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Nota di contenuto	Rough Sets: Trends, Challenges, and Prospects -- Keynote Papers -- To What Extent Can Computers Aid Human Activity? Toward Second Phase Information Technology -- Rough Sets and Decision Algorithms -- Toward a Perception-Based Theory of Probabilistic Reasoning -- Special Session: Granular Computing -- Situation Identification by Unmanned Aerial Vehicle -- Rough-Neuro Computing -- Approximation of Information Granule Sets -- Probabilistic Inference and Bayesian Theorem on Rough Sets -- Interpreting Fuzzy Membership Functions in the Theory of Rough Sets -- Rough Sets and

Systems -- Dynamic System Visualization with Rough Performance Maps -- Approximation Spaces of Type-Free Sets -- RSES and RSESlab - A Collection of Tools for Rough Set Computations -- An Investigation of ? -Reduct Selection within the Variable Precision Rough Sets Model -- Application of Discernibility Tables to Calculation of Approximate Frequency Based Reducts -- Scalable Feature Selection Using Rough Set Theory -- On Algorithm for Constructing of Decision Trees with Minimal Number of Nodes -- Rough Set-Based Dimensionality Reduction for Multivariate Adaptive Regression Splines -- Rough, and Fuzzy-Rough Classification Methods Implemented in RClass System -- Rough Set Approach to Decisions under Risk -- Variable Consistency Model of Dominance-Based Rough Sets Approach -- Approximations and Rough Sets Based on Tolerances -- A Rough Set Approach to Inductive Logic Programming -- Classification of Infinite Information Systems -- Some Remarks on Extensions and Restrictions of Information Systems -- Valued Tolerance and Decision Rules -- A Conceptual View of Knowledge Bases in Rough Set Theory -- Fuzzy Sets and Systems -- Computer Vision Using Fuzzy Logic for Robot Manipulator -- On Fuzzy Lattice -- Fuzzy-Logic-Based Adaptive Control for aClass of Nonlinear Discrete-Time System -- Conditional Probability Relations in Fuzzy Relational Database -- A New Class of Necessity Measures and Fuzzy Rough Sets Based on Certainty Qualifications -- A Fuzzy Approach for Approximating Formal Concepts -- On Axiomatic Characterizations of Fuzzy Approximation Operators -- Rough Sets and Data Mining -- LEM3 Algorithm Generalization Based on Stochastic Approximation Space -- Using the Apriori Algorithm to Improve Rough Sets Results -- An Application for Knowledge Discovery Based on a Revision of VPRS Model -- An Algorithm for Induction of Decision Rules Consistent with the Dominance Principle -- Data Mining for Monitoring Loose Parts in Nuclear Power Plants -- Supervised Learning: A Generalized Rough Set Approach -- Unification of Knowledge Discovery and Data Mining using Rough Sets Approach in A Real-World Application -- The Application of a Distance Learning Algorithm in Web-Based Course Delivery -- Searching Decision Rules in Very Large Databases Using Rough Set Theory -- On Efficient Construction of Decision Trees From Large Databases -- An Approach to Statistical Extention of Rough Set Rule Induction -- The Inconsistency in Rough Set Based Rule Generation -- Machine Learning and Data Mining -- A Comparison of Several Approaches to Missing Attribute Values in Data Mining -- Discovering Motiv Based Association Rules in a Set of DNA Sequences -- Inducing Theory for the Rule Set -- Some Basics of a Self Organizing Map (SOM) Extended Model for Information Discovery in a Digital Library Context -- Handling Data with Plural Sources in Databases -- Research Topics Discovery from WWW by Keywords Association Rules -- Temporal Templates and Analysis of Time Related Data -- Constraint Based Incremental Learning of Classification Rules -- A Hybrid Model for Rule Discovery in Data -- Non-classical Logics and Reasoning -- Rough Sets in Approximate Spatial Reasoning -- A Study of Conditional Independence Change in Learning Probabilistic Network -- ? -Level Rough Equality Relation and the Inference of Rough Paramodulation -- Annotated Semantics for Defeasible Deontic Reasoning -- Spatial Reasoning via Rough Sets -- Decomposition of Boolean Relations and Functions in Logic Synthesis and Data Analysis -- Diagnostic Reasoning from the viewpoint of Rough Sets -- Rough Set Approach to CBR -- Rough Sets for Uncertainty Reasoning -- Pattern Recognition and Image Processing -- Feature Subset Selection by Neuro-rough Hybridization -- Accurate Estimation of Motion Vectors using Active Block Matching

-- Anytime Algorithm for Feature Selection -- Reconstruction in an Original Video Sequence of the Lost Region Occupied by Caption Areas
-- Determining Influence of Visual Cues on the Perception of Surround Sound Using Soft Computing -- Application of normalized decision measures to the new case classification -- An Application of Rough Sets and Haar Wavelets to Face Recognition -- Detecting Spots for NASA Space Programs Using Rough Sets -- Solving the Localization-Detection Trade-Off in Shadow Recognition Problem Using Rough Sets
-- Neural Networks and Genetic Algorithms -- A Modular Neural Network For Vague Classification -- Evolutionary Parsing for a Probabilistic Context Free Grammar -- The Application of Genetic Programming in Milk Yield Prediction for Dairy Cows -- Localization of Sound Sources by Means of Recurrent Neural Networks -- Towards Rough Neural Computing Based on Rough Membership Functions: Theory and Application -- The Nature of Crossover Operator in Genetic Algorithms -- The Behavior of the Complex Integral Neural Network -- Current Trends in Computing -- On Trace Assertion Method of Module Interface Specification with Concurrency -- A Proposal for Including Behavior in the Process of Object Similarity Assessment with Examples from Artificial Life -- How Can Help an Inductive Approach in the Resolution of a Problematic ? Problem? -- A Timed Petri Net Interpreter: An Alternative Method for Simulation -- An Agent-Based Soft Computing Society.

Sommario/riassunto

This book constitutes the thoroughly refereed post-proceedings of the Second International Conference on Rough Sets and Current Trends in Computing, RSCTC 2000, held in Banff, Canada in October 2000. The 80 revised papers presented together with an introduction and three keynote presentations have gone through two rounds of reviewing and revision. The papers are organized in topical sections on granular computing, rough sets and systems, fuzzy sets and systems, rough sets and data mining, nonclassical logics and reasoning, pattern recognition and image processing, neural networks and genetic algorithms, and current trends in computing.
