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Soggetti	Science—Philosophy Artificial intelligence Database management Information storage and retrieval systems Information technology—Management Business information services Philosophy of Science Artificial Intelligence Database Management Information Storage and Retrieval Computer Application in Administrative Data Processing IT in Business
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- Abduction and the Dualization Problem -- Signal Extraction and Knowledge Discovery Based on Statistical Modeling -- Association Computation for Information Access -- Efficient Data Representations That Preserve Information -- Can Learning in the Limit Be Done Efficiently? -- Long Papers -- Discovering Frequent Substructures in Large Unordered Trees -- Discovering Rich Navigation Patterns on a Web Site -- Mining Frequent Itemsets with Category-Based Constraints -- Modelling Soil Radon Concentration for Earthquake Prediction -- Dialectical Evidence Assembly for Discovery

-- Performance Analysis of a Greedy Algorithm for Inferring Boolean Functions -- Performance Evaluation of Decision Tree Graph-Based Induction -- Discovering Ecosystem Models from Time-Series Data -- An Optimal Strategy for Extracting Probabilistic Rules by Combining Rough Sets and Genetic Algorithm -- Extraction of Coverings as Monotone DNF Formulas -- What Kinds and Amounts of Causal Knowledge Can Be Acquired from Text by Using Connective Markers as Clues? -- Clustering Orders -- Business Application for Sales Transaction Data by Using Genome Analysis Technology -- Improving Efficiency of Frequent Query Discovery by Eliminating Non-relevant Candidates -- Chaining Patterns -- An Algorithm for Discovery of New Families of Optimal Regular Networks -- Enumerating Maximal Frequent Sets Using Irredundant Dualization -- Discovering Exceptional Information from Customer Inquiry by Association Rule Miner -- Short Papers -- Automatic Classification for the Identification of Relationships in a Meta-Data Repository -- Effects of Unreliable Group Profiling by Means of Data Mining -- Using Constraints in Discovering Dynamics -- SA-Optimized Multiple View Smooth Polyhedron Representation NN -- Elements of an Agile Discovery Environment -- Discovery of User Preference in Personalized Design Recommender System through Combining Collaborative Filtering and Content Based Filtering -- Discovery of Relationships between Interests from Bulletin Board System by Dissimilarity Reconstruction -- A Genetic Algorithm for Inferring Pseudoknotted RNA Structures from Sequence Data -- Prediction of Molecular Bioactivity for Drug Design Using a Decision Tree Algorithm -- Mining RNA Structure Elements from the Structure Data of Protein-RNA Complexes -- Discovery of Cellular Automata Rules Using Cases -- Discovery of Web Communities from Positive and Negative Examples -- Association Rules and Dempster-Shafer Theory of Evidence -- Subgroup Discovery among Personal Homepages -- Collaborative Filtering Using Projective Restoration Operators -- Discovering Homographs Using N-Partite Graph Clustering -- Discovery of Trends and States in Irregular Medical Temporal Data -- Creating Abstract Concepts for Classification by Finding Top-N Maximal Weighted Cliques -- Content-Based Scene Change Detection of Video Sequence Using Hierarchical Hidden Markov Model -- An Appraisal of UNIVAUTO – The First Discovery Program to Generate a Scientific Article -- Scilog: A Language for Scientific Processes and Scales -- Mining Multiple Clustering Data for Knowledge Discovery -- Bacterium Lingualis – The Web-Based Commonsensical Knowledge Discovery Method -- Inducing Biological Models from Temporal Gene Expression Data -- Knowledge Discovery on Chemical Reactivity from Experimental Reaction Information -- A Method of Extracting Related Words Using Standardized Mutual Information -- Discovering Most Classificatory Patterns for Very Expressive Pattern Classes -- Mining Interesting Patterns Using Estimated Frequencies from Subpatterns and Superpatterns.

Sommario/riassunto

This book constitutes the refereed proceedings of the 6th International Conference on Discovery Science, DS 2003, held in Sapporo, Japan in October 2003. The 18 revised full papers and 29 revised short papers presented together with 3 invited papers and abstracts of 2 invited talks were carefully reviewed and selected from 80 submissions. The papers address all current issues in discovery science including substructure discovery, Web navigation patterns discovery, graph-based induction, time series data analysis, rough sets, genetic algorithms, clustering, genome analysis, chaining patterns, association rule mining, classification, content based filtering, bioinformatics, case-based reasoning, text mining, Web data analysis, and more. .