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Preface

ICONIP 2017 – the 24th International Conference on Neural Information Processing – was held in Guangzhou, China, continuing the ICONIP conference series, which started in 1994 in Seoul, South Korea. Over the past 24 years, ICONIP has been held in Australia, China, India, Japan, Korea, Malaysia, New Zealand, Qatar, Singapore, Thailand, and Turkey. ICONIP has now become a well-established, popular and high-quality conference series on neural information processing in the region and around the world. With the growing popularity of neural networks in recent years, we have witnessed an increase in the number of submissions and in the quality of papers. Guangzhou, Romanized as Canton in the past, is the capital and largest city of southern China's Guangdong Province. It is also one of the five National Central Cities at the core of the Pearl River Delta. It is a key national transportation hub and trading port. November is the best month in the year to visit Guangzhou with comfortable weather. All participants of ICONIP 2017 had a technically rewarding experience as well as a memorable stay in this great city.

A neural network is an information processing structure inspired by biological nervous systems, such as the brain. It consists of a large number of highly interconnected processing elements, called neurons. It has the capability of learning from example. The field of neural networks has evolved rapidly in recent years. It has become a fusion of a number of research areas in engineering, computer science, mathematics, artificial intelligence, operations research, systems theory, biology, and neuroscience. Neural networks have been widely applied for control, optimization, pattern recognition, image processing, signal processing, etc.

ICONIP 2017 aimed to provide a high-level international forum for scientists, researchers, educators, industrial professionals, and students worldwide to present state-of-the-art research results, address new challenges, and discuss trends in neural information processing and applications. ICONIP 2017 invited scholars in all areas of neural network theory and applications, computational neuroscience, machine learning, and others.

The conference received 856 submissions from 3,255 authors in 56 countries and regions across all six continents. Based on rigorous reviews by the Program Committee members and reviewers, 563 high-quality papers were selected for publication in the conference proceedings. We would like to express our sincere gratitude to all the reviewers for the time and effort they generously gave to the conference. We are very grateful to the Institute of Automation of the Chinese Academy of Sciences, Guangdong University of Technology, South China University of Technology, Springer's *Lecture Notes in Computer Science* (LNCS), *IEEE/CAA Journal of Automatica Sinica* (JAS), and the Asia Pacific Neural Network Society (APNNS) for their financial support. We would also like to thank the publisher, Springer, for their cooperation in

publishing the proceedings in the prestigious LNCS series and for sponsoring the best paper awards at ICONIP 2017.

September 2017

Derong Liu
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Contents

Machine Learning

Improving Generalization Capability of Extreme Learning Machine with Synthetic Instances Generation	3
<i>Wei Ao, Yulin He, Joshua Zhexue Huang, and Yupeng He</i>	
Adaptive L_p ($0 < p < 1$) Regularization: Oracle Property and Applications . . .	13
<i>Yunxiao Shi, Xiangnan He, Han Wu, Zhong-Xiao Jin, and Wenlian Lu</i>	
Fuzzy Self-Organizing Incremental Neural Network for Fuzzy Clustering. . . .	24
<i>Tianyue Zhang, Baile Xu, and Furao Shen</i>	
Stochastic Online Kernel Selection with Instantaneous Loss in Random Feature Space.	33
<i>Zhizhuo Han and Shizhong Liao</i>	
Topology Learning Embedding: A Fast and Incremental Method for Manifold Learning	43
<i>Tao Zhu, Furao Shen, Jinxi Zhao, and Yu Liang</i>	
Hybrid RVM Algorithm Based on the Prediction Variance.	53
<i>Fang Liu, Fei Zhao, Mi Tong, Yan Yang, and Zhenhao Yu</i>	
Quality Control for Crowdsourced Multi-label Classification Using RAKEL . . .	64
<i>Kosuke Yoshimura, Yukino Baba, and Hisashi Kashima</i>	
A Self-adaptive Growing Method for Training Compact RBF Networks	74
<i>Baile Xu, Furao Shen, Jinxi Zhao, and Tianyue Zhang</i>	
Incremental Extreme Learning Machine via Fast Random Search Method . . .	82
<i>Zhihui Lao, Zhiheng Zhou, and Junchu Huang</i>	
Learning of Phase-Amplitude-Type Complex-Valued Neural Networks with Application to Signal Coherence	91
<i>Rongrong Wu, He Huang, and Tingwen Huang</i>	
Application of Instruction-Based Behavior Explanation to a Reinforcement Learning Agent with Changing Policy	100
<i>Yosuke Fukuchi, Masahiko Osawa, Hiroshi Yamakawa, and Michita Imai</i>	
Using Flexible Neural Trees to Seed Backpropagation.	109
<i>Peng Wu and Jeff Orchard</i>	

