

**2010 International Symposium on Computer,
Communication, Control and Automation (3CA 2010)**

May 5-7, 2010 Tainan, Taiwan

Edited by

Qi Luo

Chao-Lin Kuo

Sponsored by

Far East University

Dept. of Electrical Engineering, National Chin-Yi University of Technology

Dept. of Engineering Science, National Cheng Kung University

**College of Electrical Engineering and Computer Science, National United
University**

Intelligent Information Technology Application Research Association

Technical Co-Sponsored by

IEEE Circuits and Systems Society Taipei Chapter

IEEE Ukraine Section I&M / CI Joint Societies Chapter

2010 International Symposium on Computer, Communication, Control and Automation Proceedings

Copyright and Reprint Permission: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Operations Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. All rights reserved. Copyright 2010 by the Institute of Electrical and Electronics Engineers

© 2010 IEEE. Personal use of this material is permitted. However, permission to reprint/republish this material for advertising or promotional purposes or for creating new collective works for resale or redistribution to servers or lists, or to reuse any copyrighted component of this work in other works must be obtained from the IEEE.

Print Version

IEEE Catalog Number: CFP1074I-PRT

ISBN: 978-1-4244-5566-9

Library of Congress: 2009938874

Conference CD-ROM Version

IEEE Catalog Number: CFP1074I-CDR

ISBN: 978-1-4244-5567-6

Library of Congress: 2009938874

Compliant PDF Files

IEEE Catalog Number: CFP1074I-ART

ISBN: 978-1-4244-5568-3

Library of Congress: 2009938874

Publisher: Institute of Electrical and Electronics Engineers, Inc.

Message from the 3CA 2010 Conference Chairs

3CA 2010 is the International Symposium on Computer, Communication, Control and Automation sponsored by Intelligent Information Technology Application Research Association and Far East University. 3CA was started in 2008. The previous conferences were held in Wuhan, China (2008), Tainan, Taiwan (2010). This conference offers a great opportunity for scientists, engineers, and practitioners to present the latest research results, ideas, developments, and applications, as well as to facilitate interactions between scholars and practitioners. We cordially invite you to attend the 2010 International Symposium on Computer, Communication, Control and Automation (3CA 2010), which will be held on May 5-7, 2010, Tainan Taiwan. Just like the name of the conference, the theme for this conference is Advancing Computing, Communication, Control, and Automation Technologies. Only original high quality papers related to this theme are especially solicited, including theories, methodologies, and applications in Computing, Communication, Control, and Automation. Topics covering industrial issues/applications and academic research will be welcome.

We would like to thank the program chairs, organization staff, and the members of the program committees for their hard work. Special thanks go to IEEE Circuits and Systems Society Taipei Chapter and IEEE Ukraine Section I&M / CI Joint Societies Chapter.

We hope that 3CA 2010 will be successful and enjoyable to all participants. We look forward to seeing all of you next year at the 3CA 2011.

Qi Luo, Wuhan Institute of Technology, China
Chao-Lin Kuo, Far East University, Taiwan

3CA2010

Organizing Committee

Honorary Chairs

Yen-Zen Wang, Far East University
Tzuu-Hseng S. Li, National Cheng Kung University, Taiwan

Honorary Co-Chairs

Ming-Jyi Jang, Far East University, Taiwan

General Chair

Yen-Liang Yeh, Far East University, Taiwan

General Co-Chairs

Jui-Sheng Lin, Far East University, Taiwan
Neng-Sheng Pai, National Chin-Yi University of Technology, Taiwan
Jung-Fa Hsieh, Far East University, Taiwan

Publication Chairs

Qi Luo, Wuhan Institute of Technology, China
Chao-Lin Kuo, Far East University, Taiwan

Advisory Committee Chairs

Yanwen Wu, Center China Normal University, China
Teh-Lu Liao, National Cheng Kung University, Taiwan
Her-Terng Yau, National Chin-Yi University of Technology, Taiwan

