

# Table of Contents – Part III

## Session 3: Algorithms

Centroid Neural Network with Simulated Annealing and Its Application to Color Image Segmentation .....	1
<i>Do-Thanh Sang, Dong-Min Woo, and Dong-Chul Park</i>	
Efficient Non-linear Filter for Impulse Noise Removal in Document Images .....	9
<i>Ali Awad</i>	
Evolving Flexible Beta Operator Neural Trees (FBONT) for Time Series Forecasting .....	17
<i>Souhir Bouaziz, Habib Dhahri, and Adel M. Alimi</i>	
Nonparametric Localized Feature Selection via a Dirichlet Process Mixture of Generalized Dirichlet Distributions .....	25
<i>Wentao Fan and Nizar Bouguila</i>	
Generalized Agglomerative Fuzzy Clustering.....	34
<i>Kiatichai Treerattanapitak and Chuleerat Jaruskulchai</i>	
A Novel Self-Adaptive Clustering Algorithm for Dynamic Data .....	42
<i>Ming Liu, Lei Lin, Lili Shan, and Chengjie Sun</i>	
Impulsive Synchronization of State Delayed Discrete Complex Networks with Switching Topology .....	50
<i>Chaojie Li, David Yang Gao, and Chao Liu</i>	
Salient Instance Selection for Multiple-Instance Learning .....	58
<i>Liming Yuan, Songbo Liu, Qingcheng Huang, Jiafeng Liu, and Xianglong Tang</i>	
Motivating Retail Marketing Efforts under Fairness Concerns in Small-World Networks: A Multi-agent Simulation .....	68
<i>Meng Qingfeng, Du Jianguo, and Li Zhen</i>	
Application of Variational Granularity Language Sets in Interactive Genetic Algorithms .....	76
<i>Dunwei Gong, Jian Chen, Xiaoyan Sun, and Yong Zhang</i>	
Linked PARAFAC/CP Tensor Decomposition and Its Fast Implementation for Multi-block Tensor Analysis .....	84
<i>Tatsuya Yokota, Andrzej Cichocki, and Yukihiro Yamashita</i>	

A Human-Simulated Immune Evolutionary Computation Approach . . . .	92
<i>Gang Xie, Hong-Bo Guo, Yu-Chu Tian, and Maolin Tang</i>	
A STPHD-Based Multi-sensor Fusion Method . . . . .	100
<i>Lu Zhenwei, Zhao Lingling, Su Xiaohong, and Ma Peijun</i>	
Group Sparse Inverse Covariance Selection with a Dual Augmented Lagrangian Method . . . . .	108
<i>Satoshi Hara and Takashi Washio</i>	
Multiple Outlooks Learning with Support Vector Machines . . . . .	116
<i>Yinglu Liu, Xu-Yao Zhang, Kaizhu Huang, Xinwen Hou, and Cheng-Lin Liu</i>	
Multi-Task Learning Using Shared and Task Specific Information . . . . .	125
<i>P.K. Srijith and Shirish Shevade</i>	
Learning Attentive Fusion of Multiple Bayesian Network Classifiers . . . . .	133
<i>Sepehr Eghbali, Majid Nili Ahmadabadi, Babak Nadjar Araabi, and Maryam Mirian</i>	
Multiclass Penalized Likelihood Pattern Classification Algorithm . . . . .	141
<i>Amira Samy Talaat, Amir F. Atiya, Sahar A. Mokhtar, Ahmed Al-Ani, and Magda Fayek</i>	
Self-Organising Maps for Classification with Metropolis-Hastings Algorithm for Supervision . . . . .	149
<i>Piotr Płoński and Krzysztof Zaremba</i>	
Decoupled 2-D DOA Estimation Algorithm Based on Cross-Correlation Matrix for Coherently Distributed Source . . . . .	157
<i>Yinghua Han, Jinkuan Wang, Qiang Zhao, and Peng Han</i>	
Feature Extraction by Nonnegative Tucker Decomposition from EEG Data Including Testing and Training Observations . . . . .	166
<i>Fengyu Cong, Anh Huy Phan, Qibin Zhao, Qiang Wu, Tapani Ristaniemi, and Andrzej Cichocki</i>	
A New Approach for a Priori Client Threshold Estimation in Biometric Signature Recognition Based on Multiple Linear Regression . . . . .	174
<i>Arancho Simon-Hurtado, Esperanza Manso-Martínez, Carlos Vivaracho-Pascual, and Juan M. Pascual-Gaspar</i>	
Deterministic Annealing Multi-Sphere Support Vector Data Description . . . . .	183
<i>Trung Le, Dat Tran, Wanli Ma, and Dharmendra Sharma</i>	
Maximal Margin Approach to Kernel Generalised Learning Vector Quantisation for Brain-Computer Interface . . . . .	191
<i>Trung Le, Dat Tran, Tuan Hoang, and Dharmendra Sharma</i>	

