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Titolo	Topological Methods in Data Analysis and Visualization V : Theory, Algorithms, and Applications / / edited by Hamish Carr, Issei Fujishiro, Filip Sadlo, Shigeo Takahashi
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Descrizione fisica	1 online resource (X, 270 p. 132 illus., 109 illus. in color.)
Collana	Mathematics and Visualization, , 2197-666X
Disciplina	515.13
Soggetti	Information visualization Dynamical systems Computer science - Mathematics Manifolds (Mathematics) Geometry Data and Information Visualization Dynamical Systems Mathematical Applications in Computer Science Manifolds and Cell Complexes
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Nota di contenuto	Persistence -- Scalar Topology -- Time-Varying Topology -- Multivariate Topology -- Other Forms of Topology.
Sommario/riassunto	This collection of peer-reviewed workshop papers provides comprehensive coverage of cutting-edge research into topological approaches to data analysis and visualization. It encompasses the full range of new algorithms and insights, including fast homology computation, comparative analysis of simplification techniques, and key applications in materials and medical science. The book also addresses core research challenges such as the representation of large and complex datasets, and integrating numerical methods with robust combinatorial algorithms. In keeping with the focus of the TopoInVis 2017 Workshop, the contributions reflect the latest advances in finding experimental solutions to open problems in the sector. They provide an

essential snapshot of state-of-the-art research, helping researchers to keep abreast of the latest developments and providing a basis for future work. Gathering papers by some of the world’s leading experts on topological techniques, the bookrepresents a valuable contribution to a field of growing importance, with applications in disciplines ranging from engineering to medicine.