

# Contents

Learning Convolutional Ranking-Score Function by Query Preference Regularization . . . . .	1
<i>Guohui Zhang, Gaoyuan Liang, Weizhi Li, Jian Fang, Jingbin Wang, Yanyan Geng, and Jing-Yan Wang</i>	
Dynamic Community Detection Algorithm Based on Automatic Parameter Adjustment . . . . .	9
<i>Kai Lu, Xin Wang, and Xiaoping Wang</i>	
An Ant Colony Random Walk Algorithm for Overlapping Community Detection . . . . .	20
<i>TianRen Ma, Zhengyou Xia, and Fan Yang</i>	
UK - Means Clustering for Uncertain Time Series Based on ULDTW Distance. . . . .	27
<i>Xiaoping Zhu, Zongmin Ma, and Qijie Tang</i>	
Predicting Physical Activities from Accelerometer Readings in Spherical Coordinate System . . . . .	36
<i>Kittikawin Lehsan and Jakramate Bootkrajang</i>	
A Community Detection Algorithm Based on Jaccard Similarity Label Propagation . . . . .	45
<i>Meng Wang, Xiaodong Cai, Yan Zeng, and Xiaoxi Liang</i>	
A Robust Object Tracking Method Based on CamShift for UAV Videos . . . .	53
<i>Chang Zhao, Jiabin Yuan, and Huiting Zheng</i>	
Multi-output LSSVM-Based Forecasting Model for Mid-Term Interval Load Optimized by SOA and Fresh Degree Function. . . . .	63
<i>Huiting Zheng, Jiabin Yuan, and Chang Zhao</i>	
A Potential-Based Density Estimation Method for Clustering Using Decision Graph . . . . .	73
<i>Huanqian Yan, Yonggang Lu, and Li Li</i>	
Optimization of Grover's Algorithm Simulation Based on Cloud Computing . . . . .	83
<i>Xuwei Tang, Juan Xu, and Ye Zhou</i>	
Cross-Media Retrieval of Tourism Big Data Based on Deep Features and Topic Semantics . . . . .	94
<i>Yang Li, Junping Du, Zijian Lin, and Lingfei Ye</i>	

Information Retrieval with Implicitly Temporal Queries . . . . .	103
<i>Jingjing Wang and Shengli Wu</i>	
On the Relations of Theoretical Foundations of Different Causal Inference Algorithms . . . . .	112
<i>Furui Liu and Laiwan Chan</i>	
SibStCNN and TBCNN + kNN-TED: New Models over Tree Structures for Source Code Classification . . . . .	120
<i>Anh Viet Phan, Minh Le Nguyen, and Lam Thu Bui</i>	
A Community Detection Algorithm Based on Local Double Rings and Fireworks Algorithm . . . . .	129
<i>TianRen Ma and Zhengyou Xia</i>	
Cost Sensitive Matrix Factorization for Face Recognition . . . . .	136
<i>Jianwu Wan, Ming Yang, and Hongyuan Wang</i>	
Research of Dengue Fever Prediction in San Juan, Puerto Rico Based on a KNN Regression Model . . . . .	146
<i>Ying Jiang, Guohun Zhu, and Ling Lin</i>	
Identification of Nonlinear System Based on Complex-Valued Flexible Neural Network . . . . .	154
<i>Lina Jia, Wei Zhang, and Bin Yang</i>	
Research on the Method of Splitting Large Class Diagram Based on Multilevel Partitioning. . . . .	163
<i>JinShuai Li, XiaoFei Zhao, and BaoShan Sun</i>	
Ford Motorcar Identification from Single-Camera Side-View Image Based on Convolutional Neural Network. . . . .	173
<i>Shui-Hua Wang, Wen-Juan Jia, and Yu-Dong Zhang</i>	
Predicting Personality Traits of Users in Social Networks. . . . .	181
<i>Zhili Ye, Yang Du, and Li Zhao</i>	
Face Anti-spoofing Algorithm Based on Gray Level Co-occurrence Matrix and Dual Tree Complex Wavelet Transform. . . . .	192
<i>Xiaofeng Qu, Hengjian Li, and Jiwen Dong</i>	
High-Accuracy Deep Convolution Neural Network for Image Super-Resolution. . . . .	201
<i>Wen'an Tan and Xiao Guo</i>	
An Improved Density Peak Clustering Algorithm . . . . .	211
<i>Jian Hou and Xu E</i>	