Joint Neighborhood Subgraphs Link Prediction.	117
<i>Dinh Tran-Van, Alessandro Sperduti, and Fabrizio Costa</i>	
Multimodal Fusion with Global and Local Features for Text Classification. . .	124
<i>Cheng Xu, Yue Wu, and Zongtian Liu</i>	
Learning Deep Neural Network Based Kernel Functions for Small Sample Size Classification	135
<i>Tieran Zheng, Jiqing Han, and Guibin Zheng</i>	
Relation Classification via CNN, Segmented Max-pooling, and SDP-BLSTM	144
<i>Pengfei Wang, Zhipeng Xie, and Junfeng Hu</i>	
Binary Stochastic Representations for Large Multi-class Classification	155
<i>Thomas Gerald, Nicolas Baskiotis, and Ludovic Denoyer</i>	
Solving the Local-Minimum Problem in Training Deep Learning Machines . . .	166
<i>James Ting-Ho Lo, Yichuan Gui, and Yun Peng</i>	
The Sample Selection Model Based on Improved Autoencoder for the Online Questionnaire Investigation	175
<i>Yijie Pang, Shaochun Wu, and Honghao Zhu</i>	
Hybrid Collaborative Recommendation via Semi-AutoEncoder	185
<i>Shuai Zhang, Lina Yao, Xiwei Xu, Sen Wang, and Liming Zhu</i>	
Time Series Classification with Deep Neural Networks Based on Hurst Exponent Analysis	194
<i>Xinjuan Li, Jie Yu, Lingyu Xu, and Gaowei Zhang</i>	
Deep Learning Model for Sentiment Analysis in Multi-lingual Corpus.	205
<i>Lisa Medrouk and Anna Pappa</i>	
Differential Evolution Memetic Document Clustering Using Chaotic Logistic Local Search	213
<i>Ibraheem Al-Jadir, Kok Wai Wong, Chun Che Fung, and Hong Xie</i>	
Completion of High Order Tensor Data with Missing Entries via Tensor-Train Decomposition	222
<i>Longhao Yuan, Qibin Zhao, and Jianting Cao</i>	
GASOM: Genetic Algorithm Assisted Architecture Learning in Self Organizing Maps	230
<i>Ashutosh Saboo, Anant Sharma, and Tirtharaj Dash</i>	

