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Track 04. *Optical and Broadband and Communications*

Chair: *Lon Wang* (Nat'l Taiwan University, Taiwan, China)

Co-Chairs:

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Ricky Keang-Po Ho (Nat'l Taiwan University, Taiwan, China)

Ping Shum (NTU, Singapore)

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 School of Information Technology and Computer Science University of Wollongong,
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 Key Lab of Broadband Optical Fiber Transmission and Communication Networks, University
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Yang Huichun, Zhang Wentao, Jiang Xing

Department of Communication and Information, Guilin University of Electronic and Technology, 541004, Guangxi

- OBC-12 (#04_04_05): Theoretical Analysis of Microwave Photonic Filter with Optical Spectrum Shaping** 1897
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National Electronic Warfare Laboratory of China Electronic Technology Group Corporation, No. 29 Research Institute, Chengdu, Sichuan, China
- OBC-13 (#04_04_06): The Implementation of PPM in Underwater Laser Communication System** 1901
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Department of Communication and Information Engineering Guilin University of Electronic Technology (GUET) Guilin 541004, China
- OBC-14 (#04_04_08): Multilevel Photon Communication with Binary Pulse Position Modulation** 1904
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Department of Information Engineering Faculty of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, THAILAND
- OBC-15 (#04_05_01): Oblivious Routing Algorithm under Hose Model for WDM Mesh Network** 1908
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Key Laboratory of Broadband Optical Fiber Transmission and Communication Networks University of Electronic Science and Technology of China Chengdu, 610054, P. R. China
- OBC-16 (#04_05_03): Traffic Grooming Algorithm for Multicast Sessions in WDM Optical Networks** 1913
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Key Lab of Broadband Optical Transmission and Communication Networks, University of Electronic Science and Technology of China Chengdu, Sichuan, China, 610054
- OBC-18 (#04_05_06): The Design and Deployment of 40Gbit/s Experimental Network** 1923
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Broadband Network Tech. Lab Chunghwa Telecommunication Laboratories Taoyuan, Taiwan
- OBC-19 (#04_05_07): Traffic Lifetime-Aware Routing Based on Grooming Policy in a WDM Network** 1928
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Department of Electrical and Computer Engineering, National University of Singapore, Singapore
- OBC-20 (#04_07_01): Behavior Model and Experimental Research of Monolithic CMOS Compatible Photodetector and Preamplifier** 1933
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State Key Laboratory on Integrated Optoelectronics Chinese Academy of Sciences Beijing, China
- OBC-21 (#04_07_02): 5.2GHz CMOS Narrow-Band Optical Receiver for Radio-Over-Fiber** 1937
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Wang Yifeng, Yuan Kejian, Liu Yongzhi, Liu Shuang

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China Chengdu, China, 610054

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Province, China
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School of Opt-Electronic Information University of Electronic Science and Technology of
China Chengdu, 610054, China
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National Normal University No. 88, Sec 4, Ting-Chou Rd. Taipei, Taiwan, 116
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Mingsong Chen, Shengyuan Zhou, Faliang Ao
Dept. of Communications and Information Engineering, Guilin University of Electronic Technology, Guilin, 541004, China
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Huajun Yang, Yu Hu, Chenghong Li, Kang Xie, Jin Fu, Hu Wei
University of Electronic Science & Technology of China (PC: 610054)
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Huajun Yang, Yu Hu, Qi Qiu, Chenghong Li, Kang Xie, Lingying Yang
University of Electronic Science and Technology of China Chengdu, China, PC: 610054

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Fei Zeng, and Jianping Yao

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Engineering University of Ottawa, Ottawa, Ontario, Canada

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NNCI-01 (#07_01_03): Study on the Identification of Loading Materials for Initiating Explosive Device 2030

Yong Wang, Jianfu Li

Department of Computer Chongqing Education College Chongqing, 400067, China

**NNCI-02 (#07_01_05): Research on FNN Energy Saving Control for Light Load Oil Well with Intermittent Oil
Extraction** 2034

DING Bao, TANG Hai-yan, QI Wei-gui

School of Electrical Engineering and Automation Harbin Institute of Technology Harbin,
China

**NNCI-03 (#07_01_10): Automated Fault Detection and Diagnosis for an Air Handling Unit Based on a
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Yonghong Huang and Nianping Li, Yonghong Huang and Yangchun Shi

College of Civil Engineering Hunan University Changsha, Hunan Province, 410082, China

**NNCI-04 (#07_01_11): Hopf Bifurcation Analysis on a Tabu Learning Single Neuron Model in the Frequency
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Xiaobing Zhou, Yue Wu, Yi Li, Yalan Ye

School of Computer Science and Engineering, University of Electronic Science and
Technology of China, Chengdu, 610054, China

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Diagnosis of Heart Diseases** 2046

Jun Zheng, Yingtao Jiang, Hongmei Yan

Department of Computer Science Queens College-CUNY Flushing, NY 11367, USA

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Hangjun Wang, Luming Fang

School of Information Science and Technology, Zhejiang Forestry University, Lin'an
311300, China