Organizing Committee Chair

Cheng-Chi Wang, Far East University, Taiwan

Program Committee Chairs

Meei-Ling Hung, Far East University, Taiwan
Tang-Jen Liu, Far East University, Taiwan
Chen-Da Tsai, Far East University, Taiwan
Sheng Chung Chen, Far East University, Taiwan
Ming-Chiou Shen, Far East University, Taiwan
Yi-Ming Tsao, Far East University, Taiwan
Chih-Chen Liu, Far East University, Taiwan

Best Paper Award Chairs

Jui-Sheng Lin, Far East University, Taiwan
Jung-Fa Hsieh, Far East University, Taiwan

Registration and Finance Chair

Meei-Ling Hung, Far East University, Taiwan

Exhibition Chairs

Yung-Chiang Wei, Far East University, Taiwan

Ying-Che Kuo, National Chin-Yi University of Technology, Taiwan

Local Arrangement Chairs

Yi-Pin Kuo, Far East University, Taiwan

Wei-Chang Du, I-Shou University, Taiwan

Nai-Ren Guo, Tung Fang Inst. of Tech, Taiwan

Ioannis Manousakas, I-Shou University, Taiwan

Yong-Ren Pu, Chang Jung Christian University, Taiwan

Invited Session Organizers

Chang-Hua Lien, National Kaohsiung Marine University, Taiwan

Chia-Hung, Jerry Lin, Kao Yuan University, Taiwan

Shin-Yong Chen, Far East University, Taiwan

Conference Secretary

Chih Li Chang, Far East University, Taiwan

Webmasters

Shun-Jih Wang, Far East University, Taiwan

Yu-Chi Pu, Far East University, Taiwan

3CA 2010 Reviewers

Meei-Ling Hung, Far East University, Taiwan
Tang-Jen Liu, Far East University, Taiwan
Chen-Da Tsai, Far East University, Taiwan
Sheng Chung Chen, Far East University, Taiwan
Ming-Chiou Shen, Far East University, Taiwan
Yi-Ming Tsao, Far East University, Taiwan
Chih-Chen Liu, Far East University, Taiwan
Xiang Kui, Wuhan University of Technology, China
Li Zhijun, Wuhan University of Technology, China
Zhang Suwen, Wuhan University of Technology, China
Shufang Li, Beijing University, China
Tianshu Zhou, George Mason University, USA
Bing Wu, Loughborough University, UK
Huawen Wang, Wuhan University, China
Zhihai Wang, Beijing Jiaotong University, China
Ronghuai Huang, Beijing Normal University, China
Xiaogong Yin, Wuhan University, China
Jiaqing Wu, Guangdong University of Business Studies, China
Xiaochun Cheng, Middlesex University, UK
Jia Luo, Wuhan University of Science and Technology Zhongnan Branch, China
Toshio Okamoto, University of Electro-Communications, Japan
Kurt Squire, University of Wisconsin-Madison, USA
Xianzhi Tian, Wuhan University of Science and Technology Zhongnan Branch, China
Alfredo Tirado-Ramos, University of Amsterdam, Amsterdam
Bing Wu, Loughborough University, UK.
Yanwen Wu, Central China Normal University, China
Harrison Hao Yang, State University of New York at Oswego, USA
Dehuai Zeng, Shenzhen University, China
Weitao Zheng, Wuhan University of Technology, China.
Qihai Zhou, Southwestern University of Finance and Economics, China
Tianshu Zhou, George Mason University, USA
Shao Xi, Nanjing University of Posts and Telecommunication, China
Xueming Zhang, Beijing Normal University, China
Peide Liu, Shandong Economic University, China
Qian Yin, Beijing Normal University, China
Zhigang Chen, Central South University, China
Hoi-Jun Yoo, Korea Advanced Institute of Science and Technology
Chin-Chen Chang, Feng Chia University, Taiwan.
Jun Wang, The Chinese University of Hong Kong, Hong Kong

