

Contents

Computational Intelligence

Multi-Robot Task Allocation Based on Cloud Ant Colony Algorithm	3
<i>Xu Li, Zhengyan Liu, and Fuxiao Tan</i>	
Firefly Algorithm for Demand Estimation of Water Resources	11
<i>Hui Wang, Zhihua Cui, Wenjun Wang, Xinyu Zhou, Jia Zhao, Li Lv, and Hui Sun</i>	
Using Hidden Markov Model to Predict Human Actions with Swarm Intelligence.	21
<i>Zhicheng Lu, Yuk Ying Chung, Henry Wing Fung Yeung, Seid Miad Zandavi, Weiming Zhi, and Wei-Chang Yeh</i>	
OutIntSys - A Novel Method for the Detection of the Most Intelligent Cooperative Multiagent Systems	31
<i>Sabri Arik, Laszlo-Barna Iantovics, and Sandor-Miklos Szilagyi</i>	
H-PSO-LSTM: Hybrid LSTM Trained by PSO for Online Handwriter Identification	41
<i>Hounaida Moalla, Walid Elloumi, and Adel M. Alimi</i>	
A Randomized Algorithm for Prediction Interval Using RVFL Networks Ensemble.	51
<i>Bara Miskony and Dianhui Wang</i>	
Selection Mechanism in Artificial Bee Colony Algorithm: A Comparative Study on Numerical Benchmark Problems	61
<i>Xinyu Zhou, Hui Wang, Mingwen Wang, and Jianyi Wan</i>	
Adaptive Fireworks Algorithm Based on Two-Master Sub-population and New Selection Strategy	70
<i>Xiguang Li, Shoufei Han, Liang Zhao, and Changqing Gong</i>	
A Novel Osmosis-Inspired Algorithm for Multiobjective Optimization.	80
<i>Corina Rotar, Laszlo Barna Iantovics, and Sabri Arik</i>	
A Memetic Algorithm for Community Detection in Bipartite Networks	89
<i>Xiaodong Wang and Jing Liu</i>	
Complex-Valued Feedforward Neural Networks Learning Without Backpropagation.	100
<i>Wei Guo, He Huang, and Tingwen Huang</i>	

Distributed Recurrent Neural Network Learning via Metropolis-Weights Consensus	108
<i>Najla Slama, Walid Elloumi, and Adel M. Alimi</i>	
Bayesian Curve Fitting Based on RBF Neural Networks	120
<i>Michael Li and Santoso Wibowo</i>	
An Improved Conjugate Gradient Neural Networks Based on a Generalized Armijo Search Method	131
<i>Bingjie Zhang, Tao Gao, Long Li, Zhanquan Sun, and Jian Wang</i>	
Removing Bias from Diverse Data Clusters for Ensemble Classification	140
<i>Sam Fletcher and Brijesh Verma</i>	
An Efficient Algorithm for Complex-Valued Neural Networks Through Training Input Weights	150
<i>Qin Liu, Zhaoyang Sang, Hua Chen, Jian Wang, and Huaqing Zhang</i>	
Feature Selection Using Smooth Gradient $L_{1/2}$ Regularization.	160
<i>Hongmin Gao, Yichen Yang, Bingyin Zhang, Long Li, Huaqing Zhang, and Shujun Wu</i>	
Top- k Merit Weighting PBIL for Optimal Coalition Structure Generation of Smart Grids	171
<i>Sean Hsin-Shyuan Lee, Jeremiah D. Deng, Lizhi Peng, Martin K. Purvis, and Maryam Purvis</i>	
Towards a Brain-Inspired Developmental Neural Network by Adaptive Synaptic Pruning	182
<i>Feifei Zhao, Tielin Zhang, Yi Zeng, and Bo Xu</i>	
Using Word Mover's Distance with Spatial Constraints for Measuring Similarity Between Mongolian Word Images	192
<i>Hongxi Wei, Hui Zhang, Guanglai Gao, and Xiangdong Su</i>	
A Multimodal Vigilance Monitoring System Based on Fuzzy Logic Architecture.	202
<i>Ahmed Snoun, Ines Teyeb, Olfa Jemai, and Mourad Zaied</i>	
Shape-Based Image Retrieval Based on Improved Genetic Programming	212
<i>Ruo Chen Liu, Guan Xia, and Jianxia Li</i>	
An AI-Based Hybrid Forecasting Model for Wind Speed Forecasting	221
<i>Haiyan Lu, Jiani Heng, and Chen Wang</i>	
Parameter Identification for a Class of Nonlinear Systems Based on ESN . . .	231
<i>Xianshuang Yao, Zhanshan Wang, and Huaguang Zhang</i>	