- NNCI-07 (#07_01_15): A Kalman Filter Based PID Controller for Stochastic Systems** 2055
Changyuan Fan, Hui Ju, Baoqiang Wang
Department of Control Engineering Chengdu University of Information Technology
Chengdu, Sichuan Province, China
- NNCI-08 (#07_01_16): A New Fast ICA Algorithm with Symmetric Orthogonalization** 2058
Changyuan Fan, Baoqiang Wang, Hui Ju
Department of Control Engineering, Chengdu University of Information Technology Chengdu,
Sichuan Province, China
- NNCI-09 (#07_02_01): A Possibilistic C-Means Clustering Algorithm Based on Kernel Methods** 2062
Xiao-Hong Wu
College of Electrical & Information Engineering Jiangsu University Zhenjiang, 212013,
China
- NNCI-10 (#07_02_03): Nonlinear System Identification Based on Adaptive Neural Fuzzy Inference System** 2067
HOU Zhi-xiang, LI He-qing
College of Automobile and Mechanical Engineering Changsha University of Science and
Technology Changsha, 410076, China
- NNCI-11 (#07_03_02): A Hybrid Evaluative Algorithm Applied to Task Scheduling** 2070
Li Gao, Shijue Zheng and Wanneng Shu, Xiong Wang
Department of Computer Science, Hua Zhong Normal University, Wuhan 430079, China
- NNCI-12 (#07_03_04): Combining Genetic Algorithms Based Task Mapping and Optimal Voltage Selection for Energy-Efficient Distributed System Synthesis** 2074
Yongpan Liu, Huazhong Yang, Rong Luo, Hui Wang
Department of Electronics Engineering, Tsinghua University, 100084, Beijing, China
- NNCI-13 (#07_03_05): Genetic Network Programming for Artificial Stock Market** 2079
Yang Cheng, Sun Shixin, Xie Zhilong
School of Computer Science and Engineering University of Electronic Science and
Technology of China Chengdu, P.R. China
- NNCI-14 (#07_03_06): Study of Differential Evolution on ATPG** 2084
XU Chuan Pei, LI Zhi, MO Wei
Dept. of Electronic Engineering GuiLin University of Electronic Technology Guilin,
Guangxi, China
- NNCI-15 (#07_03_07): Faster and More Stable-Asymmetric Bidirectional Weighting Topologies on PSO** 2088
Tang Puying, Fang Jun
School of Opto-electronic Information University of Electronic Science and Technology of
China Chengdu, Sichuan, China
- NNCI-16 (#07_03_09): A GA-based Solution to an NP-hard Problem of Clustering Security Events** 2093
Jianxin Wang, Hongzhou Wang, Geng Zhao
School of Information, Beijing Forestry University, Beijing, China, 100083
- NNCI-17 (#07_03_11): A Self-Adaptive Genetic Algorithm for Tasks Scheduling in Multiprocessor System** 2098
Lan Zhou, Sun Shi-Xin
College of Computer Science and Engineering University of Electronic Science and

Technology of China Chengdu, Sichuan 610054, China

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Xiaomeng Bian and Jiaju Qiu
Dept. of Electrical Engineering University of Zhejiang Hangzhou, Zhejiang Province, China
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Ping Zhou, Qiong Huang, Jiang-Tao Li
Institute for Nonlinear Systems Chongqing University of Posts and Telecommunications
Chongqing, 400065, China
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Fangyan Yang and Ping Zhou, Qingdu Li
Institute for Nonlinear Systems Chongqing University of Posts and Telecomm, Chongqing,
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Department of Automation Nanjing University of Sci. & Tech. Nanjing, P.R.China 210094
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School of Information Engineering, Nan Chang University, Nan Chang, JiangXi, China
- NNCI-23 (#07_07_02): A Novel Substation Fault Diagnosis Approach Based on RS and ANN and ES** 2124
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School of Information and Electrical Engineering, Lanzhou Jiaotong University, Lanzhou,
Gansu, China
- NNCI-24 (#07_07_03): Network Connection Based Intrusion Detection Using Rough Set Classification** 2128
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- NNCI-25 (#07_08_01): Palmprint Recognition Using Wavelet Decomposition and 2D Principal Component Analysis** 2133
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Department of Information Science Xi'an University of Technology Xi'an, Shannxi, China
- NNCI-26 (#07_08_02): An Optimal Text Categorization Algorithm Based on SVM** 2137
Ziqiang Wang and Xia Sun, Dexian Zhang
School of Information and Engineering Henan University of Technology Zheng Zhou
450052, Henan Province, China
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Department of Computer Science, Ocean University of China, Qingdao, 266071
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College of Architecture and Civil Engineering Shenzhen University Shenzhen, Guangdong,
China

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Chang-Jian FU, Guo-Hui LI, Jun-Tao WU, Chang-Jian FU

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Changsha 410073, Hunan, China

NNCI-30 (#07_09_06): An Algorithm for Time Series Data Mining Based on Clustering 2155

Shaozhi Wu, Yue Wu, Ying Wang, Yalan Ye

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NNCI-31 (#07_10_02): Using Artificial Neural Network to Control the Temperature of Fuel Cell 2159

Yanjun Li, Houjun Wang, Zhijian Dai

College of Automation Engineering University of Electronic Science and Technology of
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NNCI-32 (#07_10_05): A Novel Modified Particle Swarm Optimization 2163

Haiming Jiang, Kang Xie, Cheng Ren and Yafei Wang

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