

Table of Contents

Invited Papers

Ensemble Methods in Machine Learning	1
<i>T.G. Dietterich</i>	
Experiments with Classifier Combining Rules	16
<i>R.P.W. Duin, D.M.J. Tax</i>	
The 'Test and Select' Approach to Ensemble Combination	30
<i>A.J.C. Sharkey, N.E. Sharkey, U. Gerekce, G.O. Chandroth</i>	
A Survey of Sequential Combination of Word Recognizers in Handwritten Phrase Recognition at CEDAR	45
<i>S. Srihari</i>	
Multiple Classifier Combination Methodologies for Different Output Levels	52
<i>C.Y. Suen, L. Lam</i>	

Theoretical Issues

A Mathematically Rigorous Foundation for Supervised Learning	67
<i>E.M. Kleinberg</i>	
Classifier Combinations: Implementations and Theoretical Issues	77
<i>L. Lam</i>	
Some Results on Weakly Accurate Base Learners for Boosting Regression and Classification	87
<i>W. Jiang</i>	

Multiple Classifier Fusion

Complexity of Classification Problems and Comparative Advantages of Combined Classifiers	97
<i>T.K. Ho</i>	
Effectiveness of Error Correcting Output Codes in Multiclass Learning Problems	107
<i>F. Masulli, G. Valentini</i>	
Combining Fisher Linear Discriminants for Dissimilarity Representation .	117
<i>Elżbieta Pełalska, M. Skurichina, R.P.W. Duin</i>	

A Learning Method of Feature Selection for Rough Classification	127
<i>K. Takahashi, A. Sato</i>	
Analysis of a Fusion Method for Combining Marginal Classifiers	137
<i>M.D. Happel, P. Bock</i>	
A Hybrid Projection Based and Radial Basis Function Architecture	147
<i>S. Cohen, N. Intrator</i>	
Combining Multiple Classifiers in Probabilistic Neural Networks	157
<i>J. Grim, J. Kittler, P. Pudil, P. Somol</i>	
Supervised Classifier Combination Through Generalized Additive Multi-model	167
<i>C. Conversano, R. Siciliano, F. Mola</i>	
Dynamic Classifier Selection	177
<i>G. Giacinto, F. Roli</i>	

Bagging and Boosting

Boosting in Linear Discriminant Analysis	190
<i>M. Skurichina, R.P.W. Duin</i>	
Different Ways of Weakening Decision Trees and Their Impact on Classification Accuracy of DT Combination	200
<i>P. Latinne, O. Debeir, C. Decaestecker</i>	
Applying Boosting to Similarity Literals for Time Series Classification ...	210
<i>J.J. Rodríguez Díez, C.J. Alonso González</i>	
Boosting of Tree-Based Classifiers for Predictive Risk Modeling in GIS ...	220
<i>C. Furlanello, S. Merler</i>	

Design of Multiple Classifier Systems

A New Evaluation Method for Expert Combination in Multi-expert System Designing	230
<i>S. Impedovo, A. Salzo</i>	
Diversity Between Neural Networks and Decision Trees for Building Multiple Classifier Systems	240
<i>W. Wang, P. Jones, D. Partridge</i>	
Self-Organizing Decomposition of Functions in the Context of a Unified Framework for Multiple Classifier Systems	250
<i>N. Griffith, D. Partridge</i>	

Classifier Instability and Partitioning	260
<i>T. Windeatt</i>	

Applications of Multiple Classifier Systems

Remote-Sensing Data Analysis

A Hierarchical Multiclassifier System for Hyperspectral Data Analysis ...	270
<i>S. Kumar, J. Ghosh, M. Crawford</i>	
Consensus Based Classification of Multisource Remote Sensing Data	280
<i>J.A. Benediktsson, J.R. Sveinsson</i>	
Combining Parametric and Nonparametric Classifiers for an Unsupervised Updating of Land-Cover Maps	290
<i>L. Bruzzone, R. Cossu, D.F. Prieto</i>	
A Multiple Self-Organizing Map Scheme for Remote Sensing Classification	300
<i>W. Wan, D. Fraser</i>	

Document Analysis

Use of Lexicon Density in Evaluating Word Recognizers	310
<i>P. Slavík, V. Govindaraju</i>	
A Multi-expert System for Dynamic Signature Verification	320
<i>V. Di Lecce, G. Dimauro, A. Guerriero, S. Impedovo, G. Pirlo, A. Salzo</i>	
A Cascaded Multiple Expert System for Verification	330
<i>L. P. Cordella, P. Foggia, C. Sansone, F. Tortorella, M. Vento</i>	
Architecture for Classifier Combination Using Entropy Measures	340
<i>K. Ianakiev, V. Govindaraju</i>	

Miscellaneous Applications

Combining Fingerprint Classifiers	351
<i>R. Cappelli, D. Maio, D. Maltoni</i>	
Statistical Sensor Calibration for Fusion of Different Classifiers in a Biometric Person Recognition Framework	362
<i>B. Fröba, C. Rothe, C. Küblbeck</i>	

A Modular Neuro-fuzzy Network for Musical Instruments Classification .	372
<i>A.M. Fanelli, G. Castellano, C. A. Buscicchio</i>	
Classifier Combination for Grammar-Guided Sentence Recognition	383
<i>X. Jiang, K. Yu, H. Bunke</i>	
Shape Matching and Extraction by an Array of Figure-and-Ground Classifiers	393
<i>I. Kumazawa</i>	
Author Index	403

Multiple Classifier Systems

First International Workshop, MCS 2000 Cagliari, Italy,

June 21-23, 2000 Proceedings

Kittler, J.; Roli, F. (Eds.)

2000, XII, 408 p., Softcover

ISBN: 978-3-540-67704-8