3CA 2010 Volume 1 Content

Research of Wireless Sensor Networks based on ZigBee for Miner Position Xiuping Zhang, Guangjie Han, Changping Zhu, Yan Dou, Jianfeng Tao	1
Wind Turbine Control Monitor System Simulation and Validation Ho-Ling Fu, Wei-Chiang Chang	6
A Simulator Support for LSI Logic ZSP400 Instruction SET Ling Gan, Zhenjiang Ding	10
Nonlinear Discrete System Identification for Bulkhead Pressure Control of Shield Machine Lijuan Cao, Zichang Shangguan, Shouju Li, Wei Sun.....	14
Optimization of G/G/1/K Cyclic Service System with k-limited Discipline Shih-Cheng Horng, Chiung-Wen Chen	18
A Cooperative Routing in Mobile Ad-hoc Wireless Sensor Networks with Rayleigh Fading Environments Beongku An, Tran Trung Duy	22
Decipher the Success Stories of U.S Advertising in China’s market- To See the Charm of Traditional Chinese Culture Peng Li, Daifang Zhou	26
Classic Brand Across Time and Space ——the case analysis of world-famous brands L’Oreal Paris Conglie Cai, Xujuan Zong.....	31
Prediction of Coke Mechanical Strength Based on Support Vector Machines Qing Lv, Keming Xie, Xiaogang He, Jun Xie	35
The standardization of OPC interface based on a Field Bus control system Huazhu Wu, Yemin Lv, Changyou Wang	38
The Marketing Constructs of Internet Auction Sellers Ruilin Lin, Jingchen Xie, Yoau-Chau Jeng, Fang-Chao Zou	41
Development of a Hardware in-the-Loop Platform for Plug-in Hybrid Electric Vehicles Yi-Hsuan Hung, Chien-Hsun Wu, Shih-Ming Lo, Bing-Ren Chen, E-In Wu, Pin-Yung Chen.....	45
Efficient Computation of Multiscale Entropy in Biomedicine Yu-Hsiang Pan, Kun-Hsiung Chang, Yung-Hung Wang	49
An Optimal Two-dimensional Orthogonal Range Search Algorithm in VLSI Design Automation Yu-Hsiang Pan, Kuo-Tien Lee, Yung-Hung Wang.....	53

Adaptive Fuzzy Robust Control for a Class of MIMO Nonlinear Systems With Prescribed Performance Tao Jia, Jun Liu.....	57
Augmented Reality-Based Assistive Technology for Handicapped Children Chien-Yu, Lin, Jo-Ting Chao, Hsiao-Shan Wei	61
A Polarimeter for Measuring the Optical Rotation Angle in Chiral Medium Jing-Fung Lin, Jyh-Shyang Wu, Chih-Chao Chang, Cong-Hui Huang, Te-Tan Liao	65
Stabilization Wedges as a Tool of Engineering Optimization with an Example of CO2 Emission Control Kazi Mostafa, Innchyn Her.....	69
Fabrication of PLZT and the Measurement of Birefringence Jing-Fung Lin, Jyh-Shyang Wu, Jiann-Shing Jeng, Bing-Hsun Wu	73
A Novel Grouping Harmony Search Algorithm for the No-wait Flow Shop Scheduling Problems with Total Flow Time Criteria Kaizhou Gao, Quanke Pan, Junqing Li, Yongzheng He	77
Magnetic Suppression of Cylindrical MHD Couette Flow Vortex C.-L. Chang, C.-Y. Tseng, S.-L. Hung, J.C. Leong.....	81
Investigation of 2004 Ferrari Formula One Race Car Wing Effects Y.-N. Wang, C.-Y. Tseng, Y.-L. Huang, J.C. Leong	85
An Index Structure for Multi-Scale Representation of Spatial Data Gen Li, Zhiwen Zou, Shiguang Ju.....	89
An Learner-centred, Game-based, Learning Framework for Typing Games in English Course Tsung-Li Wang, Tin-Kai Chen, Ya-Fen Tseng	93
On the Core Issues of Accessible Web Course HuangLu.....	96
Risk analysis for the modification in automatic train control systems Xianhui Yang, Ming Xu, Yao Cheng	100
A Genetic Programming Based Rule Generation Approach for Intelligent Control Systems Cheng-Hsiung Chiang	104
Design of Bayer Image to NTSC Image converter Yu-Chieh Chen, Tai-Shan Liao	108
Design and Implementation of Evolution-Based Vulnerability Assessment System Wei Yang, Ling Gao, Huan Li, Lin Zhang.....	111

