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Nota di contenuto	<p>Data Structures and Representation -- Construction of Combinatorial Pyramids -- On Graphs with Unique Node Labels -- Constructing Stochastic Pyramids by MIDES — Maximal Independent Directed Edge Set -- Segmentation -- Functional Modeling of Structured Images -- Building of Symbolic Hierarchical Graphs for Feature Extraction -- Comparison and Convergence of Two Topological Models for 3D Image Segmentation -- Graph Edit Distance -- Tree Edit Distance from Information Theory -- Self-Organizing Graph Edit Distance -- Graph Edit Distance with Node Splitting and Merging, and Its Application to Diatom Identification -- Graph Matching -- Orthonormal Kernel Kronecker Product Graph Mdating -- Theoretical Analysis and</p>

Experimental Comparison of Graph Matching Algorithms for Database Filtering -- A Comparison of Three Maximum Common Subgraph Algorithms on a Large Database of Labeled Graphs -- Swap Strategies for Graph Matching -- Matrix Methods -- Graph Matching Using Spectral Seriation and String Edit Distance -- Graph Polynomials, Principal Pivoting, and Maximum Independent Sets -- Graph Partition for Matching -- Graph Clustering -- Spectral Clustering of Graphs -- Comparison of Distance Measures for Graph-Based Clustering of Documents -- Some Experiments on Clustering a Set of Strings -- A New Median Graph Algorithm -- Graph Clustering Using the Weighted Minimum Common Supergraph -- ACM Attributed Graph Clustering for Learning Classes of Images -- A Competitive Winner-Takes-All Architecture for Classification and Pattern Recognition of Structures.

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## Sommario/riassunto

This volume contains the papers presented at the Fourth IAPR Workshop on Graph Based Representations in Pattern Recognition. The workshop was held at the King's Manor in York, England between 30 June and 2nd July 2003. The previous workshops in the series were held in Lyon, France (1997), Haindorf, Austria (1999), and Ischia, Italy (2001). The city of York provided an interesting venue for the meeting. It has been said that the history of York is the history of England. There have been both Roman and Viking episodes. For instance, Constantine was proclaimed emperor in York. The city has also been a major seat of ecclesiastical power and was also involved in the development of the railways in the nineteenth century. Much of York's history is evidenced by its buildings, and the King's Manor is one of the most important and attractive of these. Originally part of the Abbey, after the dissolution of the monasteries by Henry VIII, the building became a center of government for the Tudors and the Stuarts (who stayed here regularly on their journeys between London and Edinburgh), serving as the headquarters of the Council of the North until it was disbanded in 1561. The building became part of the University of York at its foundation in 1963. The papers in the workshop span the topics of representation, segmentation, graph-matching, graph edit-distance, matrix and spectral methods, and gra- clustering.

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