A Basic Study on Particle Swarm Optimization Based on Chaotic Spike Oscillator Dynamics . . . . .	199
<i>Yoshikazu Yamanaka and Tadashi Tsubone</i>	
On the Objective Function and Learning Algorithm for Concurrent Open Node Fault . . . . .	208
<i>Chi Sing Leung, Pui Fai Sum, and Kai-Tat Ng</i>	
Evolutionary Extreme Learning Machine for Ordinal Regression . . . . .	217
<i>David Becerra-Alonso, Mariano Carbonero-Ruz, Francisco José Martínez-Estudillo, and Alfonso Carlos Martínez-Estudillo</i>	
Biclustering and Subspace Learning with Regularization for Financial Risk Analysis . . . . .	228
<i>Bernardete Ribeiro and Ning Chen</i>	
Emotion Understanding in Movie Clips Based on EEG Signal Analysis . . . . .	236
<i>Mingu Kwon and Minho Lee</i>	
A Distributed Q-Learning Approach for Variable Attention to Multiple Critics . . . . .	244
<i>Maryam Tavakol, Majid Nili Ahmadabadi, Maryam Mirian, and Masoud Asadpour</i>	
A Hybrid Approach for Adaptive Car Navigation . . . . .	252
<i>Siamak Barzegar, Maryam Davoudpour, and Alireza Sadeghian</i>	
Low Complexity Classification System for Glove-Based Arabic Sign Language Recognition . . . . .	262
<i>Khaled Assaleh, Tamer Shanableh, and Mohammed Zourob</i>	
Transductive Cartoon Retrieval by Multiple Hypergraph Learning . . . . .	269
<i>Jun Yu, Jun Cheng, Jianmin Wang, and Dacheng Tao</i>	
Adaptive Multiplicative Updates for Projective Nonnegative Matrix Factorization . . . . .	277
<i>He Zhang, Zhirong Yang, and Erkki Oja</i>	
Online Projective Nonnegative Matrix Factorization for Large Datasets . . . . .	285
<i>Zhirong Yang, He Zhang, and Erkki Oja</i>	
Optimization of Fuzzy Systems Using Group-Based Evolutionary Algorithm . . . . .	291
<i>Jyh-Yeong Chang, Ming-Feng Han, and Chin-Teng Lin</i>	