New Decision Tree Based on Genetic Algorithm Shiueng-Bien Yang Shiueng-Bien Yang, Shen-I Yang	115
The Graphic System Design in Color Image Capturing System Using the USB Interface Chien-Hung Chen, Po-Jui Chen, and Tai-Shan Liao.....	119
Power Control of Variable-Speed Constant-Frequency Doubly-Fed Wind Power Generator Lan LI, Tian-ming CAO	122
Choquet Integral with Respect to the Generalized L-measure and its Application Hsiang-Chuan Liu, Der-Bang Wu, Wei-Sung Chen,er-Bang Wu,Yu-Du Jheng	126
A Propositional Calculus Formal Deductive System SUBL Minxia Luo, Chunmei Ding.....	130
An Excellent Mortality Prediction Model Based on Support Vector Machine (SVM)-a Pilot Study Chien-Lung Chan, Chia-Li Chen, Hsien-Wei Ting.....	134
Human Behavior Recognition Based on Sitting Postures Song-Lin Wu, Rong-Yi Cui	138
An Ontology-Supported Information Agent Shell for Ubiquitous Services Sheng-Yuan Yang	142
A New Feature Selection Algorithm in Text Categorization Wei Zhao, Yafei Wang, Dan Li	146
A New Method of Chinese Personal Names Recognition Based on TBL Wei Zhao, Dan Li,Yafei Wang.....	150
Research on the Cultivation of Teachers' Information Ethics Caihong Guo.....	154
Optimal Designs and Experimental Verification for a Hybrid Energy Storage System Chien-Hsun Wu, Yi-Hsien Chiang, Wu-Yang Sean, Shih-Ming Lo, Jia-Cheng Ke, Yi-Hsuan Hung	158
The Study on the Effectiveness for the Handoff of WiMAX and ZigBee Chung-Hsin Liu, Sheng-Shiang Chang.....	162
Estimating the Dermal Didge Distance Based on Continous Spectrum Hai-yan Xu	166
The Study for the ZigBee with Bluetooth Positioning System Chung-Hsin Liu, Jian-Yun Lo.....	169

