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Soggetti	Artificial intelligence Application software Computers Database management Information storage and retrieval Optical data processing Artificial Intelligence Information Systems Applications (incl. Internet) Computation by Abstract Devices Database Management Information Storage and Retrieval Computer Imaging, Vision, Pattern Recognition and Graphics
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Nota di bibliografia	Includes bibliographical references and author index.
Nota di contenuto	Hybrid System of ART and RBF Neural Networks for Classification of Vibration Signals and Operational States of Wind Turbines -- The Parallel Approach to the Conjugate Gradient Learning Algorithm for the Feedforward Neural Networks -- A Cascade Neural Network Architecture Investigating Surface Plasmon Polaritons Propagation for Thin Metals in OpenMP -- Application of Support Vector Machines, Convolutional Neural Networks and Deep Belief Networks to

Recognition of Partially Occluded Objects -- A New Multilayer Perceptron Initialisation Method with Selection of Weights on the Basis of the Function Variability -- Soft Committee Machine Using Simple Derivative Term -- Representations of Highly-Varying Functions by One-Hidden-Layer Networks -- Non-Euclidean Principal Component Analysis for Matrices by Hebbian Learning -- Spin-Glass Implementation of a Hopfield Neural Structure -- Neural-Network Based Robust FTC: Application to Wind Turbines -- An Improved Adaptive Self-Organizing Map -- Usage of the TRACO Compiler for Neural Network Parallelization -- Training Neural Networks on Noisy Data -- Principal Component Analysis to Reduce Forecasting Error of Industrial Energy Consumption in Models Based on Neural Networks -- Boundedness of Weight Elimination for BP Neural Networks -- New Method for Nonlinear Fuzzy Correction Modelling of Dynamic Objects -- Intuitionistic Fuzzy Decision Trees - A New Approach -- An Industrial Fuzzy PID Autotuner Based on the Relay Method -- A New Pseudo-metric for Fuzzy Sets -- New Method for Design of Fuzzy Systems for Nonlinear Modelling Using Different Criteria of Interpretability -- Fuzzy Reinforcement Learning for Dynamic Power Control in Cognitive Radio Networks -- On Multi-subjectivity in Linguistic Summarization of Relational Databases -- The Learning of Neuro-Fuzzy Classifier with Fuzzy Rough Sets for Imprecise Datasets -- Aggregation Operator for Ordered Fuzzy Numbers Concerning the Direction -- The Idea for the Integration of Neuro-Fuzzy Hardware Emulators with Real-Time Network -- Hierarchical Fuzzy Logic Systems. Current Research and Perspectives -- Application of Models of Relational Fuzzy Cognitive Maps for Prediction of Work of Complex Systems -- Color Digital Picture Recognition Based on Fuzzy Granulation Approach -- Clustering of Vehicle Usage Behavior by Means of Artificial Bee Colony -- Search Space Analysis for the Combined Mathematical Model (Linear and Nonlinear) of the Water Distribution Network Design Problem -- Archive Management in Interactive Evolutionary Computation with Minimum Requirement for Human User's Fitness Evaluation Ability -- Investigation of Mutation Strategies in Differential Evolution for Solving Global Optimization Problems -- Robust Consensus: A New Measure for Multicriteria Robust Group Decision Making Problems Using Evolutionary Approach -- Preliminary Study on the Particle Swarm Optimization with the Particle Performance Evaluation -- Numerical Optimal Control of Integral-Algebraic Equations Using Differential Evolution with Fletcher's Filter -- Multi-chaotic Differential Evolution: A Preliminary Study -- Evolutionary Multi-modal Optimization with the Use of Multi-objective Techniques -- Aspects of the Selection of the Structure and Parameters of Controllers Using Selected Population Based Evolutionary Approach with Multiple Quality Criteria for Controller Design -- Optimization of Router Deployment for Sensor Networks Using Genetic Algorithm -- On Applying Evolutionary Computation Methods to Optimization of Vacation Cycle Costs in Finite-Buffer Queue -- On Convergence of Evolutionary Algorithms Powered by Non-random Generators -- A Semantic Kernel for Text Classification Based on Iterative Higher-Order Relations between Words and Documents -- Nonparametric Extension of Regression Functions Outside Domain -- Nonparametric Function Fitting in the Presence of Nonstationary Noise -- One-Class Classification Decomposition for Imbalanced Classification of Breast Cancer Malignancy Data -- Comparison of Tree-Based Ensembles in Application to Censored Data -- Advanced Oblique Rule Generating Based on PCA -- Statistical Assessment of Signal and Image Symmetries -- Statistical Classifier with Ordered Decisions as an Image

Based Controller with Application to Gas Burners -- Crop Classification Using Different Color Spaces and RBF Neural Networks -- Small Sample Size in High Dimensional Space - Minimum Distance Based Classification -- Failures Prediction in the Cold Forging Process Using Machine Learning Methods -- An Approach for Imperfection Propagation: Application to Land Cover Change Prediction -- Large-Scale Region-Based Multimedia Retrieval for Solar Images -- Three-Dimensional Urban-Type Scene Representation in Vision System of Unmanned Flying Vehicles -- Classification of Dynamic Sequences of 3D Point Clouds -- Texture Image Classification with Improved Weber Local Descriptor -- Different Orderings and Visual Sequence Alignment Algorithms for Image Classification -- Surface Mixture Models for the Optimization of Object Boundary Representation -- Video Compression Algorithm Based on Neural Network Structures -- A New Image Reconstruction from Projections Algorithm -- Discovering Multi-sense Features from Images Using Random Indexing -- Recognition of Signed Expressions Using Symbolic Aggregate Approximation -- Dimensionality Reduction of Dynamic Animations Using HO-SVD -- Big Data Paradigm Developed in Volunteer Grid System with Genetic Programming Scheduler -- Novel Algorithm for Translation from Image Content to Semantic Form -- Recommendations and Object Discovery in Graph Databases Using Path Semantic Analysis -- Belief Propagation during Data Integration in a P2P Network.

Sommario/riassunto

The two-volume set LNAI 8467 and LNAI 8468 constitutes the refereed proceedings of the 13th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2014, held in Zakopane, Poland in June 2014. The 139 revised full papers presented in the volumes, were carefully reviewed and selected from 331 submissions. The 69 papers included in the first volume are focused on the following topical sections: Neural Networks and Their Applications, Fuzzy Systems and Their Applications, Evolutionary Algorithms and Their Applications, Classification and Estimation, Computer Vision, Image and Speech Analysis, and Special Session 3: Intelligent Methods in Databases. The 71 papers in the second volume are organized in the following subjects: Data Mining, Bioinformatics, Biometrics and Medical Applications, Agent Systems, Robotics and Control, Artificial Intelligence in Modeling and Simulation, Various Problems of Artificial Intelligence, Special Session 2: Machine Learning for Visual Information Analysis and Security, Special Session 1: Applications and Properties of Fuzzy Reasoning and Calculus, and Clustering.