Consensus-based Parallel Algorithm for Robust Convex Optimization with Scenario Approach in Colored Network . . . . .	222
<i>Fan Feng and Feilong Cao</i>	
Heterogeneous Context-aware Recommendation Algorithm with Semi-supervised Tensor Factorization . . . . .	232
<i>Guoyong Cai and Weidong Gu</i>	
Object Detection with Proposals in High-Resolution Optical Remote Sensing Images . . . . .	242
<i>Huoping Ding, Qinhan Luo, Zhengxia Zou, Cuicui Guo, and Zhenwei Shi</i>	
Towards Spectral-Texture Approach to Hyperspectral Image Analysis for Plant Classification. . . . .	251
<i>Ali AlSuwaidi, Bruce Grieve, and Hujun Yin</i>	
Face Attributes Retrieval by Multi-Label Contractive Hashing . . . . .	261
<i>Xuan Zhao, Xin Jin, and Xiao Guo</i>	
Trajectory Similarity-Based Prediction with Information Fusion for Remaining Useful Life . . . . .	270
<i>Zhongyu Wang, Wang Tang, and Dechang Pi</i>	
Co-clustering with Manifold and Double Sparse Representation . . . . .	279
<i>Fang Li and Sanyuan Zhang</i>	
Artifact Removal Methods in Motor Imagery of EEG . . . . .	287
<i>Yanlong Zhu, Zhongyu Wang, Chenglong Dai, and Dechang Pi</i>	
Clustering by Searching Density Peaks via Local Standard Deviation . . . . .	295
<i>Juanying Xie, Weiliang Jiang, and Lijuan Ding</i>	
Sparse Representation Based on Discriminant Locality Preserving Dictionary Learning for Face Recognition . . . . .	306
<i>Guang Feng, Hengjian Li, Jiwen Dong, and Xi Chen</i>	
Cost-Sensitive Alternating Direction Method of Multipliers for Large-Scale Classification . . . . .	315
<i>Huihui Wang, Yinghuan Shi, Xingguo Chen, and Yang Gao</i>	
Fuzzy 2D-LDA Face Recognition Based on Sub-image . . . . .	326
<i>Xingrui Zhang, Yulian Zhu, and Xiaohong Chen</i>	
Evolving Technical Trading Strategies Using Genetic Algorithms: A Case About Pakistan Stock Exchange . . . . .	335
<i>Basit Tanvir Khan, Noman Javed, Ambreen Hanif, and Muhammad Adil Raja</i>	

A Hybrid Evolutionary Algorithm based on Adaptive Mutation and Crossover for Collaborative Learning Team Formation in Higher Education . . . . .	345
<i>Virginia Yannibelli and Analía Amandi</i>	
Object Recognition Based on Dynamic Random Forests and SURF Descriptor . . . . .	355
<i>Khaoula Jayech and Mohamed Ali Mahjoub</i>	
Reducing Subjectivity in the System Dynamics Modeling Process: An Interdisciplinary Approach . . . . .	365
<i>Jae Un Jung</i>	
The Theory of Modified Rings Game . . . . .	376
<i>Yushuang Wu, Yuhao Lin, Xiaoyu Chen, and Xingguo Chen</i>	
Markov Random Field Based Convolutional Neural Networks for Image Classification . . . . .	387
<i>Yao Peng and Hujun Yin</i>	
Using the Multivariate Normal to Improve Random Projections . . . . .	397
<i>Keegan Kang</i>	
Automatic Motion Segmentation via a Cumulative Kernel Representation and Spectral Clustering . . . . .	406
<i>O.R. Oña-Rocha, O.T. Sánchez-Manosalvas, A.C. Umaquina-Criollo, P.D. Rosero-Montalvo, L.E. Suárez-Zambrano, J.L. Rodríguez-Sotelo, and D.H. Peluffo-Ordóñez</i>	
Generation of Reducts and Threshold Functions and Its Networks for Classification . . . . .	415
<i>Naohiro Ishii, Ippei Torii, Kazunori Iwata, Kazuya Odagiri, and Toyoshiro Nakashima</i>	
Exploring Elitism in Genetic Algorithms for License Plate Recognition with Michigan-Style Classifiers . . . . .	425
<i>Dante Giovanni Sterpin Buitrago and Fernando Martínez Santa</i>	
Comparison Among Physiological Signals for Biometric Identification . . . . .	436
<i>M. Moreno-Revelo, M. Ortega-Adarme, D.H. Peluffo-Ordoñez, K.C. Alvarez-Urbe, and M.A. Becerra</i>	
A Pay as You Use Resource Security Provision Approach Based on Data Graph, Information Graph and Knowledge Graph . . . . .	444
<i>Lixu Shao, Yucong Duan, Lizhen Cui, Quan Zou, and Xiaobing Sun</i>	