The Study of Video Conference Through Firewall Security Chung-Hsin Liu, Wu-Fan Hsu	173
Adaptive Block-based Error Concealment Scheme in Spatial Enhancement Layer on H.264/AVC SVC Xue-Bo Zhang, Wei-Ping Ye	177
Study of Using Interleaved Mapping with Non-uniform M-QAM for Mobile Video Transmission Songchar Jiang, Ming-Sheng Lui, Sin-Ruei Ho.....	181
Automation of Data Mining for Telemetry Database of Computer Systems C. -H. Yang, C.- H. Wu, S. -C. Lo, M. Pecht, V. Sotiris, E. Rhem, N. Vichare.....	185
Embedded Control System Design for “Novel Micro-fluidic Sensor” for the Measurement of Dynamic Liquid Interfacial Tension Syed Faiz Ahmed, Choudhry Fahad Azim.....	189
Analysis and Research Maximum Power Point Tracking of Photovoltaic Array Chang-Chun Wang, Ming-Chuan Wu, Kuang-Jang Lin, Chii-Ruey Lin.....	196
Image Copyright Protection Scheme Using Sobel Technology and Genetic Algorithm Mn-Ta Lee, Shih-Syong Chen	201
An Integrated Numerical Analysis for a Backward-Inclined Centrifugal Fan Sheam-Chyun Lin, Ming-Lun Tsai, Ming-Chou Shen, Wen-Liang Chen, Hsien-Chang Shih.....	205
Multi-sensor Data Fusion via Federated Adaptive Filter Li-Wei Fong.....	209
Optimization of Combined Filter for Vehicle Navigation Qin-xue LI	213
Fine-grained and Multi-level Recovery Scheme for Windows Based on Duplication and Snapshot Zhizhuo Sun, Yu-an Tan, Xuelan Zhang, Zexiang Zhou.....	217
Transformed Domain Block Size and Intra Mode Decision for Advanced Video Coding Yung-Chiang Wei, Chao-Hsuing Tseng	221
Research on the Dynamic Comprehensive Evaluation Based on Information Integrated Yong-hui Huang.....	225
A Design Partitioning Algorithm for Three Dimensional Integrated Circuits Hua-Sin Ye,Mely Chen Chi, Shih-Hsu Huang.....	229
An Adaptive Multi-objective Clonal Selection Algorithm Lu Hong, Zhicheng Ji	233

Binary Image Scrambling Evaluation Method Based on the Mean Square Deviation and the Bipartite Graph Ai-Ying Fu, Qing-Wei Zeng, Zhi-Hai Xu, Geng-Sheng Deng.....	237
A Re- Coloring Algorithm for a Color Image Using Statistic Scheme in CIE L*a*b* Color Space Chen-Chung Liu, Guan-Nan Hu.....	240
A Watermarking Scheme for 3D Models Using Haar Discrete Wavelet Transform Chen-Chung Liu, Jiun-You Chen.....	244
Breast Extraction Scheme for Mammograms Using GVF-Snake Chen- Chung Liu, Chung-Yen Tsai, Shyr- Shen Yu.....	248
A Face Identification Algorithm using Two Dimensional Binary Principal Component Analysis Chen-Chung Liu, Shiuan-You Chin.....	252
An Extraction Algorithm of Vehicle License Plate Numbers Using Pixel Value Projection and License Plate Calibration Chen-Chung Liu, Zhi-Chun Luo	256
3D Model Normalization Algorithm Using Star Topology for 3D Model Watermarking Chen-Chung Liu, Pei-Chung Chung.....	260
Tag Quantity Estimation for RFID Based on Probability Chen-Chung Liu, Yin-Tsung Chan	264
Adaptive Predictive Power Control for Wireless Communication Systems with Random Delay Cunwu Han,Dehui Sun,Zhijun Li.....	268
Cardiac Arrhythmia Diagnosis Method Using Fuzzy C-Means Algorithm on ECG Signals Yun-Chi Yeh, Hong-Jhih Lin	272
Automatic Measurement System for Junction Temperature of Light Emitting Diodes C. L. Kuo, D. Y. Lin.....	276
A Syndrome-Based Hybrid Decoder for Turbo Product Codes Erl-Huei Lu, Pen-Yao Lu.....	280
A Study on Design Patent Knowledge Base System Rain Chen, Eva Chang, Ying-Jye Lee, Cheih-Ying Chen, Chien-Yu Lin, Bei-Bei Yau	283
An Efficient Truthful Mechanism for the Ticket Booking Scheme of NBA All-Star Event Championship Sajal Mukhopadhyay, D.Ghosh, Pramod Mane	287
An Addition-Invariant Partial Order of Ordered Addition Monoids of Intuitionistic Fuzzy Values Hsiang-Chuan Liu	291