Gabor-Based Novel Local, Shape and Color Features for Image Classification .....	299
<i>Atreyee Sinha, Sugata Banerji, and Chengjun Liu</i>	
A Hybrid KNN-Ant Colony Optimization Algorithm for Prototype Selection .....	307
<i>Amal Miloud-Aouidate and Ahmed Riadh Baba-Ali</i>	
Energy-Efficient Virtual Machine Placement in Data Centers by Genetic Algorithm .....	315
<i>Grant Wu, Maolin Tang, Yu-Chu Tian, and Wei Li</i>	
A Contextual-Bandit Algorithm for Mobile Context-Aware Recommender System .....	324
<i>Djallel Bouneffouf, Amel Bouzeghoub, and Alda Lopes Gançurski</i>	
Multi-source Transfer Learning with Multi-view Adaboost .....	332
<i>Zhijie Xu and Shiliang Sun</i>	
Semi-supervised Multitask Learning via Self-training and Maximum Entropy Discrimination .....	340
<i>Guoqing Chao and Shiliang Sun</i>	
Tracking Property of UMDA in Dynamic Environment by Landscape Framework .....	348
<i>Ran Long, Liangqi Gong, Bo Yuan, Ping Ao, and Qingsheng Ren</i>	
Computation of Joint Spectral Radius for Network Model Associated with Rank-One Matrix Set .....	356
<i>Jun Liu and Mingqing Xiao</i>	
Novelty Detection Using a New Group Outlier Factor .....	364
<i>Amine Chaibi, Mustapha Lebbah, and Hanane Azzag</i>	
Hierarchical K-Means Algorithm for Modeling Visual Area V2 Neurons .....	373
<i>Xiaolin Hu, Peng Qi, and Bo Zhang</i>	
Feature Selection for Unsupervised Learning .....	382
<i>Jyoti Ranjan Adhikary and M. Narasimha Murty</i>	
Recursive Similarity-Based Algorithm for Deep Learning .....	390
<i>Tomasz Maszczyk and Włodzisław Duch</i>	
A Fast Edge-Directed Interpolation Algorithm .....	398
<i>Qichong Tian, Hao Wen, Chenhui Zhou, and Wei Chen</i>	
Real-Valued Constraint Optimization with ICHEA .....	406
<i>Anurag Sharma and Dharmendra Sharma</i>	

Modeling Post-training Memory Transfer in Cerebellar Motor Learning .....	417
<i>Tadashi Yamazaki and Soichi Nagao</i>	
Surface-Based Construction of Curvature Selectivity from the Integration of Local Orientations .....	425
<i>Yasuhiro Hatori and Ko Sakai</i>	
Solving Dynamic Constraint Optimization Problems Using ICHEA ..	434
<i>Anurag Sharma and Dharmendra Sharma</i>	
An Incremental Approach to Solving Dynamic Constraint Satisfaction Problems .....	445
<i>Anurag Sharma and Dharmendra Sharma</i>	
Constrained Multi-objective Optimization Using a Quantum Behaved Particle Swarm .....	456
<i>Heyam Al-Baity, Souham Meshoul, and Ata Kaban</i>	
Learning from Positive and Unlabelled Examples Using Maximum Margin Clustering .....	465
<i>Sneha Chaudhari and Shirish Shevade</i>	
Novel Robust Stability Criteria for Stochastic Hopfield Neural Network with Time-Varying Delays .....	474
<i>Xiaolin Li and Minrui Wang</i>	
RST-DCA. A Dendritic Cell Algorithm Based on Rough Set Theory ..	480
<i>Zeineb Chelly and Zied Elouedi</i>	
A Meta-Learning Approach to Select Meta-Heuristics for the Traveling Salesman Problem Using MLP-Based Label Ranking .....	488
<i>Jorge Kanda, Carlos Soares, Eduardo Hruschka, and Andre de Carvalho</i>	
Modified Particle Swarm Optimization for Pattern Clustering ..	496
<i>Swetha K.P and V. Susheela Devi</i>	
A Weighted Learning Vector Quantization Approach for Interval Data .....	504
<i>Telmo M. Silva Filho and Renata Maria Cardoso R. de Souza</i>	
A Genetic Algorithm Solution for the Operation of Green LTE Networks with Energy and Environment Considerations .....	512
<i>Hakim Ghazzai, Elias Yaacoub, Mohamed Slim Alouini, and Adnan Abu-Dayya</i>	
Robust Hypersurface Fitting Based on Random Sampling Approximations .....	520
<i>Jun Fujiki, Shotaro Akaho, Hideitsu Hino, and Noboru Murata</i>	

