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| Collana | Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 7749 |
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| Soggetti | Computer graphics Optical data processing Pattern recognition Computer science—Mathematics Algorithms Computer Graphics Image Processing and Computer Vision Computer Imaging, Vision, Pattern Recognition and Graphics Pattern Recognition Discrete Mathematics in Computer Science Algorithm Analysis and Problem Complexity |
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| Nota di contenuto | Stable length estimates of tube-like shapes -- The Complexity of Discrete Objects -- Optimal covering of a straight line applied to discrete convexity -- On dimension partitions in discrete metric spaces -- Walking in the Farey fan to Compute the Characteristics of a Discrete Straight Line Subsegment -- Persistent patterns in integer discrete circles -- Comparison of Point Clouds Acquired by 3d Scanner -- Generalized Simple Surface Points -- A parallel thinning algorithm for grayscale images -- New structures based on completions -- Asymptotic Analysis and Random Sampling of Digitally Convex |

Polyominoes -- Extremal connectedness of thin arithmetical discrete planes -- From the zones of influence of skeleton branch points to meaningful object parts -- Sufficient conditions for topological invariance of 2D images under rigid transformations -- The persistence space in multidimensional persistent homology -- Skeleton extraction of vertex sets lying on arbitrary triangulated 3D meshes -- Arc recognition on irregular isothetic grids and its application to reconstruction of noisy digital contour -- Reconstruction of quantitative properties from X-rays -- How to decompose a binary matrix into three convex polyominoes -- A method for feature detection in binary tomography.

Sommario/riassunto

This book constitutes the thoroughly refereed proceedings of the 17th International Conference on Discrete Geometry for Computer Imagery, DGCI 2013, held in Seville, Spain, in March 2013. The 34 revised full papers presented were carefully selected from 56 submissions and focus on geometric transforms, discrete and combinatorial tools for image segmentation and analysis, discrete and combinatorial topology, discrete shape representation, recognition and analysis, models for discrete geometry, morphological analysis and discrete tomography.
