- Improving Graph Classification by Isomap -- On Computing Canonical Subsets of Graph-Based Behavioral Representations -- Object Detection by Keygraph Classification -- Graph Regularisation Using Gaussian Curvature -- Characteristic Polynomial Analysis on Matrix Representations of Graphs -- Flow Complexity: Fast Polytopal Graph Complexity and 3D Object Clustering -- Pyramids, Combinatorial Maps, and Homologies -- Irregular Graph Pyramids and Representative Cocycles of Cohomology Generators -- Annotated Contraction Kernels for Interactive Image Segmentation -- 3D Topological Map Extraction from Oriented Boundary Graph -- An Irregular Pyramid for Multi-scale Analysis of Objects and Their Parts -- A First Step toward Combinatorial Pyramids in n-D Spaces -- Cell AT-Models for Digital Volumes -- From Random to Hierarchical Data through an Irregular Pyramidal Structure -- Graph-Based Segmentation -- Electric Field Theory Motivated Graph Construction for Optimal Medical Image Segmentation -- Texture Segmentation by Contractive Decomposition and Planar Grouping -- Image Segmentation Using Graph Representations and Local Appearance and Shape Models -- Comparison of Perceptual Grouping Criteria within an Integrated Hierarchical Framework.

Sommario/riassunto

This book constitutes the refereed proceedings of the 7th IAPR-TC-15 International Workshop on Graph-Based Representations in Pattern Recognition, GbRPR 2009, held in Venice, Italy in May 2009. The 37 revised full papers presented were carefully reviewed and selected from 47 submissions. The papers are organized in topical sections on graph-based representation and recognition, graph matching, graph clustering and classification, pyramids, combinatorial maps, and homologies, as well as graph-based segmentation.