Record Nr. UNINA9910413446503321 Combinatorial Image Analysis: 20th International Workshop, IWCIA Titolo 2020, Novi Sad, Serbia, July 16–18, 2020, Proceedings / / edited by Tibor Luki, Reneta P. Barneva, Valentin E. Brimkov, Lidija omi, Nataša Sladoje Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2020 **ISBN** 3-030-51002-6 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (XII, 283 p. 222 illus., 54 illus. in color.) Collana Computer Communication Networks and Telecommunications, , 2945-9184 ; ; 12148 Disciplina 006.37 006.6 Soggetti Computer vision Computer science - Mathematics Artificial intelligence Computer engineering Computer networks **Computer Vision** Mathematics of Computing Artificial Intelligence Computer Engineering and Networks Computer Communication Networks Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Nota di contenuto Theoretical Foundations -- Euler Well-Composedness -- On Connectedness of Discretized Sets -- Persistent Homology as Stopping-Criterion for Voronoi Interpolation -- Atomic Super-Resolution Tomography -- Characterizations of Simple Points on the Body-Centered Cubic Grid -- A 4D Counter-Example Showing that DWCness does not Imply CWCness in nD -- 3D-Array Token Petri Nets Generating Tetrahedral Picture Languages -- Simulating Parallel Internal Column Contextual Array Grammars Using Two-Dimensional

Parallel Restarting Automata with Multiple Windows -- Grayscale

Uncertainty of Projection Geometries and Projections Sets -- Finding the Maximum Empty Axis-Parallel Rectangular Annulus -- Parallel Contextual Array Insertion Deletion Grammar and (Context-free: Context-free) Matrix Grammar -- Digital Hyperplane Fitting -- Methods and Applications -- Repairing Binary Images through the 2D Diamond Grid -- Transmission Based Adaptive Automatic Tube Voltage Selection for Computed Tomography -- MicrAnt: Towards Regression Task Oriented Annotation Tool for Microscopic Images -- Graph Cuts Based Tomography Enhanced by Shape Orientation -- Dealing with Noise in Cluster Pattern Interface -- Local Q-Convexity Histograms for Shape Analysis -- k-Attempt Thinning -- Fuzzy Metaheuristic Algorithm for Copy-Move Forgery Detection in Images.

Sommario/riassunto

This book constitutes the refereed proceedings of the 20th International Workshop on Combinatorial Image Analysis, IWCIA 2020, held in Novi Sad, Serbia, in July 2020. The 20 full papers presented were carefully reviewed and selected from 23 submissions. The papers are grouped into two sections. The first one includes twelve papers devoted to theoretical foundations of combinatorial image analysis, including digital geometry and topology, array grammars, picture languages, digital tomography, and other technical tools for image analysis. The second part includes eight papers presenting application-driven research on topics such as image repairing, annotation of images, image reconstruction, forgery detection, and dealing with noise in images.