

	Center for Vision, Speech and Signal Proc. of the University of Surrey	 Faculty of Electrical and Computer Engineering University of Iceland	Dept. of Electrical and Electronic Eng. of the University of Cagliari	
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Preliminary Program

MCS 2009

EIGHTH INTERNATIONAL WORKSHOP ON MULTIPLE CLASSIFIER SYSTEMS

University of Iceland, Reykjavik, Iceland June 10-12 2009
Updated information: <http://www.diee.unica.it/mcs>

Wednesday, June 10

08:50 Opening

ECOC, boosting and bagging

09:00 The Bias Variance Trade-of in Bootstrapped Error Correcting Output Code Ensembles
R.S. Smith and T. Windeatt

09:25 Recoding Error-Correcting Output Codes
Sergio Escalera, Oriol Pujol, and Petia Radeva

09:50 Comparison of Bagging and Boosting Algorithms on Sample and Feature Weighting
Satoshi Shirai, Mineichi Kudo, and Atsuyoshi Nakamura

10:15 Multi-class Boosting with Class Hierarchies
Goo Jun, Joydeep Ghosh

10:40 Coffee break

Invited presentation I

11:05 Manifold Learning for Multi-classifier Systems via Ensembles
Melba Crawford and Wonkook Kim

MCS in Remote Sensing

11:50 Hybrid Hierarchical Classifiers for Hyperspectral Data Analysis
Goo Jun, Joydeep Ghosh

12:15 Multiple Classifier Combination for Hyperspectral Remote Sensing Image Classification
Peijun Du, Wei Zhang, Hao Sun

12:40 Ensemble strategies for classifying hyperspectral remote sensing data
Xavier Ceamanos, Björn Waske, Jón Atli Benediktsson, Jocelyn Chanussot, Johannes R. Sveinsson

13:05 Lunch

Unbalanced Data and Decision templates

14:15 Optimal mean precision classifier
D.M.J. Tax, M. Loog and R.P.W. Duin

14:40 A multiple expert approach to the class imbalance problem using
Inverse Random Under Sampling

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M. A. Tahir, J. Kittler, K. Mikolajczyk and F. Yan

15:05 Decision Templates Based RBF Network for Tree-Structured Multiple Classifier Fusion
Mohamed F. Abdel Hady , Friedhelm Schwenker

15:30 **Poster Session and Coffee**

- Classifying remote sensing data with support vector machines and imbalanced training data imbalanced training data
Björn Waske, Jón Atli Benediktsson and Johannes R. Sveinsson
- Terrain Segmentation with On-line Mixtures of Experts for Autonomous Robot Navigation. *Michael J. Procopio, W. Philip Kegelmeyer, Greg Grudic, and Jane Mulligan*
- Consistency Measure of Multiple Classifiers for Land Cover Classification by Remote Sensing Image
Peijun Du, Guangli Li, Wei Zhang, Xiaomei Wang, and Hao Sun
- Target identification from high resolution remote sensing image by combining multiple classifiers
Peijun Du, Hao Sun and Wei Zhang
- Neural Network Optimization for Combinations in Identification Systems
Sergey Tulyakov and Venu Govindaraju
- MLP, Gaussian Processes and Negative Correlation Learning for Time Series Prediction
Waleed M. Azmy, Neamat El Gayar, Amir F. Atiya and Hisham El-Shishiny
- Diversity-based classifier selection for adaptive object tracking
Ingrid Visentini, Josef Kittler and Gian Luca Foresti
- Ensemble based Data Fusion for Gene Function Prediction
Matteo Re and Giorgio Valentini
- A Cascade Multiple Classifier System for Document Categorization
Jian-Wu Xu, Vartika Singh, Venu Govindaraju, and Depankar Neogi
- Maximum Membership Scale Selection A Classifier Combining Approach to Multi-Scale Image Segmentation
Marco Loog, Yan Li and David M. J. Tax
- An Empirical Study of a Linear Regression Combiner on Multi-class Data Sets
Chun-Xia Zhang and Robert P.W. Duin
- A Study of Random Linear Oracle Ensembles
Amir Ahmad and Gavin Brown
- Stacking for Ensembles of Local Experts in Metabonomic Applications
Kai Lienemann, Thomas Plötz, and Gernot A. Fink
- Boosting Support Vector Machines Successfully
Kai Ming Ting and Lian Zhu