A Nonnegative Projection Based Algorithm for Low-Rank Nonnegative Matrix Approximation	240
<i>Peitao Wang, Zhaoshui He, Kan Xie, Junbin Gao, and Michael Antolovich</i>	
Multi-view Label Space Dimension Reduction	248
<i>Qi Hu, Pengfei Zhu, Changqing Zhang, and Qinghua Hu</i>	
Large-Margin Supervised Hashing.	259
<i>Xiaopeng Zhang, Hui Zhang, Yong Chen, and Xianglong Liu</i>	
Three-Dimensional Surface Feature for Hyperspectral Imagery Classification	270
<i>Sen Jia, Kuilin Wu, Meng Zhang, and Jie Hu</i>	
Stochastic Sequential Minimal Optimization for Large-Scale Linear SVM . . .	279
<i>Shili Peng, Qinghua Hu, Jianwu Dang, and Zhichao Peng</i>	
Robust Kernel Approximation for Classification	289
<i>Fanghui Liu, Xiaolin Huang, Cheng Peng, Jie Yang, and Nikola Kasabov</i>	
A Multiobjective Multiclass Support Vector Machine Restricting Classifier Candidates Based on k-Means Clustering.	297
<i>Keiji Tatsumi, Yuki Kawashita, and Takahumi Sugimoto</i>	
Multi-label Learning with Label-Specific Feature Selection.	305
<i>Yan Yan, Shining Li, Zhe Yang, Xiao Zhang, Jing Li, Anyi Wang, and Jingyu Zhang</i>	
Neural Networks for Efficient Nonlinear Online Clustering	316
<i>Yanis Bahroun, Eugénie Hunsicker, and Andrea Soltoggio</i>	
Multiple Scale Canonical Correlation Analysis Networks for Two-View Object Recognition.	325
<i>Xinghao Yang and Weifeng Liu</i>	
A Novel Newton-Type Algorithm for Nonnegative Matrix Factorization with Alpha-Divergence	335
<i>Satoshi Nakatsu and Norikazu Takahashi</i>	
Iterative Local Hyperlinear Learning Based Relief for Feature Weight Estimation.	345
<i>Xiaojuan Huang, Li Zhang, Bangjun Wang, Zhao Zhang, and Fanzhang Li</i>	
Projected Kernel Recursive Least Squares Algorithm.	356
<i>Ji Zhao and Hongbin Zhang</i>	

Resource Allocation and Optimization Based on Queuing Theory and BP Network	366
<i>Hong Tang, Delu Zeng, Xin Liu, Jiabin Huang, and Yinghao Liao</i>	
Linear Dimensionality Reduction for Time Series	375
<i>Nikolaos Gianniotis</i>	
An Effective Martin Kernel for Time Series Classification	384
<i>Liangang Zhang, Yang Li, and Huanhuan Chen</i>	
Text Classification Using Lifelong Machine Learning	394
<i>Muhammad Hassan Arif, Xin Jin, Jianxin Li, and Muhammad Iqbal</i>	
Wake-Sleep Variational Autoencoders for Language Modeling	405
<i>Xiaoyu Shen, Hui Su, Shuzi Niu, and Dietrich Klakow</i>	
Educational and Non-educational Text Classification Based on Deep Gaussian Processes.	415
<i>Huijuan Wang, Jing Zhao, Zeheng Tang, and Shiliang Sun</i>	
A Generalized I-ELM Algorithm for Handling Node Noise in Single-Hidden Layer Feedforward Networks.	424
<i>Hiu Tung Wong, Chi-Sing Leung, and Sam Kwong</i>	
Locality-Sensitive Term Weighting for Short Text Clustering	434
<i>Chu-Tao Zheng, Sheng Qian, Wen-Ming Cao, and Hau-San Wong</i>	
A Comparison of Supervised Machine Learning Algorithms for Classification of Communications Network Traffic	445
<i>Pramitha Perera, Yu-Chu Tian, Colin Fidge, and Wayne Kelly</i>	
Emotion Classification from Electroencephalogram Using Fuzzy Support Vector Machine	455
<i>Anuchin Chatchinarat, Kok Wai Wong, and Chun Che Fung</i>	
Regularized Multi-source Matrix Factorization for Diagnosis of Alzheimer's Disease	463
<i>Xiaofan Que, Yazhou Ren, Jiayu Zhou, and Zenglin Xu</i>	
Multi-roles Graph Based Extractive Summarization	474
<i>Zhibin Chen, Yunming Ye, Xiaofei Xu, and Feng Li</i>	
Self-advised Incremental One-Class Support Vector Machines: An Application in Structural Health Monitoring	484
<i>Ali Anaissi, Nguyen Lu Dang Khoa, Thierry Rakotoarivelo, Mehri Makki Alamdari, and Yang Wang</i>	
Incremental Self-Organizing Maps for Collaborative Clustering.	497
<i>Denis Maurel, Jérémie Sublime, and Sylvain Lefebvre</i>	

