Table of Contents

Preface v
Organizing Committees vii

Session 1

Study of Electrical Simulation Application in Hydraulic System 1
Jinjun Jiang

CFSB: A Load Balanced Switch Architecture with O(1) Complexity 5
Shen Zhijun, Zeng Huashen and Gao Zhijiang

Common Mode EMI Measurement Method of Coal Mine Inverter 12
SUN Ji-ping, Cheng Qiang and Tian Zi-jian

Tort Situation of China's C2C Platform Service Providers and the Improvement of Its System 16
Jie Jiang and Ying Xu

A Parallel Simulation Code for Synchronization of Spin Torque Oscillators for Microwave Applications 21
Yan Zhou and Ada Zheng

Secure and Reliable Multi-Path Transmission Scheme on Underwater Acoustic Sensor Networks 28
ZHANG Mei-Yan, CAI Wen-Yu and ZHANG Hong-Tao

A Novel Subspace Outlier Detection Approach in High Dimensional Data Sets 36
Jinsong Leng

A Wrapper-based Feature Selection for Analysis of Large Data Set 42
Jinsong Leng, Craig Valli, and Leisa Armstrong

A Integrated Computational Approach for Protein Sub-network Detection in Parkinson's Disease 49
Yue Huang and Yunying Huang

Scheduling Algorithm for Data Flow Model in Real-time Control System 54
Chenggang Qin, Dong Yu and Wenjiang Wu

Session 2

Research on Segmentation Algorithm of 2D Color Barcode Based on Mobile Phone 63
Zhi Liu, Lingna He and Ronghua Liang

SABER-Based Modeling and Simulation of Induction Motor Drive System for EVs 70
Ping Liu, HePing Liu and Jun Guo

The Research in Remote and Real-time Monitoring System of Digitized Earthquake Omen Instrument 79
Min Ren and Jianjun Lu

Analysis and Design of High-current Arc-triggering Hybrid Current-limiting Fuse 85
Chao DAI, Jinwu ZHUANG, Feng YANG, Bo CHEN, Chen WANG and *Zhuangxian JIANG*

Topographic Information Based Three-Dimensional Localization Algorithm for Wireless Sensor Networks 92
Jihua Lu, Xingmiao Yao, Chuan Li and Fucai Yu

Design and Implementation of Remote Push System of Resources Based on Internet 99
Qian Li, Xiangqian Ding and Xiaodong Wang

The Reaserach in Streaming Media on-Demand Technology Based on IP Multicast 104
Xudong Sun, Jianjun Lu and Min Ren

Level Sets Method and Corner Detector Fused Approach to Image Classification 110
XIN WANG

Detection Algorithm of 2D Barcode under Complex Background 116
Zhi Liu, Xingbo Guo and Chong Cui

Load's Swing Angle Equation and Structure Parameter for container Crane Hydraulic Anti-sway System 123
Bin Zhong and Wenming Cheng

Session 3

Road Segmentation based on Learning Classification 129
Yiming Nie, Zhenping Sun, Daxue Liu, Tao Wu and Bin Dai

Mobile Media Developing Analysis Based on 3G Industrial Chain 134
Wang Lu, Han Jie

Zigbee Based Temperature Monitoring System for Electric Cable Junction 138
CHEN Fan and WEI Zhinong

Temperature and Humidity Control Strategy for Spacecraft Cabin based on Humidity Priority 143
Chang Haijuan and Pang Liping

Condition-based Maintenance Model Under the Imperfect Maintenance 149
En-shun Ge and Qing-min Li

Resources Access Control Strategy based on CPK Identification Authentication 155
Wen-Yuan Tang, Qin-wei Li and Mu Liu

Design &Implement of Embedded Web Technology in Traffic Monitoring System 160
Rui Li and Xiang Qiang Xiao

Design of Control System for EOD Robot Based on Embedded Linux 168
Zhu Jianguo, Gao Junyao, Li Kejie, Teergele and Yin Qiang