Personalized Web Search Based on Ontological User Profile in Transportation Domain.	239
<i>Omar ElShaweesh, Farookh Khadeer Hussain, Haiyan Lu, Malak Al-Hassan, and Sadegh Kharazmi</i>	
Adaptive Dynamic Programming for Human Postural Balance Control	249
<i>Eric Mauro, Tao Bian, and Zhong-Ping Jiang</i>	
Dynamic Multi Objective Particle Swarm Optimization Based on a New Environment Change Detection Strategy	258
<i>Ahlem Aboud, Raja Fdhila, and Adel M. Alimi</i>	
Multi Objective Particle Swarm Optimization Based Cooperative Agents with Automated Negotiation	269
<i>Najwa Kouka, Raja Fdhila, and Adel M. Alimi</i>	
Emergency Materials Scheduling in Disaster Relief Based on a Memetic Algorithm	279
<i>Yongwei Qin and Jing Liu</i>	
Robot Path Planning Based on A Hybrid Approach.	288
<i>Zhou Jiang and Zhigang Zeng</i>	
A Portable System of Visual Fatigue Evaluation for Stereoscopic Display . . .	296
<i>Yue Bai, Jun-Dong Cho, Ghulam Hussain, and Song-Yun Xie</i>	
A Swarm Optimization-Based Kmedoids Clustering Technique for Extracting Melanoma Cancer Features	307
<i>Amin Khatami, Saeed Mirghasemi, Abbas Khosravi, Chee Peng Lim, Houshyar Asadi, and Saeid Nahavandi</i>	
A Deep Learning-Based Model for Tactile Understanding on Haptic Data Percutaneous Needle Treatment.	317
<i>Amin Khatami, Yonghang Tai, Abbas Khosravi, Lei Wei, Mohsen Moradi Dalvand, Min Zou, and Saeid Nahavandi</i>	
Measuring Word Semantic Similarity Based on Transferred Vectors	326
<i>Changliang Li, Teng Ma, Yujun Zhou, Jian Cheng, and Bo Xu</i>	
Multi-population Based Search Strategy Ensemble Artificial Bee Colony Algorithm with a Novel Resource Allocation Mechanism.	336
<i>Liu Wu, Zhiwei Sun, Kai Zhang, Genghui Li, and Ping Wang</i>	
Grammatical Evolution Using Tree Representation Learning.	346
<i>Shunya Maruta, Yi Zuo, Masahiro Nagao, Hideyuki Sugiura, and Eisuke Kita</i>	

