

**J.-M. Jolion
W. G. Kropatsch (eds.)**

**Graph Based
Representations in
Pattern Recognition**



SpringerWienNewYork

006-54-1

Contents

Hypergraphs

Demko, D.: Generalization of Two Hypergraphs. Algorithm of Calculation of the Greatest Sub-Hypergraph Common to Two Hypergraphs Annotated by Semantic Information	1
---	---

Recognition and Detection

Englert, R., Cremers, A. B., Seelmann-Eggebert, J.: Recognition of Polymorphic Patterns in Parameterized Graphs for 3D Building Reconstruction	11
Tupin, F., Mangin, J.-F., Pechersky, E., Nicolas, J.-M., Maître, H.: A Graph-Based Representation to Detect Linear Features	21
Salotti, M.: Edge Detection as Finding the Minimum Cost Path in a Graph ...	33

Matching

Cordella, L. P., Foggia, P., Sansone, C., Vento, M.: Subgraph Transformations for the Inexact Matching of Attributed Relational Graphs	43
Shearer, K., Bunke, H., Venkatesh, S., Kieronska, D.: Efficient Graph Matching for Video Indexing	53
Wendling, L., Desachy, J.: Isomorphism between Strong Fuzzy Relational Graphs Based on k -Formulae	63

Segmentation

Jahn, H.: A Graph Structure for Grey Value and Texture Segmentation	73
Brun, L., Domenger, J.-P., Braquelaire, J.-P.: Discrete Maps: a Framework for Region Segmentation Algorithms	83
Bertolino, P., Ribas, S.: Image Sequence Segmentation by a Single Evolutionary Graph Pyramid	93

Implementation Problems

Kropatsch, W. G., Burge, M., Ben Yacoub, S., Selmaoui, N.: Dual Graph Contraction with LEDA	101
Ducourthial, B., Constantinescu, G., Mériqot, A.: Implementing Image Analysis with a Graph-Based Parallel Computing Model	111

Representation

Pailloney, J.-G., Jolion, J.-M.: The Frontier-Region Graph	123
Mottl, V. V., Blinov, A. B., Kopylov, A. V., Kostin, A. A.: Optimization Techniques on Pixel Neighborhood Graphs for Image Processing	135