

Discrete Geometry for Computer Imagery

10th International Conference, DGCI 2002, Bordeaux, France, April 3-5, 2002. Proceedings

Bearbeitet von
Achille Braquelaire, Jacques-Olivier Lauchaud, Anne Vialard

1. Auflage 2002. Taschenbuch. xii, 444 S. Paperback
ISBN 978 3 540 43380 4
Format (B x L): 15,5 x 23,5 cm
Gewicht: 1410 g

Weitere Fachgebiete > EDV, Informatik > Informatik > Logik, Formale Sprachen,
Automaten

Zu Leseprobe

schnell und portofrei erhältlich bei


DIE FACHBUCHHANDLUNG

Die Online-Fachbuchhandlung beck-shop.de ist spezialisiert auf Fachbücher, insbesondere Recht, Steuern und Wirtschaft. Im Sortiment finden Sie alle Medien (Bücher, Zeitschriften, CDs, eBooks, etc.) aller Verlage. Ergänzt wird das Programm durch Services wie Neuerscheinungsdienst oder Zusammenstellungen von Büchern zu Sonderpreisen. Der Shop führt mehr als 8 Millionen Produkte.

Table of Contents

Topology

Invited Paper: Abstraction Pyramids on Discrete Representations	1
<i>W.G. Kropatsch</i>	
XPMaps and Topological Segmentation – A Unified Approach to Finite Topologies in the Plane	22
<i>U. Köthe</i>	
Curves in $\mathbb{Z}^n$	34
<i>G. Thürmer</i>	
Separation Theorems for Simplicity 26-Surfaces	45
<i>J.C. Ciria, E. Domínguez, A.R. Francés</i>	
Topological Quadrangulations of Closed Triangulated Surfaces Using the Reeb Graph	57
<i>F. Hétroy, D. Attali</i>	
Non-manifold Decomposition in Arbitrary Dimensions	69
<i>L. De Floriani, M.M. Mesmoudi, F. Morando, E. Puppo</i>	

Combinatorial Image Analysis

4D Minimal Non-simple Sets	81
<i>C.J. Gau, T. Yung Kong</i>	
Receptive Fields within the Combinatorial Pyramid Framework	92
<i>L. Brun, W.G. Kropatsch</i>	
A New 3D 6-Subiteration Thinning Algorithm Based on P -Simple Points	102
<i>C. Lohou, G. Bertrand</i>	
Monotonic Tree	114
<i>Y. Song, A. Zhang</i>	
Displaying Image Neighborhood Hypergraphs Line-Graphs	124
<i>S. Chastel, P. Colantoni, A. Bretto</i>	
The Reconstruction of a Bicolored Domino Tiling from Two Projections . .	136
<i>A. Frosini, G. Simi</i>	

Morphological Analysis

Invited Paper: Digital Geometry for Image-Based Metrology	145
<i>A.M. Bruckstein</i>	
Topological Reconstruction of Occluded Objects in Video Sequences	155
<i>V. Agnus, C. Ronse</i>	
On the Strong Property of Connected Open-Close and Close-Open Filters	165
<i>J. Crespo, V. Maojo, J.A. Sanandr��s, H. Billhardt, A. Mu��oz</i>	
Advances in the Analysis of Topographic Features on Discrete Images	175
<i>P. Soille</i>	
Morphological Operations on Recursive Neighbourhoods	187
<i>P.P. Jonker</i>	

Shape Representation

Computing the Diameter of a Point Set	197
<i>G. Malandain, J.-D. Boissonnat</i>	
Shape Representation Using Trihedral Mesh Projections	209
<i>L. Ros, K. Sugihara, F. Thomas</i>	
Topological Map Based Algorithms for 3D Image Segmentation	220
<i>G. Damiand, P. Resch</i>	
On Characterization of Discrete Triangles by Discrete Moments	232
<i>J. ��uni��</i>	
Weighted Distance Transforms for Images Using Elongated Voxel Grids . . .	244
<i>I.-M. Sintorn, G. Borgefors</i>	
Robust Normalization of Shapes	255
<i>J. Cortadellas, J. Amat, M. Frigola</i>	
Surface Area Estimation of Digitized 3D Objects Using Local Computations	267
<i>J. Lindblad, I. Nystr��m</i>	

Models for Discrete Geometry

Invited Paper: An Abstract Theoretical Foundation of the Geometry of Digital Spaces	279
<i>G.T. Herman</i>	
Concurrency of Line Segments in Uncertain Geometry	289
<i>P. Veelaert</i>	

Discretization in 2D and 3D Orders	301
<i>M. Couprie, G. Bertrand, Y. Kenmochi</i>	
Defining Discrete Objects for Polygonalization: The Standard Model	313
<i>E. Andres</i>	
Visibility in Discrete Geometry: An Application to Discrete Geodesic Paths	326
<i>D. Coeurjolly</i>	
Multi-scale Discrete Surfaces	338
<i>J. Burguet, R. Malgouyres</i>	
Invertible Minkowski Sum of Polygons	350
<i>K. Sugihara</i>	

Segmentation and Shape Recognition

Thinning Grayscale Well-Composed Images: A New Approach for Topological Coherent Image Segmentation	360
<i>J. Marchadier, D. Arquès, S. Michelin</i>	
An Incremental Linear Time Algorithm for Digital Line and Plane Recognition Using a Linear Incremental Feasibility Problem	372
<i>L. Buzer</i>	
Reconstruction of Animated Models from Images Using Constrained Deformable Surfaces	382
<i>J. Starck, A. Hilton, J. Illingworth</i>	
Reconstruction of Binary Matrices from Absorbed Projections	392
<i>E. Balogh, A. Kuba, A. Del Lungo, M. Nivat</i>	
A Simplified Recognition Algorithm of Digital Planes Pieces	404
<i>M.M. Mesmoudi</i>	

Applications

Ridgelet Transform Based on Reveillès' Discrete Lines	417
<i>P. Carré, E. Andres</i>	
A Discrete Radiosity Method	428
<i>R. Malgouyres</i>	
Author Index	439