Application of Grammatical Swarm to Symbolic Regression Problem	356
<i>Eisuke Kita, Risako Yamamoto, Hideyuki Sugiura, and Yi Zuo</i>	
Bi-MOCK: A Multi-objective Evolutionary Algorithm for Bi-clustering with Automatic Determination of the Number of Bi-clusters	366
<i>Meriem Bousselmi, Slim Bechikh, Chih-Cheng Hung, and Lamjed Ben Said</i>	
A Transferable Framework: Classification and Visualization of MOOC Discussion Threads	377
<i>Lin Feng, Guochao Liu, Sen Luo, and Shenglan Liu</i>	
A Simple Convolutional Transfer Neural Networks in Vision Tasks	385
<i>Wenlei Wu, Zhaohang Lin, Xinghao Ding, and Yue Huang</i>	
Dissimilarity-Based Sequential Backward Feature Selection Algorithm for Fault Diagnosis	393
<i>Yangtao Xue, Li Zhang, and Bangjun Wang</i>	
Online Chaotic Time Series Prediction Based on Square Root Kalman Filter Extreme Learning Machine	402
<i>Shoubo Feng, Meiling Xu, and Min Han</i>	
Automatic Detection of Epileptic Seizures Based on Entropies and Extreme Learning Machine	410
<i>Xiaolin Cheng, Meiling Xu, and Min Han</i>	
Community Detection in Networks by Using Multiobjective Membrane Algorithm	419
<i>Chuang Liu, Linan Fan, Liangjie Li, Zhou Liu, Xiang Dai, and Wei Gao</i>	
Double-Coding Density Sensitive Hashing	429
<i>Xiaoliang Tang, Xing Wang, Di Jia, Weidong Song, and Xiangfu Meng</i>	
Improving Shape Retrieval by Fusing Generalized Mean First-Passage Time	439
<i>Danchen Zheng, Wangshu Liu, and Hanxing Wang</i>	
Complex-Valued Neural Networks for Wave-Based Realization of Reservoir Computing.	449
<i>Akira Hirose, Seiji Takeda, Toshiyuki Yamane, Daiju Nakano, Shigeru Nakagawa, Ryosho Nakane, and Gouhei Tanaka</i>	
Waveform Classification by Memristive Reservoir Computing	457
<i>Gouhei Tanaka, Ryosho Nakane, Toshiyuki Yamane, Seiji Takeda, Daiju Nakano, Shigeru Nakagawa, and Akira Hirose</i>	

A Preliminary Approach to Semi-supervised Learning in Convolutional Neural Networks Applying “Sleep-Wake” Cycles	466
<i>Mikel Elkan, Humberto Bustince, and Andrew Paplinski</i>	
Deep Reinforcement Learning: From Q-Learning to Deep Q-Learning	475
<i>Fuxiao Tan, Pengfei Yan, and Xinpeng Guan</i>	
Origami Folding Sequence Generation Using Discrete Particle Swarm Optimization	484
<i>Ha-Duong Bui, Sungmoon Jeong, Nak Young Chong, and Matthew Mason</i>	
CACO-LD: Parallel Continuous Ant Colony Optimization with Linear Decrease Strategy for Solving CNOP	494
<i>Shijin Yuan, Yunyi Chen, and Bin Mu</i>	
New Decrease-and-Conquer Strategies for the Dynamic Genetic Algorithm for Server Consolidation	504
<i>Chanipa Sonklin, Maolin Tang, and Yu-Chu Tian</i>	
Feature Extraction for the Identification of Two-Class Mechanical Stability Test of Natural Rubber Latex.	513
<i>Weng Kin Lai, Kee Sum Chan, Chee Seng Chan, Kam Meng Goh, and Jee Keen Raymond Wong</i>	
Neural Data Analysis	
Evolutionary Modularity Optimization Clustering of Neuronal Spike Trains . . .	525
<i>Chaojie Yu, Yuquan Zhu, Yuqing Song, and Hu Lu</i>	
Identifying Gender Differences in Multimodal Emotion Recognition Using Bimodal Deep AutoEncoder	533
<i>Xue Yan, Wei-Long Zheng, Wei Liu, and Bao-Liang Lu</i>	
EEG-Based Sleep Quality Evaluation with Deep Transfer Learning	543
<i>Xing-Zan Zhang, Wei-Long Zheng, and Bao-Liang Lu</i>	
A Stochastic Neural Firing Generated at a Hopf Bifurcation and Its Biological Relevance	553
<i>Huijie Shang, Rongbin Xu, Dong Wang, Jin Zhou, and Shiyuan Han</i>	
Functional Connectivity Analysis of EEG in AD Patients with Normalized Permutation Index.	563
<i>Lihui Cai, Jiang Wang, Ruofan Wang, Bin Deng, Haitao Yu, and Xile Wei</i>	