The research and design of embedded pulse monitoring instrument Sue Wang, Pengfei Hao, Kaisheng Zhang	295
An Object-Oriented Processor with Just-In-Time Compilation Support Anthony S. Fong, C. H. Yau, Yiyu Tan	299
A 3D Ultrasound Renal Calculi Fragmentation Image Analysis System for Extracorporeal Shock Wave Lithotripsy Ioannis Manousakas, Chih-Ching Lai, Wan-Yi Chang	303
A Remote Sleep-monitoring Medical Alarm System Panfeng Zhang, Kaisheng Zhang	307
A Proposal for Improved Particle Swarm Optimization PenChen Chou, EeChen Lin, WayLen Don	311
The Research of Efficiency Audit in the University Construction Project Fang Liu, Yilong Xie, Qinghong Li	315
Frequency Domain Criteria for l^p -Robust Stability of Systems with Fuzzy Parameters Le Hung Lan, Hongwei Zhang	318
Process Exhaust Duct System Design in a Semiconductor Factory Using Feedback Simulation Method Wen-Liang Chen, Ming-Chiou Shen	322
Loading Algorithms for Flexible Manufacturing Systems with Partially Grouped Unrelated Machines and Tooling Constraints H.-W. Kim, J.-S. Kim, J.-M. Yu, H.-H. Doh, D.-H. Lee, S.-H. Nam	326
A Fuzzy Logic Call Admission Control Scheme in Multi-class Traffic Cellular Mobile Networks Son Vo Truong, Lan Le Hung, Hai Nguyen Thanh	330
Accelerating Recognition System of Leaves on Nios II Embedded Platform Yu-Ping Liao, Hao-Gong Zhou, Gang-Ren Fan	334
Study on Disaster Reconstruction Project Performance Evaluation Based on Fuzzy Analytic Network Process Chunling Sun, Ran Bi	338
Opinion Dynamics under Different Agents' Personality Lei Yang, Peng Xi	342
Comparison of Time Domain and Frequency Domain Equalization for HSDPA Channel Bushra Tasadduq, Aisha Haroon, Hira Imtiaz, Adeel Razi	346
Universal Test Bench of Diesel Hydraulic Governor Based on Hardware-in-Loop Simulation Weidong Zhang, Yourong Zhang, Shihua Liu, Guangyao Ouyang, Zhenming Liu	350

Realization of Improved HMM-based Speech Synthesis System Sun Ying, Xueying Zhang	354
A study on the Three-dimensional Coordinate Calibration using Fuzzy System Cheng-Liang Laia, Sung-Ting Tsaia, Yi-Ping Hung	358
Evaluation of Effect Pontryagin's Maximum Principle for Optimal Control Train by Criteria of Energy Save Nguyen Thanh Hai.....	363
Numerical Investigation of Aerodynamic Characteristics of a New Wind Turbine Pey-Shey Wu, Mien-Ying Kung, Hung-Yun Wu, Chin-Jen Chang.....	367
Apply Principal Gabor Basis Functions to Extract Discontinuous Points from Low-Resolution Binarized Fingerprint Images Chih-Jen Lee, Tai-Ning Yang, Chun-Jung Chen, Chun-Lin Lo, Li-Wei Chiang	371
Enhancement of Speech Recognition Using A Variable-length Frame Overlapping Method Ing-Jr Ding	375
Realization of Mandarin Continuous Digits Speech Recognition System Using Sphinx Yun Wang, Xueying Zhang.....	378
Application of Interactive Design as Teaching Materials for Learning Disabled Students Chien-Yu Lin, Eva Chang, Rain Chen, Chih-feng Lee, Jie-Ying Chen, Yin-Yin Chang, Kai-Ping Yang	381
Combining Independent Component Analysis and Support Vector Machine for Identifying Fault Quality Variables in the Multivariate Process Chi-Jie Lu, Yuehjen E. Shao, Yu-Chiun Wang.....	385
The Fabrication of LED Detecting System Hsien-Cheng Tseng, Jia-Hao Chang	390
Pulse of the Physiological Signal Sensing Circuit in the Realization and Its Signal Acquisition Reconstruction System Design Hsi Chiang Chou, Ming Che Liou, Wei-Chin Lin, Pi-Pai Chang	393
A Study on the Product Design of Hair Dryer Using Neural Network Method Wen-Liang Chen, Ya-Mei Chiang.....	395
Risk Assessment Model for Project Investment Based on Fuzzy Theory Xiaojian Guo, Qiuxiang Yang.....	400
Evolutionary Optimization of a Fed-batch Penicillin Fermentation Process Hongwei Zhang, Ze Zhang, Le Hung Lan.....	403