Efficient Neighborhood Covering Reduction with Submodular Function Optimization	505
<i>Qiang Chen, Xiaodong Yue, Jie Zhou, and Yufei Chen</i>	
Online Hidden Conditional Random Fields to Recognize Activity-Driven Behavior Using Adaptive Resilient Gradient Learning	515
<i>Ahmad Shahi, Jeremiah D. Deng, and Brendon J. Woodford</i>	
Atomic Distance Kernel for Material Property Prediction	526
<i>Hiroataka Akita, Yukino Baba, Hisashi Kashima, and Atsuto Seko</i>	
Batch Process Fault Monitoring Based on LPGD-kNN and Its Applications in Semiconductor Industry.	534
<i>Ting Li, Dongsheng Yang, Qinglai Wei, and Huaguang Zhang</i>	
Large Scale Image Classification Based on CNN and Parallel SVM	545
<i>Zhanquan Sun, Feng Li, and Huifen Huang</i>	
Malware Detection Using Deep Transferred Generative Adversarial Networks	556
<i>Jin-Young Kim, Seok-Jun Bu, and Sung-Bae Cho</i>	
A Grassmannian Approach to Zero-Shot Learning for Network Intrusion Detection	565
<i>Jorge Rivero, Bernardete Ribeiro, Ning Chen, and Fátima Silva Leite</i>	
Selective Ensemble Random Neural Networks Based on Adaptive Selection Scope of Input Weights and Biases for Building Soft Measuring Model.	576
<i>Jian Tang, Junfei Qiao, Zhiwei Wu, Jian Zhang, and Aijun Yan</i>	
Semi-supervised Coefficient-Based Distance Metric Learning	586
<i>Zhangcheng Wang, Ya Li, and Xinmei Tian</i>	
Improving Hashing by Leveraging Multiple Layers of Deep Networks.	597
<i>Xin Luo, Zhen-Duo Chen, Gao-Yuan Du, and Xin-Shun Xu</i>	
Accumulator Based Arbitration Model for both Supervised and Reinforcement Learning Inspired by Prefrontal Cortex.	608
<i>Masahiko Osawa, Yuta Ashihara, Takuma Seno, Michita Imai, and Satoshi Kurihara</i>	
Energy-Balanced Distributed Sparse Kernel Machine in Wireless Sensor Network	618
<i>Xinrong Ji, Yibin Hou, Cuiqin Hou, Fang Gao, and Shulong Wang</i>	
A Hybrid Evolutionary Algorithm for Protein Structure Prediction Using the Face-Centered Cubic Lattice Model	628
<i>Daniel Varela and José Santos</i>	

Simulation Study of Physical Reservoir Computing by Nonlinear Deterministic Time Series Analysis	639
<i>Toshiyuki Yamane, Seiji Takeda, Daiju Nakano, Gouhei Tanaka, Ryosho Nakane, Akira Hirose, and Shigeru Nakagawa</i>	
Targets Detection Based on the Prejudging and Prediction Mechanism	648
<i>Xuemei Sun, Jianrong Cao, Chengdong Li, Ya Tian, and Shusheng Zhao</i>	
An Image Quality Evaluation Method Based on Joint Deep Learning	658
<i>Jiachen Yang, Bin Jiang, Yinghao Zhu, Chunqi Ji, and Wen Lu</i>	
Generic Pixel Level Object Tracker Using Bi-Channel Fully Convolutional Network	666
<i>Zijing Chen, Jun Li, Zhe Chen, and Xinge You</i>	
RBNNet: A Deep Neural Network for Unified Road and Road Boundary Detection.	677
<i>Zhe Chen and Zijing Chen</i>	
Semi-supervised Multi-label Linear Discriminant Analysis	688
<i>Yanming Yu, Guoxian Yu, Xia Chen, and Yazhou Ren</i>	
Field Support Vector Regression.	699
<i>Haochuan Jiang, Kaizhu Huang, and Rui Zhang</i>	
Deep Mixtures of Factor Analyzers with Common Loadings: A Novel Deep Generative Approach to Clustering.	709
<i>Xi Yang, Kaizhu Huang, and Rui Zhang</i>	
Improve Deep Learning with Unsupervised Objective	720
<i>Shufei Zhang, Kaizhu Huang, Rui Zhang, and Amir Hussain</i>	
Reinforcement Learning	
Adaptive Dynamic Programming for Direct Current Servo Motor	731
<i>Liao Zhu, Ruizhuo Song, Yulong Xie, and Junsong Li</i>	
An Event-Triggered Heuristic Dynamic Programming Algorithm for Discrete-Time Nonlinear Systems.	741
<i>Ziyang Wang, Qinglai Wei, and Derong Liu</i>	
Implicit Incremental Natural Actor Critic	749
<i>Ryo Iwaki and Minoru Asada</i>	
Influence of the Chaotic Property on Reinforcement Learning Using a Chaotic Neural Network.	759
<i>Yuki Goto and Katsunari Shibata</i>	