Emotion Annotation Using Hierarchical Aligned Cluster Analysis	572
<i>Wei-Ye Zhao, Sheng Fang, Ting Ji, Qian Ji, Wei-Long Zheng, and Bao-Liang Lu</i>	
Identify Non-fatigue State to Fatigue State Using Causality Measure During Game Play	581
<i>Yuying Zhu, Yi-Ning Wu, Hui Su, Sanqing Hu, Tong Cao, Jianhai Zhang, and Yu Cao</i>	
A Graph Theory Analysis on Distinguishing EEG-Based Brain Death and Coma	589
<i>Gaochao Cui, Li Zhu, Qibin Zhao, Jianting Cao, and Andrzej Cichocki</i>	
EEG Comparison Between Normal and Developmental Disorder in Perception and Imitation of Facial Expressions with the NeuCube	596
<i>Yuma Omori, Hideaki Kawano, Akinori Seo, Zohreh Gholami Doborjeh, Nikola Kasabov, and Maryam Gholami Doborjeh</i>	
Testing and Understanding Second-Order Statistics of Spike Patterns Using Spike Shuffling Methods	602
<i>Zedong Bi and Changsong Zhou</i>	
Self-connection of Thalamic Reticular Nucleus Modulating Absence Seizures	613
<i>Daqing Guo, Mingming Chen, Yang Xia, and Dezhong Yao</i>	
Learning a Continuous Attractor Neural Network from Real Images	622
<i>Xiaolong Zou, Zilong Ji, Xiao Liu, Yuanyuan Mi, K.Y. Michael Wong, and Si Wu</i>	
Active Prediction in Dynamical Systems	632
<i>Chun-Chung Chen, Kevin Sean Chen, and C.K. Chan</i>	
A Biophysical Model of the Early Olfactory System of Honeybees	639
<i>Ho Ka Chan and Thomas Nowotny</i>	
The Dynamics of Bimodular Continuous Attractor Neural Networks with Moving Stimuli	648
<i>Min Yan, Wen-Hao Zhang, He Wang, and K.Y. Michael Wong</i>	
Encoding Multisensory Information in Modular Neural Networks	658
<i>He Wang, Wen-Hao Zhang, K.Y. Michael Wong, and Si Wu</i>	

Biomedical Engineering

Using Transfer Learning with Convolutional Neural Networks to Diagnose Breast Cancer from Histopathological Images	669
<i>Weiming Zhi, Henry Wing Fung Yueng, Zhenghao Chen, Seid Miad Zandavi, Zhicheng Lu, and Yuk Ying Chung</i>	
Real-Time Prediction of the Unobserved States in Dopamine Neurons on a Reconfigurable FPGA Platform	677
<i>Shuangming Yang, Jiang Wang, Bin Deng, Xile Wei, Lihui Cai, Huiyan Li, and Ruofan Wang</i>	
A Subject-Specific EMG-Driven Musculoskeletal Model for the Estimation of Moments in Ankle Plantar-Dorsiflexion Movement	685
<i>Congsheng Zhang, Qingsong Ai, Wei Meng, and Jiwei Hu</i>	
Real-Time Scalp-Hemodynamics Artifact Reduction Using a Sliding-Window General Linear Model: A Functional Near-Infrared Spectroscopy Study	694
<i>Yuta Oda, Takanori Sato, Isao Nambu, and Yasuhiro Wada</i>	
Liver Segmentation and 3D Modeling Based on Multilayer Spiral CT Image.	702
<i>Yanhua Liang and Yongxiong Sun</i>	
Deep Retinal Image Segmentation: A FCN-Based Architecture with Short and Long Skip Connections for Retinal Image Segmentation	713
<i>Zhongwei Feng, Jie Yang, Lixiu Yao, Yu Qiao, Qi Yu, and Xun Xu</i>	
Computer-Aided Diagnosis in Chest Radiography with Deep Multi-Instance Learning	723
<i>Kang Qu, Xiangfei Chai, Tianjiao Liu, Yadong Zhang, Biao Leng, and Zhang Xiong</i>	
A Hybrid Model: DGnet-SVM for the Classification of Pulmonary Nodules . . .	732
<i>Yixuan Xu, Guokai Zhang, Yuan Li, Ye Luo, and Jianwei Lu</i>	
Deep Learning Features for Lung Adenocarcinoma Classification with Tissue Pathology Images.	742
<i>Jia He, Lin Shang, Hong Ji, and XiuLing Zhang</i>	
The Analysis and Classify of Sleep Stage Using Deep Learning Network from Single-Channel EEG Signal	752
<i>Songyun Xie, Yabing Li, Xinzhou Xie, Wei Wang, and Xu Duan</i>	
Thin-Cap Fibroatheroma Detection with Deep Neural Networks	759
<i>Tae Joon Jun, Soo-Jin Kang, June-Goo Lee, Jihoon Kweon, Wonjun Na, Daeyoun Kang, Dohyeun Kim, Daeyoung Kim, and Young-hak Kim</i>	

