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Titolo	Graphs for pattern recognition : infeasible systems of linear inequalities / / Damir Gainanov
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ISBN	3-11-048030-1 3-11-048106-5
Descrizione fisica	1 online resource (x, 147 pages)
Disciplina	516/.1
Soggetti	Inequalities (Mathematics) Graph theory
Lingua di pubblicazione	Tedesco
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Preface -- Contents -- 1. Pattern recognition, infeasible systems of linear inequalities, and graphs -- 2. Complexes, (hyper) graphs, and inequality systems -- 3. Polytopes, positive bases, and inequality systems -- 4. Monotone Boolean functions, complexes, graphs, and inequality systems -- 5. Inequality systems, committees, (hyper)graphs, and alternative covers -- Bibliography -- List of notation -- Index
Sommario/riassunto	This monograph deals with mathematical constructions that are foundational in such an important area of data mining as pattern recognition. By using combinatorial and graph theoretic techniques, a closer look is taken at infeasible systems of linear inequalities, whose generalized solutions act as building blocks of geometric decision rules for pattern recognition.Infeasible systems of linear inequalities prove to be a key object in pattern recognition problems described in geometric terms thanks to the committee method. Such infeasible systems of inequalities represent an important special subclass of infeasible systems of constraints with a monotonicity property - systems whose multi-indices of feasible subsystems form abstract simplicial complexes (independence systems), which are fundamental objects of

	combinatorial topology.The methods of data mining and machine learning discussed in this monograph form the foundation of technologies like big data and deep learning, which play a growing role in many areas of human-technology interaction and help to find solutions, better solutions and excellent solutions. Contents: PrefacePattern recognition, infeasible systems of linear inequalities, and graphsInfeasible monotone systems of constraintsComplexes, (hyper) graphs, and inequality systemsPolytopes, positive bases, and inequality systemsMonotone Boolean functions, complexes, graphs, and inequality systemsInequality systems, committees, (hyper)graphs, and alternative coversBibliographyList of notationIndex

2. Record Nr. UNINA9910484839703321

Titolo	Advances in Data Mining - Theoretical Aspects and Applications : 7th Industrial Conference, ICDM 2007, Leipzig, Germany, July 14-18, 2007, Proceedings / / edited by Petra Perner
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2007
ISBN	3-540-73435-X
Edizione	[1st ed. 2007.]
Descrizione fisica	1 online resource (XI, 356 p.)
Collana	Lecture Notes in Artificial Intelligence, , 2945-9141 ; ; 4597
Altri autori (Persone)	PernerPetra
Disciplina	005.74
Soggetti	Database management Pattern recognition systems Computer vision Data mining Application software Artificial intelligence Database Management Automated Pattern Recognition Computer Vision Data Mining and Knowledge Discovery Computer and Information Systems Applications Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talk -- Case Based Reasoning and the Search for Knowledge -- Aspects of Classification and Prediction -- Subsets More Representative Than Random Ones -- Concepts for Novelty Detection and Handling Based on a Case-Based Reasoning Process Scheme -- An Efficient Algorithm for Instance-Based Learning on Data Streams -- Softening the Margin in Discrete SVM -- Feature Selection Using Ant Colony Optimization (ACO): A New Method and Comparative Study in the Application of Face Recognition System -- Outlier Detection with Streaming Dyadic Decomposition -- VISRED –Numerical Data Mining with Linear and Nonlinear Techniques -- Clustering -- Clustering by Random Projections -- Lightweight Clustering Technique for Distributed Data Mining Applications -- Web Mining -- Predicting Page Occurrence in a Click-Stream Data: Statistical and Rule-Based Approach -- Improved IR in Cohesion Model for Link Detection System -- Improving a State-of-the-Art Named Entity Recognition System Using the World Wide Web -- Data Mining in Medicine -- ISOR-2: A Case-Based Reasoning System to Explain Exceptional Dialysis Patients -- The Role of Prototypical Cases in Biomedical Case-Based Reasoning -- Applications of Data Mining -- A Search Space Reduction Methodology for Large Databases: A Case Study -- Combining Traditional and Neural-Based Techniques for Ink Feed Control in a Newspaper Printing Press -- Active Learning Strategies: A Case Study for Detection of Emotions in Speech -- Neural Business Control System -- A Framework for Discovering and Analyzing Changing Customer Segments -- Collaborative Filtering Using Electrical Resistance Network Models -- Visual Query and Exploration System for Temporal Relational Database -- Towards an Online Image-Based Tree Taxonomy -- Distributed Generative Data Mining -- Time Series andFrequent Pattern Mining -- Privacy-Preserving Discovery of Frequent Patterns in Time Series -- Efficient Non Linear Time Series Prediction Using Non Linear Signal Analysis and Neural Networks in Chaotic Diode Resonator Circuits -- Association Minnig -- Using Disjunctions in Association Mining.
Sommario/riassunto	ICDM / MLDM Medaillie (limited edition) Meissner Porcellan, the “White Gold” of King August the Strongest of Saxonia ICDM 2007 was the seventh event in the Industrial Conference on Data Mining series and was held in Leipzig (www.data-mining-forum.de). For this edition the Program Committee received 96 submissions from 24 countries (see Fig. 1). After the peer-review process, we accepted 25 high-quality papers for oral presentation that are included in this proceedings book. The topics range from aspects of classification and prediction, clustering, Web mining, data mining in medicine, applications of data mining, time series and frequent pattern mining, and association rule mining. Germany 9,30% 4,17% China 9,30% 1,04% 6,98% 3,13% South Korea Czech Republic 6,98% 3,13% USA 6,98% 2,08% 4,65% 2,08% UK Portugal 4,65% 2,08% Iran 4,65% 2,08% India 4,65% 2,08% Brazil 4,65% 1,04% Hungary 4,65% 1,04% Mexico 4,65% 1,04% Finland 2,33% 1,04% Ireland 2,33% 1,04% Slovenia 2,33% 1,04% France 2,33% 1,04% Israel 2,33% 1,04% Spain 2,33% 1,04% Greece 2,33% 1,04% Italy 2,33% 1,04% Sweden 2,33% 1,04% Netherlands 2,33% 1,04% Malaysia 2,33% 1,04% Turkey 2,33% 1,04% Fig. 1. Distribution of papers among countries Twelve papers were selected for poster presentations that are published in the ICDM Poster Proceedings Volume.