1. Record Nr. UNINA9910438142903321

Autore	Dzemyda Gintautas
Titolo	Multidimensional data visualization : methods and applications / / Gintautas Dzemyda, Olga Kurasova, Julius Zilinskas
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	1-4419-0236-8
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (261 p.)
Collana	Springer optimization and its applications ; ; v. 75
Altri autori (Persone)	KurasovaOlga ZilinskasJulius
Disciplina	006.6 006.693
Soggetti	Multimedia systems
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 and index.
Nota di contenuto	Preface -- 1. Multidimensional Data and the Concept of Visualization -- 2. Strategies for Multidimensional Data Visualization -- 3. Optimization-Based Visualization -- 4. Combining Multidimensional Scaling with Artificial Neural Networks -- 5. Applications of Visualizations -- A. Test Data Sets -- References -- Index.
Sommario/riassunto	The goal of this book is to present a variety of methods used in multidimensional data visualization. The emphasis is placed on new research results and trends in this field, including optimization, artificial neural networks, combinations of algorithms, parallel computing, different proximity measures, nonlinear manifold learning, and more. Many of the applications presented allow us to discover the obvious advantages of visual data mining—it is much easier for a decision maker to detect or extract useful information from graphical representation of data than from raw numbers. The fundamental idea of visualization is to provide data in some visual form that lets humans understand them, gain insight into the data, draw conclusions, and directly influence the process of decision making. Visual data mining is a field where human participation is integrated in the data analysis process; it covers data visualization and graphical presentation of information. Multidimensional Data Visualization is intended for scientists and researchers in any field of study where complex and multidimensional data must be visually represented. It

may also serve as a useful research supplement for PhD students in operations research, computer science, various fields of engineering, as well as natural and social sciences.