Generalization of Local Temporal Correlation Common Spatial Patterns Using Lp-norm ($0 < p < 2$)	769
<i>Na Fang and Haixian Wang</i>	
fNIRS Approach to Pain Assessment for Non-verbal Patients	778
<i>Raul Fernandez Rojas, Xu Huang, Julio Romero, and Keng-Liang Ou</i>	
Tinnitus EEG Classification Based on Multi-frequency Bands.	788
<i>Shao-Ju Wang, Yue-Xin Cai, Zhi-Ran Sun, Chang-Dong Wang, and Yi-Qing Zheng</i>	
Deep Neural Network with l2-Norm Unit for Brain Lesions Detection.	798
<i>Mina Rezaei, Haojin Yang, and Christoph Meinel</i>	
Emotion and Bayesian Networks	
Multimodal Emotion Recognition Using Deep Neural Networks	811
<i>Hao Tang, Wei Liu, Wei-Long Zheng, and Bao-Liang Lu</i>	
Investigating Gender Differences of Brain Areas in Emotion Recognition Using LSTM Neural Network.	820
<i>Xue Yan, Wei-Long Zheng, Wei Liu, and Bao-Liang Lu</i>	
Can Eye Movement Improve Prediction Performance on Human Emotions Toward Images Classification?	830
<i>Kitsuchart Pasupa, Wisuwat Sunhem, Chu Kiong Loo, and Yoshimitsu Kuroki</i>	
Effect of Parameter Tuning at Distinguishing Between Real and Posed Smiles from Observers' Physiological Features	839
<i>Md Zakir Hossain and Tom Gedeon</i>	
Brain Effective Connectivity Analysis from EEG for Positive and Negative Emotion	851
<i>Jianhai Zhang, Shaokai Zhao, Wenhao Huang, and Sanqing Hu</i>	
Efficient Human Stress Detection System Based on Frontal Alpha Asymmetry.	858
<i>Asma Baghdadi, Yassine Aribi, and Adel M. Alimi</i>	
A Pattern-Based Bayesian Classifier for Data Stream.	868
<i>Jidong Yuan, Zhihai Wang, Yange Sun, Wei Zhang, and Jingjing Jiang</i>	
A Hierarchical Mixture Density Network	878
<i>Fan Yang, Jaymar Soriano, Takatomi Kubo, and Kazushi Ikeda</i>	
A New Bayesian Method for Jointly Sparse Signal Recovery	886
<i>Haiyan Yang, Xiaolin Huang, Cheng Peng, Jie Yang, and Li Li</i>	
Author Index	895

Neural Information Processing

24th International Conference, ICONIP 2017,

Guangzhou, China, November 14–18, 2017,

Proceedings, Part IV

Liu, D.; Xie, S.; Li, Y.; Zhao, D.; El-Alfy, E.-S.M. (Eds.)

2017, XVIII, 898 p. 326 illus., Softcover

ISBN: 978-3-319-70092-2