Random Noise Attenuation Based on Support Vector Regression and Adaptive Wiener Filtering 176
Xiaoying Deng and Yong Luo

Research on Torque Ripple For Switched Reluctance Motors Based on A Torque Distribution Function Considering Mutual Inductance 182
Xiaojie Zang, Dejun Meng and Minglan Jing

Session 4

Multiwavelet-based Image Compression Using Human Visual System Model 189
Aili Wang and Shaoliang Meng

The Combinational Test Generation Algorithm Based on Three-valued Neural Networks 195
ZHAO Ying and MENG Xiang

A Optimal Schema Based on Local Query for Computer graphics 200
Ce Fan

An Improved Wall Climbing Robot for Ship Rust Removal 207
Zhengyao Yi, Yongjun Gong, Wei Xiong and Zuwen Wang

Design and Application of Neural Network PID Decoupling Controller 214
Guijin Han

Research of Anti Electromagnetic Interference Technology for PMSM Driving System 220
Bai Gong-ding, Ma Xiao-feng

Research of Choice and Design for PMSM Driving System Data Transmission and Control Communication Bus 225
Bai Gong-ding, Gai Jiang-tao

Robust Analysis for Dichotomy and Absolutely Stability of the 2D Lure Systems with Parameter Uncertianties 231
Ao Dun, Lei Fei and Yuan Haiying

Ramulus Cinnamomi Intelligence Quality Assessment Based on Knowledge Reduction 237
Jianyang Lin, Mingyan Jiang, Yajie Xu, Zhoumi Kan

Model and Algorithm for Computer Spare Parts Logistics Management System 243
Huihui Huang and Buyang Cao

Session 5

A Novel Control Method of 400-Hz Paralleled Single-Phase Inverter with Nonlinear Load 248
Fanqiang Gao and Ping Wang

The Design of Wireless Smart Home System based on ZigBee 256
Mingming Gao

Particle Swarm Optimization with Particle Similarity Based Mutation 263
Xin Jin and Yong-quan Liang

Modeling and Simulation Comparison of Real-time Monitoring of Particleboard Hot-pressing Thermal Conductivity 269
Yingying Wei and Yaqiu Liu

Elimination of Algorithm's Initial Value Error by Optimizing the Maneuver Direction in Airborne Passive Location 276
Liang Jie, Xie Xiaofang, Cao Jian and Hu Xunqiang

Bulk Power Systems Reliability Assessment with Wind Farms in Electricity Market Environment 282
Li-zi ZHANG and Qian WANG

QPSK Signal Detection Based on Two Duffing Oscillator 289
Yongfeng Wu, Shiping Zhang, Jinwei Sun

Feedback Control for Uncertain Systems With Limited Data Rates 294
Qing-Quan Liu

Cryptanalysis of a Self-certified Threshold Proxy Signature Schemebased on Elliptic Curve Discrete Logarithm Problem 301
Qi Xie

Bionic Robot Control based on Advanced Updating 307
Tao Shi and Zhikun Chen

Session 6

The Routing Strategy of Network-on-Chip with Dual Subnets Infrastructure 313
Hui Shen, Xiang Ling

Research on Face Recognition Based on Back Propagation Neural Network 322
Lingyun Shen

Prediction Control for ATE Metrology Parameters Based on Improved LS-SVM 328
Mao Hongyu, Yang Guang, Yang Hongsheng and Hu Zhuolin

A Novel NLOS Mitigation Approach for Wireless Positioning System 334
Jian Chen and Yong-ning Zhuo

The Experimental Research of NO Removal by Dielectric Barrier Discharge at Atmospheric Pressure 340
Yun Liu, Wei Zong and Zhongyang Chen

Application of Wavelet Transform to Process Electromagnetic Pulses from Explosion of Flexible Linear Shaped Charge 348
Zhichao Ma, Shuguo Xie and Jingyang Cao

The Design and Implementation of Dynamic Customized Platform Based on Database Storage in ERP Secondary Development 355
Jiang Guihua and Zhang Yu

