

# Table of Contents

Improving Simple Collaborative Filtering Models Using Ensemble Methods . . . . .	1
<i>Ariel Bar, Lior Rokach, Guy Shani, Bracha Shapira, and Alon Schclar</i>	
Combining Instance Information to Classify Bags . . . . .	13
<i>Veronika Cheplygina, David M.J. Tax, and Marco Loog</i>	
Similarity Weighted Ensembles for Relocating Models of Rare Events . . .	25
<i>Claire D'Este and Ashfaqur Rahman</i>	
Diversity in Classifier Ensembles: Fertile Concept or Dead End? . . . . .	37
<i>Luca Didaci, Giorgio Fumera, and Fabio Roli</i>	
Gender Classification Using Mixture of Experts from Low Resolution Facial Images . . . . .	49
<i>Yomna Safaa El-Din, Mohamed N. Moustafa, and Hani Mahdi</i>	
Multi-view Multi-class Classification for Identification of Pathogenic Bacterial Strains . . . . .	61
<i>Evgeni Tsiwtsivadze, Tom Heskes, and Armand Paauw</i>	
Feature Level Multiple Model Fusion Using Multilinear Subspace Analysis with Incomplete Training Set and Its Application to Face Image Analysis . . . . .	73
<i>Zhen-Hua Feng, Josef Kittler, William Christmas, and Xiao-Jun Wu</i>	
Kalman Filter Based Classifier Fusion for Affective State Recognition . . .	85
<i>Michael Glodek, Stephan Reuter, Martin Schels, Klaus Dietmayer, and Friedhelm Schwenker</i>	
Adaptive Ensemble Selection for Face Re-identification under Class Imbalance . . . . .	95
<i>Paulo Radtke, Eric Granger, Robert Sabourin, and Dmitry Gorodnichy</i>	
Self-organizing Neural Grove and Its Application to Incremental Learning . . . . .	109
<i>Hirotaaka Inoue</i>	
Cascaded Reduction and Growing of Result Sets for Combining Object Detectors . . . . .	121
<i>Uwe Knauer and Udo Seiffert</i>	

Single Classifier Based Multiple Classifications . . . . .	134
<i>Albert Hung-Ren Ko and Robert Sabourin</i>	
Selective Ensemble of Classifier Chains . . . . .	146
<i>Nan Li and Zhi-Hua Zhou</i>	
The Link between Multiple-Instance Learning and Learning from Only Positive and Unlabelled Examples . . . . .	157
<i>Yan Li, David M.J. Tax, Robert P.W. Duin, and Marco Loog</i>	
Stable L2-Regularized Ensemble Feature Weighting . . . . .	167
<i>Yun Li, Shasha Huang, Songcan Chen, and Jennie Si</i>	
Selective Clustering Ensemble Based on Covariance . . . . .	179
<i>Xuyao Lu, Yan Yang, and Hongjun Wang</i>	
Semi-supervised Clustering Ensemble for Web Video Categorization . . . .	190
<i>Amjad Mahmood, Tianrui Li, Yan Yang, Hongjun Wang, and Mehtab Afzal</i>	
Coding Theory Tools for Improving Recognition Performance in ECOC Systems . . . . .	201
<i>Claudio Marrocco, Paolo Simeone, and Francesco Tortorella</i>	
Can Diversity amongst Learners Improve Online Object Tracking? . . . .	212
<i>Georg Nebehay, Walter Chibamu, Peter R. Lewis, Arjun Chandra, Roman Pflugfelder, and Xin Yao</i>	
A New Perspective of Support Vector Clustering with Boundary Patterns . . . . .	224
<i>Yuan Ping, Huina Li, Yong Zhang, and Zhili Zhang</i>	
Ensembles of Optimum-Path Forest Classifiers Using Input Data Manipulation and Undersampling . . . . .	236
<i>Moacir P. Ponti Jr. and Isadora Rossi</i>	
Random Oracle Ensembles for Imbalanced Data . . . . .	247
<i>Juan J. Rodríguez, José-Francisco Díez-Pastor, and César García-Osorio</i>	
Towards a Framework for Designing Full Model Selection and Optimization Systems . . . . .	259
<i>Quan Sun, Bernhard Pfahringer, and Michael Mayo</i>	
Transfer Learning with Part-Based Ensembles . . . . .	271
<i>Shiliang Sun, Zhijie Xu, and Mo Yang</i>	
Dimensionality Reduction Using Stacked Kernel Discriminant Analysis for Multi-label Classification . . . . .	283
<i>Muhammad Atif Tahir, Ahmed Bouridane, and Josef Kittler</i>	

Ensemble of Feature Chains for Anomaly Detection . . . . .	295
<i>Lena Tenenboim-Chekina, Lior Rokach, and Bracha Shapira</i>	
Soft-Voting Clustering Ensemble . . . . .	307
<i>Haishen Wang, Yan Yang, Hongjun Wang, and Dahai Chen</i>	
Randomized Bayesian Network Classifiers . . . . .	319
<i>Qing Wang and Ping Li</i>	
A Novel Pattern Rejection Criterion Based on Multiple Classifiers . . . . .	331
<i>Wei-Na Wang, Xu-Yao Zhang, and Ching Y. Suen</i>	
MRF-Based Multiple Classifier System for Hyperspectral Remote Sensing Image Classification . . . . .	343
<i>Junshi Xia, Peijun Du, and Xiyang He</i>	
A Directed Inference Approach towards Multi-class Multi-model Fusion . . . . .	352
<i>Tianbao Yang, Lei Wu, and Piero P. Bonissone</i>	
A New Feature Fusion Approach Based on LBP and Sparse Representation and Its Application to Face Recognition . . . . .	364
<i>He-Feng Yin and Xiao-Jun Wu</i>	
Binary Decision Trees for Melanoma Diagnosis . . . . .	374
<i>Yu Zhou and Zhuoyi Song</i>	
ECOC Matrix Pruning Using Accuracy Information . . . . .	386
<i>Cemre Zor, Terry Windeatt, and Josef Kittler</i>	
<b>Author Index . . . . .</b>	<b>399</b>