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| Titolo                  | Modern Approaches to Discrete Curvature // edited by Laurent Najman, Pascal Romon   |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017   |
| ISBN                    | 3-319-58002-7   |
| Edizione                | [1st ed. 2017.]   |
| Descrizione fisica      | 1 online resource (XXVI, 353 p. 80 illus., 35 illus. in color.)   |
| Collana                 | Lecture Notes in Mathematics, , 0075-8434 ; ; 2184  |
| Disciplina              | 516   |
| Soggetti                | Geometry<br>Geometry, Algebraic<br>Discrete mathematics<br>Computer science - Mathematics<br>Algebraic Geometry<br>Discrete Mathematics<br>Computational Mathematics and Numerical Analysis   |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Note generali           | Includes index.   |
| Nota di contenuto       | 1 The geometric meaning of curvature. Local and nonlocal aspects of Ricci curvature.- 2 Metric Curvatures Revisited - A Brief Overview -- 3 Distances between datasets -- 4 Inference of curvature using tubular neighborhoods -- 5 Entropic Ricci curvature for discrete spaces -- 5 Geometric and spectral consequences of curvature bounds on tessellations -- 7 The geometric spectrum of a graph and associated curvatures -- 8 Discrete minimal surfaces of Koebe type -- 9 Robust and Convergent Curvature and Normal Estimators with Digital Integral Invariants -- References -- List of Figures -- Index. |
| Sommario/riassunto      | This book provides a valuable glimpse into discrete curvature, a rich new field of research which blends discrete mathematics, differential geometry, probability and computer graphics. It includes a vast collection of ideas and tools which will offer something new to all interested readers. Discrete geometry has arisen as much as a theoretical development as in response to unforeseen challenges coming from applications. Discrete and continuous geometries have   |

turned out to be intimately connected. Discrete curvature is the key concept connecting them through many bridges in numerous fields: metric spaces, Riemannian and Euclidean geometries, geometric measure theory, topology, partial differential equations, calculus of variations, gradient flows, asymptotic analysis, probability, harmonic analysis, graph theory, etc. In spite of its crucial importance both in theoretical mathematics and in applications, up to now, almost no books have provided a coherent outlook on this emerging field.

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