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Titolo	Adaptive and Natural Computing Algorithms [[electronic resource]] : 9th International Conference, ICANNGA 2009, Kuopio, Finland, April 23-25, 2009, Revised Selected Papers / / edited by Ville Kolehmainen, Pekka Toivanen, Bartlomiej Beliczynski
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Neural Networks -- Automatic Discriminative Lossy Binary Conversion of Redundant Real Training Data Inputs for Simplifying an Input Data Space and Data Representation -- On Tractability of Neural-Network Approximation -- Handling Incomplete Data Using Evolution of Imputation Methods -- Ideas about a Regularized MLP Classifier by

Means of Weight Decay Stepping -- Connection Strategies in Associative Memory Models with Spiking and Non-spiking Neurons -- Some Enhancements to Orthonormal Approximation of 2D Functions -- Shortest Common Superstring Problem with Discrete Neural Networks -- A Methodology for Developing Nonlinear Models by Feedforward Neural Networks -- A Predictive Control Economic Optimiser and Constraint Governor Based on Neural Models -- Computationally Efficient Nonlinear Predictive Control Based on RBF Neural Multi-models -- Parallel Implementations of Recurrent Neural Network Learning -- Growing Competitive Network for Tracking Objects in Video Sequences -- Emission Analysis of a Fluidized Bed Boiler by Using Self-Organizing Maps -- Network Security Using Growing Hierarchical Self-Organizing Maps -- On Document Classification with Self-Organising Maps -- Evolutionary Computation -- A Heuristic Procedure with Guided Reproduction for Constructing Cocyclic Hadamard Matrices -- Tuning of Large-Scale Linguistic Equation (LE) Models with Genetic Algorithms -- Elitistic Evolution: An Efficient Heuristic for Global Optimization -- Solving the Multiple Sequence Alignment Problem Using Prototype Optimization with Evolved Improvement Steps -- Grid-Oriented Scatter Search Algorithm -- Agent-Based Gene Expression Programming for Solving the RCPSP/max Problem -- Feature Selection from Barkhausen Noise Data Using Genetic Algorithms with Cross-Validation -- Time-Dependent Performance Comparison of Evolutionary Algorithms -- Multiobjective Genetic Programming for Nonlinear System Identification -- NEAT in HyperNEAT Substituted with Genetic Programming -- Simulation Studies on a Genetic Algorithm Based Tomographic Reconstruction Using Time-of-Flight Data from Ultrasound Transmission Tomography -- Estimation of Sensor Network Topology Using Ant Colony Optimization -- Learning -- Scalability of Learning Impact on Complex Parameters in Recurrent Neural Networks -- A Hierarchical Classifier with Growing Neural Gas Clustering -- A Generative Model for Self/Non-self Discrimination in Strings -- On the Efficiency of Swap-Based Clustering -- Sum-of-Squares Based Cluster Validity Index and Significance Analysis -- Supporting Scalable Bayesian Networks Using Configurable Discretizer Actuators -- String Distances and Uniformities -- Emergent Future Situation Awareness: A Temporal Probabilistic Reasoning in the Absence of Domain Experts -- Efficient Hold-Out for Subset of Regressors -- Improving Optimistic Exploration in Model-Free Reinforcement Learning -- Improving Visualization, Scalability and Performance of Multiclass Problems with SVM Manifold Learning -- A Cat-Like Robot Real-Time Learning to Run -- Controlling the Experimental Three-Tank System via Support Vector Machines -- Feature-Based Clustering for Electricity Use Time Series Data -- The Effect of Different Forms of Synaptic Plasticity on Pattern Recognition in the Cerebellar Cortex -- Soft Computing -- Fuzzy Inference Systems for Efficient Non-invasive On-Line Two-Phase Flow Regime Identification -- Machine Tuning of Stable Analytical Fuzzy Predictive Controllers -- Crisp Classifiers vs. Fuzzy Classifiers: A Statistical Study -- Efficient Model Predictive Control Algorithm with Fuzzy Approximations of Nonlinear Models -- Dynamic Classifier Systems and Their Applications to Random Forest Ensembles -- A Fuzzy Shape Descriptor and Inference by Fuzzy Relaxation with Application to Description of Bones Contours at Hand Radiographs -- Hough and Fuzzy Hough Transform in Music Tunes Recognition Systems -- Bioinformatics -- Multiple Order Gradient Feature for Macro-Invertebrate Identification Using Support Vector Machines -- Bayesian Dimension Reduction Models for Microarray Data -- Gene Selection for Cancer Classification through Ensemble of Methods --

Applications -- Rules versus Hierarchy: An Application of Fuzzy Set Theory to the Assessment of Spatial Grouping Techniques -- A Novel Signal-Based Approach to Anomaly Detection in IDS Systems -- Extracting Discriminative Features Using Non-negative Matrix Factorization in Financial Distress Data -- Evolutionary Regression Modeling with Active Learning: An Application to Rainfall Runoff Modeling -- Gene Trajectory Clustering for Learning the Stock Market Sectors -- Accurate Prediction of Financial Distress of Companies with Machine Learning Algorithms -- Approximation Scheduling Algorithms for Solving Multi-objects Movement Synchronization Problem -- Automatic Segmentation of Bone Tissue in X-Ray Hand Images -- Automatic Morphing of Face Images -- A Comparison Study of Strategies for Combining Classifiers from Distributed Data Sources -- Visualizing Time Series State Changes with Prototype Based Clustering.