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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics, , 3004-9954 ; ; 11414
Disciplina	006.601516 006.6
Soggetti	Computer graphics Computer vision Pattern recognition systems Computer science - Mathematics Algorithms Computer Graphics Computer Vision Automated Pattern Recognition Mathematical Applications in Computer Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Discrete Geometric Models and Transforms -- Digital Two-dimensional Bijective Reflection and Associated Rotation -- Digital Curvature Evolution Model for Image Segmentation -- Rhombic Dodecahedron Grid { Coordinate System and 3D Digital Object Definitions -- Facet Connectedness of Arithmetic Discrete Hyperplanes with Non Zero Shift -- Local Turn-boundedness: a Curvature Control for a Good Digitization -- Distance Transform based on Weight Sequences -- Stochastic Distance Transform -- Discrete Topology -- Filtration Simplification for Persistent Homology via Edge Contraction -- One More Step towards Well-composedness of Cell Complexes over nD

Pictures -- On the Space between Critical Points -- Rigid Motions in the Cubic Grid: A Discussion on Topological Issues -- Graph-based Models, Analysis and Segmentation -- A New Entropy for Hypergraphs -- Graph-based Segmentation with Local Band Constraints -- A Study of Observation Scales based on Felzenswalb-Huttenlocher Dissimilarity Measure for Hierarchical Segmentation -- The Role of Optimum Connectivity in Image Segmentation: Can the algorithm learn object information during the process? -- On the Degree Sequence of 3-uniform Hypergraph: A New Sufficient Condition -- Optimization of Max-Norm Objective Functions in Image Processing and Computer Vision -- Common Object Discovery as Local Search for Maximum Weight Cliques in a Global Object Similarity Graph -- Reconstruction of the Crossing Type of a Point Set from the Compatible Exchange Graph of Noncrossing Spanning Trees -- Mathematical Morphology -- Vector-based Mathematical Morphology Operations on Polygons Using Straight Skeletons for Digital Pathology -- Morphological Networks for Image De-raining -- Minimal Component-Hypertrees -- Single Scan Granulometry Estimation from an Asymmetric Distance Map -- Recognizing Hierarchical Watersheds -- Shape Representation, Recognition and Analysis -- Straight Line Reconstruction for Fully Materialized Table Extraction in Degraded Document Images -- A Spatial Convexity Descriptor for Object Enlacement -- The Propagating Skeleton: A Robust Detail-preserving Approach -- Non-Centered Voronoi Skeletons -- Dual Approaches for Elliptic Hough Transform: Eccentricity/Orientation vs Center based -- Digital Plane Recognition with Fewer Probes -- Geometric Computation -- Convex and Concave Vertices on a Simple Closed Curve in the Triangular Grid -- Efficient Algorithms to Test Digital Convexity -- Compact Packings of the Plane with Three Sizes of Discs -- Convex Aggregation Problems in 2 -- Polygon Approximations of the Euclidean Circles on the Square Grid by Broadcasting Sequences -- Unfolding Level 1 Menger Polycubes of Arbitrary Size with Help of Outer Faces -- A Discrete Bisector Function Based on Annulus -- Average Curve of n Digital Curves.

Sommario/riassunto

This book constitutes the thoroughly refereed proceedings of the 21st IAPR International Conference on Discrete Geometry for Computer Imagery, DGCI 2019, held in Marne-la-Vallée, France, in March 2019. The 38 full papers were carefully selected from 50 submissions. The papers are organized in topical sections on discrete geometric models and transforms; discrete topology; graph-based models, analysis and segmentation; mathematical morphology; shape representation, recognition and analysis; and geometric computation.