1. Record Nr. UNINA9910483974503321

Titolo	Combinatorial Image Analysis : 13th International Workshop, IWCIA 2009, Playa del Carmen, Mexico, November 24-27, 2009, Proceedings / / edited by Petra Wiederhold, Reneta P. Barneva
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2009
ISBN	3-642-10210-7
Edizione	[1st ed. 2009.]
Descrizione fisica	1 online resource (XV, 437 p.)
Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics, , 3004-9954 ; ; 5852
Classificazione	DAT 756f DAT 760f SS 4800
Altri autori (Persone)	WiederholdPetra BarnevaReneta P
Disciplina	004n/a
Soggetti	Computer vision Computer programming Computer science Pattern recognition systems Computer graphics Algorithms Computer Vision Programming Techniques Theory of Computation Automated Pattern Recognition Computer Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	International conference proceedings.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Paper -- Digital Circularity and Its Applications -- Digital Geometry - Curves, Straightness, and Convexity -- On the Convex Hull of the Integer Points in a Bi-circular Region -- Multi-primitive Analysis of Digital Curves -- What Does Digital Straightness Tell about Digital Convexity? -- Digital Geometry - Geometric Transformations, Metrics, Distance Transforms, and Skeletons -- Hierarchical Discrete Medial

Axis for Sphere-Tree Construction -- Quasi-Affine Transformation in 3-D: Theory and Algorithms -- Farey Sequences and the Planar Euclidean Medial Axis Test Mask -- Neighborhood Sequences on nD Hexagonal/Face-Centered-Cubic Grids -- Neighborhood Sequences in the Diamond Grid – Algorithms with Four Neighbors -- Hinge Angles for 3D Discrete Rotations -- Segmentation, Thinning and Skeletonization -- Surface Thinning in 3D Cubical Complexes -- A General Bayesian Markov Random Field Model for Probabilistic Image Segmentation -- An Order–Independent Sequential Thinning Algorithm -- Blurred Segments in Gray Level Images for Interactive Line Extraction -- Multi-scale Analysis of Discrete Contours for Unsupervised Noise Detection -- Sub-pixel Segmentation with the Image Foresting Transform -- Image Representation, Processing, Analysis, Reconstruction and Recognition - Algorithms and Applications -- Phase-Correlation Guided Search for Realtime Stereo Vision -- PCIF: An Algorithm for Lossless True Color Image Compression -- Ego-Vehicle Corridors for Vision-Based Driver Assistance -- Adaptive Pixel Resizing for Multiscale Recognition and Reconstruction -- Contour Reconstruction for Multiple 2D Regions Based on Adaptive Boundary Samples -- Digital Tomography -- Reconstruction of Canonical hv-Convex Discrete Sets from Horizontal and Vertical Projections -- About the Complexity of Timetables and3-Dimensional Discrete Tomography: A Short Proof of NP-Hardness -- Image Models Based on Geometry, Combinatorics, Arithmetics, Algebra, Mathematical Morphology, Topology and Grammars -- Theoretical Issues of Cluster Pattern Interfaces -- ?-Arithmetization: A Discrete Multi-resolution Representation of Real Functions -- Tree-Based Encoding for Cancellations on Morse Complexes -- Parallel Contextual Hexagonal Array Grammars and Languages -- Connected Viscous Filters -- Signatures of Combinatorial Maps -- Digital Topology and its Applications to Image Modeling and Analysis -- Using Membrane Computing for Obtaining Homology Groups of Binary 2D Digital Images -- Collapses and Watersheds in Pseudomanifolds -- The Inscribed Square Conjecture in the Digital Plane -- Convenient Closure Operators on .

Sommario/riassunto

This volume constitutes the refereed proceedings of the 13th International Workshop on Combinatorial Image Analysis, IWCIA 2009, held in Playa del Carmen, Mexico, in November 2009. The 32 revised full papers and one invited paper presented were carefully reviewed and selected from 70 initial submissions. The papers are organized in topical sections on digital geometry: curves, straightness, convexity, geometric transformations, metrics, distance transforms and skeletons, segmentation, thinning, skeletonization, image representation, processing, analysis, reconstruction and recognition, digital tomography, image models based on geometry, combinatorics, arithmetics, algebra, mathematical morphology, topology and grammars, as well as digital topology and its applications to image modeling and analysis.