

| | |
|-------------------------|--|
| 1. Record Nr. | UNINA9910877680103321 |
| Titolo | Topological data structures for surfaces : an introduction to geographical information science // editor, Sanjay Rana |
| Pubbl/distr/stampa | Chichester, West Sussex, England ; ; Hoboken, NJ, : J. Wiley & Sons, c2004 |
| ISBN | 1-280-28750-0 9786610287505 0-470-02028-8 0-470-02027-X |
| Descrizione fisica | 1 online resource (217 p.) |
| Altri autori (Persone) | RanaSanjay |
| Disciplina | 910/.285 |
| Soggetti | Geographic information systems Information storage and retrieval systems - Geography Geography - Data processing |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references (p. [185]-195) and index. |
| Nota di contenuto | Topological Data Structures for Surfaces; Contents; List of Contributors; Foreword; Preface; INTRODUCTION; 1 Introduction; PART I CONCEPTS AND IMPLEMENTATIONS; 2 Topographic Surfaces and Surface Networks; 3 Algorithms for Extracting Surface Topology from Digital Elevation Models; 4 Construction of Metric Surface Networks from Raster-Based DEMs; 5 Contour Trees and Small Seed Sets for Isosurface Generation; 6 Surface Shape Understanding Based on Extended Reeb Graphs; PART II APPLICATIONS 7 A Method for Measuring Structural Similarity among Activity Surfaces and its Application to the Analysis of Urban Population Surfaces in Japan 8 Topology Diagram of Scalar Fields in Scientific Visualisation; 9 Topology-Guided Downsampling and Volume Visualisation; 10 Application of Surface Networks for Augmenting the Visualisation of Dynamic Geographic Surfaces; 11 An Application of Surface Networks in Surface Texture; 12 Application of Surface Networks for Fast Approximation of Visibility Dominance in Mountainous Terrains; CONCLUSION; 13 Issues and Future Directions; References; Index |

Sommario/riassunto

In Geography and GIS, surfaces can be analysed and visualised through various data structures, and topological data structures describe surfaces in the form of a relationship between certain surface-specific features. Drawn from many disciplines with a strong applied aspect, this is a research-led, interdisciplinary approach to the creation, analysis and visualisation of surfaces, focussing on topological data structures. *Topological Data Structures for Surfaces: an introduction for Geographical Information Science* describes the concepts and applications of these data structures. The
