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Note generali	"Papers presented at the First International Conference on Discovery Science (DS'98) held at the Hotel Uminonakamichi, Fukuoka, Japan, during December 14-16, 1998"--Pref.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Philosophical Aspects of Scientific Discovery: A Historical Survey -- Learning, Mining, or Modeling? A Case Study from Paleoecology -- The Computer-Aided Discovery of Scientific Knowledge -- On Classification and Regression -- Knowledge Discovery in Biological and Chemical Domains -- Random Case Analysis of Inductive Learning Algorithms -- On Variants of Iterative Learning -- Uniform Characterizations of Polynomial-Query Learnabilities -- Inferring a Rewriting System from Examples -- Toward Genomic Hypothesis Creator: View Designer for Discovery -- Visualization of Community Knowledge Interaction Using Associative Representation -- Discovering Characteristic Patterns from Collections of Classical Japanese Poems -- Approximate Retrieval of High-Dimensional Data by Spatial Indexing -- Practical Algorithms for On-Line Sampling -- Discovering Conceptual Differences among People from Cases -- Discovery of Unknown Causes from Unexpected Co-occurrence of Inferred Known Causes -- Refining Search Expression by Discovering Hidden User's Interests -- The Discovery of Rules from Brain Images -- Instance Guided Rule Induction -- Learning with Globally Predictive Tests -- Query-Initiated Discovery of Interesting

Association Rules -- Boosting Cost-Sensitive Trees -- On the Boosting Algorithm for Multiclass Functions Based on Information-Theoretic Criterion for Approximation -- The Continuous—Function Attribute Class in Decision Tree Induction -- Feature Transformation and Multivariate Decision Tree Induction -- Formal Logics of Discovery and Hypothesis Formation by Machine -- Finding Hypotheses from Examples by Computing the Least Generalization of Bottom Clauses -- On the Completion of the Most Specific Hypothesis Computation in Inverse Entailment for Mutual Recursion -- Biochemical Knowledge Discovery Using Inductive Logic Programming -- Computational Characteristics of Law Discovery Using Neural Networks -- Development of SDS2: Smart Discovery System for Simultaneous Equation Systems -- Discovery of Differential Equations from Numerical Data -- Automatic Transaction of Signal via Statistical Modeling -- Empirical Comparison of Competing Query Learning Methods -- Abstracting a Human's Decision Process by PRISM -- Mechanisms of Self-organized Renormalizability -- An Efficient Tool for Discovering Simple Combinatorial Patterns from Large Text Databases -- A Similarity Finding System under a Goal Concept -- Parallel Induction Algorithms for Large Samples -- Toward Effective Knowledge Acquisition with First Order Logic Induction -- A Logic of Discovery -- A Strong Relevant Logic Model of Epistemic Processes in Scientific Discovery -- Four-Fold Table Calculi for Discovery Science -- Parallel Organization Algorithm for Graph Matching and Subgraph Isomorphism Detection -- Visualizing Semantic Clusters in the Internet Information Space -- KN on ZK — Knowledge Network on Network Note Pad ZK -- Virtual Integration of Distributed Database by Multiple Agents -- Development of Some Methods and Tools for Discovering Conceptual Knowledge -- Reducing the Dimensions of Attributes by selection and Aggregation -- On the Number of Clusters in Cluster Analysis -- Geometric Clustering Models in Feature Space -- Efficient Mining of Association Rules with Item Constraints -- GDT-RS: A Probabilistic Rough Induction Approach -- A Constructive Fuzzy NGE Learning System -- Composing Inductive Applications Using Ontologies for Machine Learning -- TDDA, a Data Mining Tool for Text Databases: A Case History in a Lung Cancer Text Database -- Crows Classification and Retrieval on WWW -- Extracting Knowledge Patterns from Ticket Data -- Automatic Acquisition of Phoneme Models and Its Application to Phoneme Labeling of a Large Size of Speech Corpus -- An Experimental Agricultural Data Mining System -- Data Mining Oriented System for Business Applications -- Moving Object Recognition Using Wavelets and Learning of Eigenspaces -- Search for New Methods for Assignment of Complex Molecular Spectra and a Program Package for Simulation of Molecular Spectra -- Computer Aided Hypotheses Based Drug Discovery Using CATALYSTRTM and PC GUHA Software Systems -- Knowledge Discovery through the Navigation Inside the Human Body -- Application of Discovery Science to Solar-Terrestrial Physics -- Incorporating a Navigation Tool into a WWW Browser.

Sommario/riassunto

This book constitutes the refereed proceedings of the First International Conference on Discovery Science, DS'98, held in Fukuoka, Japan, in December 1998. The volume presents 28 revised full papers selected from a total of 76 submissions. Also included are five invited contributions and 34 selected poster presentations. The ultimate goal of DS'98 and this volume is to establish discovery science as a new field of research and development. The papers presented relate discovery science to areas as formal logic, knowledge processing, machine learning, automated deduction, searching, neural networks, database management, information retrieval, intelligent network agents,

visualization, knowledge discovery, data mining, information
extraction, etc.
