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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Unsupervised Learning -- Patch Relational Neural Gas -- Clustering of Huge Dissimilarity Datasets -- The Block Generative Topographic Mapping -- Kernel k-Means Clustering Applied to Vector Space Embeddings of Graphs -- Probabilistic Models Based on the ?-Sigmoid Distribution -- How Robust Is a Probabilistic Neural VLSI System Against Environmental Noise -- Supervised Learning -- Sparse Least

Squares Support Vector Machines by Forward Selection Based on Linear Discriminant Analysis -- Supervised Incremental Learning with the Fuzzy ARTMAP Neural Network -- Discriminatory Data Mapping by Matrix-Based Supervised Learning Metrics -- Neural Approximation of Monte Carlo Policy Evaluation Deployed in Connect Four -- Cyclostationary Neural Networks for Air Pollutant Concentration Prediction -- Fuzzy Evolutionary Probabilistic Neural Networks -- Experiments with Supervised Fuzzy LVQ -- A Neural Network Approach to Similarity Learning -- Partial Discriminative Training of Neural Networks for Classification of Overlapping Classes -- Multiple Classifiers -- Boosting Threshold Classifiers for High-Dimensional Data in Functional Genomics -- Decision Fusion on Boosting Ensembles -- The Mixture of Neural Networks as Ensemble Combiner -- Combining Methods for Dynamic Multiple Classifier Systems -- Researching on Multi-net Systems Based on Stacked Generalization -- Applications -- Real-Time Emotion Recognition from Speech Using Echo State Networks -- Sentence Understanding and Learning of New Words with Large-Scale Neural Networks -- Multi-class Vehicle Type Recognition System -- A Bio-inspired Neural Model for Colour Image Segmentation -- Mining Software Aging Patterns by Artificial Neural Networks -- Bayesian Classifiers for Predicting the Outcome of Breast Cancer Preoperative Chemotherapy -- Feature Selection -- Feature Ranking Ensembles for Facial Action Unit Classification -- Texture Classification with Generalized Fourier Descriptors in Dimensionality Reduction Context: An Overview Exploration -- Improving Features Subset Selection Using Genetic Algorithms for Iris Recognition -- Artificial Neural Network Based Automatic Face Model Generation System from Only One Fingerprint.

Sommario/riassunto

The Third IAPR TC3 Workshop on Artificial Neural Networks in Pattern Recognition, ANNPR 2008, was held at Pierre and Marie Curie University in Paris (France), July 2-4, 2008. The workshop was organized by the Technical Committee on Neural Networks and Computational Intelligence (TC3) that is one of the 20 TCs of the International Association for Pattern Recognition (IAPR). The scope of TC3 includes computational intelligence approaches, such as fuzzy systems, evolutionary computing and artificial neural networks and their use in various pattern recognition applications. ANNPR 2008 followed the success of the previous workshops: ANNPR 2003 held at the University of Florence (Italy) and ANPPR 2006 held at Reissensburg Castle, University of Ulm (Germany). All the workshops featured a single-track program including both oral sessions and posters with a focus on active participation from every participant. In recent years, the field of neural networks has matured considerably in both methodology and real-world applications. As reflected in this book, artificial neural networks in pattern recognition combine many ideas from machine learning, advanced statistics, signal and image processing for solving complex real-world pattern recognition problems. High quality across such a diverse field of research can only be achieved through a rigorous and selective review process. For this workshop, 57 papers were submitted out of which 29 were selected for inclusion in the proceedings. The oral sessions included 18 papers, while 11 contributions were presented as posters. ANNPR 2008 featured research works in the areas of supervised and unsupervised learning, multiple classifier systems, pattern recognition in signal and image processing, and feature selection.