Associative Classification Based on Artificial Immune System 361
Zhang Lei and Jiang Jimin

Simultaneous Localization and Mapping in Structured Environment Based on Point Feature 368
Shujuan Chen, Bo He, Shu Tian, Pei Song and Tao Zhan

Application of Artificial Intelligence and Visualization Technology in Construction Risk Prediction 375
Yan Liu, Mingyuan Zhang and Yongbo Yuan

Session 7

Design and Implementation of a Process-protecting System In Windows NT 381
Guo Chun and Jiang Chao-Hui

The Network Simulation Application and Study Based on OPNET Modeler 388
Jun Cheng

An Ontology Based Semantic Service Model in Smart Home Environment 392
Yi Yang, Zhiliang Wang, Ming Li and Yang Yang

Data Acquisition System for Press Machine 400
Ku Xiangchen, Li Jishun, Ma Wei and Xue Yujun

A New SLAM Algorithm Particle Filter-based for Autonomous Underwater Vehicle 407
He Bo and Zhang Tao

QC-LDPC Encoding and Decoding Algorithms for G.hn Standard 413
He Yi, Yao Rugui and Wang Ling

Waste Electronic & Electronical Equipments Recycling Management System of China Based on the Stakeholder Theory 422
Duan Xianming, Liang Huijuan and Yu Fumao

Segment-based Proxy Caching for Streaming Media Delivery 430
ZHAO Zheng-de and ZHAO KAI

Towards a Model for Information Traffic Flow in Wireless Networks 434
Mingzhe Liu, Shibo Zhao and Ken Hawick

Recursive Plateau Histogram Equalization for the Contrast Enhancement of the Infrared Images 439
Zongwei Lu, Zhide Tang, Lin Zhou and Qian Zhang

Session 8

A Feasible Approach to Emergency Response Plan Digitalization and Cooperation 446
Xieyu Fan and Fang Yin

A Schema-based Method of Summarizing XMLDocuments 452
Teng Lv, Weimin He and Ping Yan

Research on SNR Estimation of Signals in Galileo SAR System 458
Wang Kun, Wu Si-liang and Zhu Shengyu

Noise Analysis for Active CMOS Mixers Including Memory Effect 464
Benqing Guo, Guangjun Wen and Xiaolei Li

The Weapon Target Assignment Strategy Research on Genetic Algorithm 471
YUAN Haiying, LEI Fei, GAO Xuejin and LI Haitao

Analog Circuit Fault Diagnosis with Small Samples Based on Selective SVM Ensemble 476
Haisong Liu and Jiechang Wu

A Novel PSR Enhancement Technique for Full on-Chip Low-Dropout Regulator 481
Ling Ding, Shuying Zhang, Yang Liu, Yingying Yuan and Yuchun Chang

A UWB MAC Protocol using Dynamic TH Code Assignment and Rate Control 487
Wang Hailiang, Jiang Yule, Xiong Huagang, Chen Junyan

SAR Image Feature Extraction and Target Recognition Based on Contourlet and SVM 492
Aili Wang and Chunhui Zhao

Answering Tag-Term Keyword Queries over XML Documents in DHT Networks 497
Weimin He and Teng Lv

Session 9

Research on Evaluation Method of Vehicle Head-Lamp Follow-Up Steering Control System Based on Virtual Scene 505
Pengchao Du, Wei Liu, Weibin Lu and Tao Zhang

Sliding-mode Control of Single-phase PWM Rectifier for DC Micro-grid Applications 511
Wei Jiang

Application of PSO Algorithm and SurfaceWith Minimum Threat in Path Planning of Aircraft 519
HU Xun-qiang, XIE Xiao-fang, LIANG Jie and CAO Jian

A Velocity Measurement Principle Based on Scaling Parameter Estimation of Chaotic System 524
Lidong Liu, Jinfeng Hu, Zishu He, Chunlin Han and Lei Chao

Author Index 531