17:00 End of day 1 - **Conference dinner**

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Thursday, June 11

Stacked Generalization and Active Learning

- 9:00 Efficient Online Classification using an Ensemble of Bayesian Linear Logistic Regressors
Narayanan U. Edakunni and Sethu Vijayakumar
- 9:25 Regularized Linear Models in Stacked Generalization
Sam Reid and Greg Grudic
- 9:50 Active Grading Ensembles for Learning Visual Quality Control from Multiple Humans
Davy Sannen and Hendrik Van Brussel
- 10:15 Multiple Classifier Systems for Adversarial Classification Tasks
Battista Biggio, Giorgio Fumera, Fabio Roli
- 10:40 Coffee

Concept Drift, Missing Values and Random Forest


- 11:05 Incremental Learning of Variable Rate Concept Drift
Ryan Elwell and Robi Polikar
- 11:30 Semi-supervised Co-update of Multiple Matchers
Luca Didaci, Gian Luca Marcialis, and Fabio Roli
- 11:55 Handling Multimodal Information Fusion with Missing Observations Using the Neutral Point Substitution Method
David Windridge, Norman Poh, Vadim Mottl, Alexander Tatarchuk, and Andrey Eliseyev
- 12:20 Influence of Hyperparameters on Random Forest Accuracy
Simon Bernard, Laurent Heutte, and Sébastien Adam
- 12:45 Lunch

Invited presentation II

- 14:00 When Semi-Supervised Learning Meets Ensemble Learning
Zhi-Hua Zhou

SVM Ensembles

- 14:45 Ensembles of one class support vector machines
Albert D. Shieh and David F. Kamm
- 15:10 Disturbing Neighbors Ensembles for Linear SVM
Jesús Maudes, Juan J. Rodríguez, and César García-Osorio
- 15:35 Coffee

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Preliminary Program

Fusion of Graphs, Concepts and Categorical Data

- 16:00 A Labelled Graph Based Multiple Classifier System
Wan-Jui Lee and Robert P.W. Duin
- 16:25 Cluster Ensembles Based on Vector Space Embeddings of Graphs
Kaspar Riesen and Horst Bunke
- 16:50 Random Ordinality Ensembles: A Novel Ensemble Method for Multi-Valued Categorical Data
Amir Ahmad and Gavin Brown
- 17:15 True Path Rule Hierarchical Ensembles
Giorgio Valentini
- 17:45 End of day 2

Friday, June 12

Clustering

- 9:00 A Study of Semi-Supervised Generative Ensembles
Manuela Zanda, Gavin Brown
- 9:25 Hierarchical Ensemble Support Cluster Machine
Mingmin Chi, Youdong Miao, Youze Tang, Jón Atli Benediktsson, Xuanjing Huang
- 9:50 Multi-scale stacked sequential learning
Oriol Pujol, Eloi Puertas and Carlo Gatta
- 10:15 Unsupervised Hierarchical Weighted Multi-Segmenter
Michal Haindl, Stanislav Mikeš, and Pavel Pudil
- 10:40 Ant Clustering Using Ensembles of Partitions
Yuhua Gu, Lawrence O. Hall, and Dmitry B. Goldgof
- 11:05 Coffee
- 11:30 Discussion
- 12:45 Lunch

Classifier and Feature Selection

- 14:00 Selective Ensemble Under Regularization Framework
Nan Li and Zhi-Hua Zhou
- 14:25 Criteria Ensembles in Feature Selection
Petr Somol, Jana Novovičová, Pavel Pudil
- 14:50 Network Protocol Verification by a Classifier Selection Ensemble
Francesco Gargiulo, Ludmila I. Kuncheva, and Carlo Sansone

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15:15 Supervised Selective Combining Pattern Recognition Modalities and its Application to Signature Verification by Fusing On-Line and Off-Line Kernels
Alexander Tatarchuk, Valentina Sulimova, David Windridge, Vadim Mottl and Mikhail Lange

15:40 Coffee

Theory of MCS

16:05 Improved Uniformity Enforcement in Stochastic Discrimination
Matthew Prior and Terry Windeatt

16:30 An Information Theoretic Perspective on Multiple Classifier Systems
Gavin Brown

16:55 Constraints in Weighted Averaging
Amber Tomas

17.20 FaSS: Ensembles for Stable Learners
Kai Ming Ting, Jonathan R. Wells, Swee Chuan Tan, Shyh Wei Teng, and Geoffrey I. Webby

17:45 End of MCS 2009