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Nota di contenuto	Discrete Tomography -- Binary Matrices Under the Microscope: A Tomographical Problem -- On the Reconstruction of Crystals Through Discrete Tomography -- Binary Tomography by Iterating Linear Programs from Noisy Projections -- Combinatorics and Computational Models -- Hexagonal Pattern Languages -- A Combinatorial Transparent Surface Modeling from Polarization Images -- Integral Trees: Subtree Depth and Diameter -- Supercover of Non-square and Non-cubic Grids -- Calculating Distance with Neighborhood Sequences in the Hexagonal Grid -- On Correcting the Unevenness of Angle

Distributions Arising from Integer Ratios Lying in Restricted Portions of
 the Farey Plane -- Combinatorial Algorithms -- Equivalence Between
 Regular n-G-Maps and n-Surfaces -- Z-Tilings of Polyominoes and
 Standard Basis -- Curve Tracking by Hypothesis Propagation and
 Voting-Based Verification -- 3D Topological Thinning by Identifying
 Non-simple Voxels -- Convex Hulls in a 3-Dimensional Space -- A
 Near-linear Time Algorithm for Binarization of Fingerprint Images
 Using Distance Transform -- Combinatorial Mathematics -- On
 Recognizable Infinite Array Languages -- On the Number of
 Digitizations of a Disc Depending on Its Position -- On the Language of
 Standard Discrete Planes and Surfaces -- Characterization of Bijective
 Discretized Rotations -- Digital Topology -- Magnification in Digital
 Topology -- Curves, Hypersurfaces, and Good Pairs of Adjacency
 Relations -- A Maximum Set of (26,6)-Connected Digital Surfaces --
 Simple Points and Generic Axiomatized Digital Surface-Structures --
 Minimal Non-simple Sets in 4-Dimensional Binary Images with (8,80)-
 Adjacency -- Jordan Surfaces in Discrete Antimatroid Topologies --
 How to Find a Khalimsky-Continuous Approximation of a Real-Valued
 Function -- Digital Geometry -- Algorithms in Digital Geometry Based
 on Cellular Topology -- An Efficient Euclidean Distance Transform --
 Two-Dimensional Discrete Morphing -- A Comparison of Property
 Estimators in Stereology and Digital Geometry -- Thinning by
 Curvature Flow -- Convex Functions on Discrete Sets -- Discrete
 Surfaces Segmentation into Discrete Planes -- Approximation of Digital
 Sets by Curves and Surfaces -- Sketch-Based Shape Retrieval Using
 Length and Curvature of 2D Digital Contours -- Surface Smoothing for
 Enhancement of 3D Data Using Curvature-Based Adaptive
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 3D Space -- Corner Detection and Curve Partitioning Using Arc-Chord
 Distance -- Shape Preserving Sampling and Reconstruction of Grayscale
 Images -- Algebraic Approaches -- Comparison of Nonparametric
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 Exact Optimization of Discrete Constrained Total Variation
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 Matching and Recognition -- 2D Shape Recognition Using Discrete
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 Video -- Automatic Face Recognition by Support Vector Machines --
 Practical Region-Based Matching for Stereo Vision -- Video Program
 Clustering Indexing Based on Face Recognition Hybrid Model of Hidden
 Markov Model and Support Vector Machine -- Texture Feature
 Extraction and Selection for Classification of Images in a Sequence.

This volume presents the proceedings of the 10th International Workshop on Combinatorial Image Analysis, held December 1–3, 2004, in Auckland, New Zealand. Prior meetings took place in Paris (France, 1991), Ube (Japan, 1992), Washington DC (USA, 1994), Lyon (France, 1995), Hiroshima (Japan, 1997), Madras (India, 1999), Caen (France, 2000), Philadelphia (USA, 2001), and - lermo (Italy, 2003). For this workshop we received 86 submitted papers from 23 countries. Each paper was evaluated by at least two independent referees. We selected 55 papers for the conference. Three invited lectures by Vladimir Kovalevsky (Berlin), Akira Nakamura (Hiroshima), and Maurice Nivat (Paris) completed the program. Conference papers are presented in this volume under the following topical part titles: discrete tomography (3 papers), combinatorics and computational models (6), combinatorial algorithms (6), combinatorial mathematics (4), d- ital topology (7), digital geometry (7), approximation of digital sets by curves and surfaces (5), algebraic approaches (5), fuzzy image analysis (2), image s- mentation (6), and matching and recognition (7). These subjects are dealt with in the context of digital image analysis or computer vision.