An Investment Defined Transaction Processing Towards Temporal and Spatial Optimization with Collaborative Storage and Computation Adaptation . . . . .	452
<i>Yucong Duan, Lixu Shao, Xiaobing Sun, Donghai Zhu, Xiaoxian Yang, and Abdelrahman Osman Elfaki</i>	
Interactive Data Visualization Using Dimensionality Reduction and Dissimilarity-Based Representations . . . . .	461
<i>D.F. Peña-Unigarro, P. Rosero-Montalvo, E.J. Revelo-Fuelagán, J.A. Castro-Silva, J.C. Alvarado-Pérez, R. Therón, C.M. Ortega-Bustamante, and D.H. Peluffo-Ordóñez</i>	
Applying Random Forest to Drive Recommendation . . . . .	470
<i>Le Zhan, Jingwei Zhang, Qing Yang, and Yuming Lin</i>	
Linguistic Truth-Valued Multi-Attribute Decision Making Approach Based on TOPSIS. . . . .	481
<i>Yuanyuan Shi, Li Zou, Yingying Xu, Siyuan Luo, and Jia Meng</i>	
A Comparative Study on Lagrange Ying-Yang Alternation Method in Gaussian Mixture-Based Clustering . . . . .	489
<i>Weijian Long, Shikui Tu, and Lei Xu</i>	
Convolutional Neural Networks for Unsupervised Anomaly Detection in Text Data. . . . .	500
<i>Oleg Gorokhov, Mikhail Petrovskiy, and Igor Mashechkin</i>	
Solving the Bi-criteria Max-Cut Problem with Different Neighborhood Combination Strategies . . . . .	508
<i>Li-Yuan Xue, Rong-Qiang Zeng, Zheng-Yin Hu, and Yi Wen</i>	
Semi-supervised Regularized Discriminant Analysis for EEG-Based BCI System . . . . .	516
<i>Yuhang Xin, Qiang Wu, Qibin Zhao, and Qi Wu</i>	
Predicting Learning Effect by Learner's Behavior in MOOCs. . . . .	524
<i>Ye Tian, Yimin Wen, Xinhe Yi, Xi Yang, and Yuqing Miao</i>	
Standardised Reputation Measurement . . . . .	534
<i>Peter Mitic</i>	
Is a Reputation Time Series White Noise? . . . . .	543
<i>Peter Mitic</i>	
Chaotic Brain Storm Optimization Algorithm . . . . .	551
<i>Eva Tuba, Edin Dolicanin, and Milan Tuba</i>	

Universum Discriminant Canonical Correlation Analysis . . . . .	560
<i>Xiaohong Chen, Hujun Yin, Menglei Hu, and Liping Wang</i>	
Color Image Segmentation by Multilevel Thresholding Based on Harmony Search Algorithm . . . . .	571
<i>Viktor Tuba, Marko Beko, and Milan Tuba</i>	
Finding Sentiment in Noise: Non-linear Relationships Between Sentiment and Financial Markets. . . . .	580
<i>Zeyan Zhao, Stephen Kelly, and Khurshid Ahmad</i>	
Stochastic and Non-Stochastic Feature Selection . . . . .	592
<i>Antonio J. Tallón-Ballesteros, Luís Correia, and Sung-Bae Cho</i>	
Understanding Matching Data Through Their Partial Components. . . . .	599
<i>Pablo Álvarez de Toledo, Fernando Núñez, Carlos Usabiaga, and Antonio J. Tallón-Ballesteros</i>	
<b>Author Index</b> . . . . .	607

Intelligent Data Engineering and Automated Learning –  
IDEAL 2017

18th International Conference, Guilin, China, October  
30 – November 1, 2017, Proceedings

Yin, H.; Gao, Y.; Chen, S.; Wen, Y.; Cai, G.; Gu, T.; Du, J.;  
Tallón-Ballesteros, A.J.; Zhang, M. (Eds.)

2017, XVI, 609 p. 198 illus., Softcover

ISBN: 978-3-319-68934-0