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Nota di contenuto	Invited Paper -- Data Dependence in Combining Classifiers -- Boosting -- Boosting with Averaged Weight Vectors -- Error Bounds for Aggressive and Conservative AdaBoost -- An Empirical Comparison of Three Boosting Algorithms on Real Data Sets with Artificial Class Noise -- The Beneficial Effects of Using Multi-net Systems That Focus on Hard Patterns -- Combination Rules -- The Behavior Knowledge Space Fusion Method: Analysis of Generalization Error and Strategies for Performance Improvement -- Reducing the Overconfidence of Base Classifiers when Combining Their Decisions -- Linear Combiners for Classifier Fusion: Some Theoretical and Experimental Results --

Comparison of Classifier Selection Methods for Improving Committee Performance -- Towards Automated Classifier Combination for Pattern Recognition -- Multi-class Methods -- Serial Multiple Classifier Systems Exploiting a Coarse to Fine Output Coding -- Polychotomous Classification with Pairwise Classifiers: A New Voting Principle -- Multi-category Classification by Soft-Max Combination of Binary Classifiers -- A Sequential Scheduling Approach to Combining Multiple Object Classifiers Using Cross-Entropy -- Binary Classifier Fusion Based on the Basic Decomposition Methods -- Fusion Schemes Architectures -- Good Error Correcting Output Codes for Adaptive Multiclass Learning -- Finding Natural Clusters Using Multi-clusterer Combiner Based on Shared Nearest Neighbors -- An Ensemble Approach for Data Fusion with Learn++ -- The Practical Performance Characteristics of Tomographically Filtered Multiple Classifier Fusion -- Accumulated-Recognition-Rate Normalization for Combining Multiple On/Off-Line Japanese Character Classifiers Tested on a Large Database -- Beam Search Extraction and Forgetting Strategies on Shared Ensembles -- A Markov Chain Approach to Multiple Classifier Fusion -- Neural Network Ensembles -- A Study of Ensemble of Hybrid Networks with Strong Regularization -- Combining Multiple Modes of Information Using Unsupervised Neural Classifiers -- Neural Net Ensembles for Lithology Recognition -- Improving Performance of a Multiple Classifier System Using Self-generating Neural Networks -- Ensemble Strategies -- Negative Correlation Learning and the Ambiguity Family of Ensemble Methods -- Spectral Coefficients and Classifier Correlation -- Ensemble Construction via Designed Output Distortion -- Simulating Classifier Outputs for Evaluating Parallel Combination Methods -- A New Ensemble Diversity Measure Applied to Thinning Ensembles -- Ensemble Methods for Noise Elimination in Classification Problems -- Applications -- New Boosting Algorithms for Classification Problems with Large Number of Classes Applied to a Handwritten Word Recognition Task -- Automatic Target Recognition Using Multiple Description Coding Models for Multiple Classifier Systems -- A Modular Multiple Classifier System for the Detection of Intrusions in Computer Networks -- Input Space Transformations for Multi-classifier Systems Based on n-tuple Classifiers with Application to Handwriting Recognition -- Building Classifier Ensembles for Automatic Sports Classification -- Classification of Aircraft Maneuvers for Fault Detection -- Solving Problems Two at a Time: Classification of Web Pages Using a Generic Pair-Wise Multiple Classifier System -- Design and Evaluation of an Adaptive Combination Framework for OCR Result Strings.

Sommario/riassunto

This book constitutes the refereed proceedings of the 4th International Workshop on Multiple Classifier Systems, MCS 2003, held in Guildford, UK in June 2003. The 40 revised full papers presented with one invited paper were carefully reviewed and selected for presentation. The papers are organized in topical sections on boosting, combination rules, multi-class methods, fusion schemes and architectures, neural network ensembles, ensemble strategies, and applications.