Average Reward Reinforcement Learning for Semi-Markov Decision Processes	768
<i>Jiayuan Yang, Yanjie Li, Haoyao Chen, and Jiangang Li</i>	
Neuro-control of Nonlinear Systems with Unknown Input Constraints	778
<i>Bo Zhao, Xinliang Liu, Derong Liu, and Yuanchun Li</i>	
Average Reward Optimization with Multiple Discounting Reinforcement Learners	789
<i>Chris Reinke, Eiji Uchibe, and Kenji Doya</i>	
Finite Horizon Optimal Tracking Control for Nonlinear Discrete-Time Switched Systems	801
<i>Chunbin Qin, Xianxing Liu, Guoquan Liu, Jun Wang, and Dehua Zhang</i>	
Large-Scale Bandit Approaches for Recommender Systems	811
<i>Qian Zhou, XiaoFang Zhang, Jin Xu, and Bin Liang</i>	
Off-Policy Reinforcement Learning for Partially Unknown Nonzero-Sum Games	822
<i>Qichao Zhang, Dongbin Zhao, and Sibao Zhang</i>	
Consensus Based Distributed Reinforcement Learning for Nonconvex Economic Power Dispatch in Microgrids	831
<i>Fangyuan Li, Jiahui Qin, Yu Kang, and Wei Xing Zheng</i>	
FMR-GA – A Cooperative Multi-agent Reinforcement Learning Algorithm Based on Gradient Ascent	840
<i>Zhen Zhang, Dongqing Wang, Dongbin Zhao, and Tingting Song</i>	
Policy Gradient Reinforcement Learning for I/O Reordering on Storage Servers	849
<i>Kumar Dheenadayalan, Gopalakrishnan Srinivasaraghavan, and V.N. Muralidhara</i>	
Big Data Analysis	
Profile-Based Ant Colony Optimization for Energy-Efficient Virtual Machine Placement	863
<i>Fares Alharbi, Yu-Chu Tian, Maolin Tang, and Md Hasanul Ferdous</i>	
An Iterative Model for Predicting Film Attendance	872
<i>Yang Yue, Ying Li, Tong Jia, and Zhonghai Wu</i>	
Estimating VNF Resource Requirements Using Machine Learning Techniques	883
<i>Houda Jmila, Mohamed Ibn Khedher, and Mounim A. El Yacoubi</i>	

Accelerating Core Decomposition in Large Temporal Networks
Using GPUs 893
Heng Zhang, Haibo Hou, Libo Zhang, Hongjun Zhang, and Yanjun Wu

Pulsar Bayesian Model: A Comprehensive Astronomical Data
Fitting Model 904
Hang Yu, Qian Yin, and Ping Guo

Assessing the Performance of Deep Learning Algorithms
for Newsvendor Problem 912
Yanfei Zhang and Junbin Gao

A Small Scale Multi-Column Network for Aesthetic Classification
Based on Multiple Attributes 922
Chaoqun Wan and Xinmei Tian

Author Index 933