Manifold Regularized Multi-Task Learning . . . . .	528
<i>Peipei Yang, Xu-Yao Zhang, Kaizhu Huang, and Cheng-Lin Liu</i>	
Cooperative Behavior Acquisition in Multi-agent Reinforcement Learning System Using Attention Degree . . . . .	537
<i>Kunikazu Kobayashi, Tadashi Kurano, Takashi Kuremoto, and Masanao Obayashi</i>	
Basic Study on Particle Swarm Optimization with Hierarchical Structure for Constrained Optimization Problems . . . . .	545
<i>Kazuki Komori, Kazuhiro Homma, and Tadashi Tsubone</i>	
A New Probabilistic Approach to Independent Component Analysis Suitable for On-Line Learning in Artificial Neural Networks . . . . .	552
<i>Marko V. Jankovic and Neil Rubens</i>	
Immune Algorithm for Bitmap Join Indexes . . . . .	560
<i>Amina Gacem and Kamel Boukhalfa</i>	
Data Driven System Identification Using Evolutionary Algorithms . . . . .	568
<i>Awhan Patnaik, Samrat Dutta, and Laxmidhar Behera</i>	
A Possibilistic Density Based Clustering for Discovering Clusters of Arbitrary Shapes and Densities in High Dimensional Data . . . . .	577
<i>Noha A. Yousri, Mohamed S. Kamel, and Mohamed A. Ismail</i>	
A Knowledge-Driven Bi-clustering Method for Mining Noisy Datasets . . . . .	585
<i>Karima Mouhoubi, Lucas Létocart, and Céline Rouveirol</i>	
Robust Active Learning for Linear Regression via Density Power Divergence . . . . .	594
<i>Yasuhiro Sogawa, Tsuyoshi Ueno, Yoshinobu Kawahara, and Takashi Washio</i>	
Adaptive Probabilistic Policy Reuse . . . . .	603
<i>Yann Chevaleyre and Aydano Machado Pamponet</i>	
Adaptive Classifier Selection in Large-Scale Hierarchical Classification . . . . .	612
<i>Ioannis Partalas, Rohit Babbar, Eric Gaussier, and Cecile Amblard</i>	
An Efficient Algorithm for Anomaly Detection in a Flight System Using Dynamic Bayesian Networks . . . . .	620
<i>Mohamad Saada and Qinggang Meng</i>	
A Novel Road Traffic Sign Detection and Recognition Approach by Introducing CCM and LESH . . . . .	629
<i>Usman Zakir, Asima Usman, and Amir Hussain</i>	

On the Application of Bio-inspired Algorithms in Timetabling Problem .....	637
<i>Daniela Oliveira Francisco and Ivan Nunes da Silva</i>	
A Bio Inspired Estimation of Distribution Algorithm for Global Optimization .....	645
<i>Omar S. Soliman and Aliaa Rassem</i>	
Managing Qualitative Preferences with Constraints .....	653
<i>Eisa Alanazi and Malek Mouhoub</i>	
A Bio Inspired Fuzzy K-Modes Clustering Algorithm .....	663
<i>Omar S. Soliman, Doaa A. Saleh, and Samaa Rashwan</i>	
Evaluating SPAN Incremental Learning for Handwritten Digit Recognition .....	670
<i>Ammar Mohemmed, Guoyu Lu, and Nikola Kasabov</i>	
DPSO Based on Random Particle Priority Value and Decomposition Procedure as a Searching Strategy for the Evacuation Vehicle Routing Problem .....	678
<i>Marina Yusoff, Junaidah Ariffin, and Azlinah Mohamed</i>	
A Quantum-Inspired Evolutionary Algorithm for Optimization Numerical Problems .....	686
<i>Maurizio Fiasché</i>	
Are You a Social Conformer? .....	694
<i>Priyanka Garg, Irwin King, and Michael R. Lyu</i>	
Canonical Duality Theory and Algorithm for Solving Challenging Problems in Network Optimisation .....	702
<i>Ning Ruan and David Yang Gao</i>	
<b>Author Index .....</b>	<b>711</b>