The Study for Campus Monitoring System of Attacks Analysis Chung-Hsin Liu, Po-Cheng Teng	407
A New Rotation Estimation and Recovery Algorithm S. M. Elshoura, D. B. Megherbi	411
Image Focusing System based on FPGA Miaofen Zhu, Guojin Chen, Wanqiang Wang, Yongning Li	415
The Development of Microsystems Device Based on Wireless Sensor Network Y.-J. Pan, H.-T. Nian.....	419
Reducing Power Consumed by a PC-based Server in an Internet-based Data Acquisition System Using a Novel Server agent I-Cheng Shen, Tang-Jen Liu	423
Minimum Buffer Insertions for Clock Period Minimization Shih-Hsu Huang, Guan-Yu Jhuo, Wei-Lun Huang	426
Analytical Approach for Performance Evaluation of Pricing Incentives Based Call Admission Control in Cellular Network Chatkwan Pongmala, Chaiyachet Saivichit	430
A Post-Processing Approach to Minimize TSV Number for High-Level Synthesis of 3D ICs Chih-Hung Lee, Tsorng-Yu Huang, Chun-Hua Cheng, Shih-Hsu Huang	434
Employing Broadband Light Source on FTTx/RoF Transmission System Sheng-Hui Meng, Jen-Fa Huang, Ke-Jen Hu, An-Chi Huang	438
Automated Microfluidic Sample Stream Control for On-Chip Selective Drug Delivery Nicola Moscelli, Nicola Ladisa, Michael J. Vellekoop	442
Vigilance Analysis Based on Fractal Features of EEG Signals Jun Pan, Qing-sheng Ren, Hong-tao Lu	446
Improved Particle Swarm Optimization Approach of PID Controller Design for Machine Tool Positioning Ming-You Ma, Jen-Ai Chao, Yi-Cheng Huang.....	450
Integration of VSAT with WiMAX Technology for E-health in Chinese Rural Areas Ying Su, Jeffrey Soar.....	454
Research on MAS Behavior and Paradigm Learning-based Evolutionary Method and Its Application in E-commerce Weijin Jiang, Lina Yao	458
Research on New Data Mining Method Based on Hybrid Genetic Algorithm Lianmei Zhang, Xingjun Jiang	462

A Forwarding Mechanism for Processing Two Categories of Packets in Wireless Sensor Networks Yao-Pin Tsai, Ming-Che Chung, Ru-Sheng Liu.....	466
Dental Plaque Quantification using Mean-shift-based Image Segmentation Jiayin Kang, Zhicheng Ji	470
Classification and Evaluation of Data Mining Techniques for Data Stream Requirements Mahnoosh Kholghi, Hamed Hassanzadeh, MohammadReza Keyvanpour.....	474
The New Design for Wireless Sensor Networks at 3Dspace Nima Attarzadeh, Seyed Javad Mirabedini, Ali Harounabadi	479
Research on a Certificate-based Authentication for Mobile Ad hoc Networks Xiaodong Mao, Dahu Wang, Tong Zhang, Keming Huang	483
Secure Remote Mobile Payment Architecture and Application Xi Li ,Wei Zhu, Mingxing He.....	486
Research on the Technology of Peer-to-Peer Traffic Classification Jian Feng.....	491
About Distributed Intrusion Detection System's Research Weijian Huang, Yan An, Guanjun Li, Fei Wang	495
The Application of Distributed Intrusion Detection System in electronic commerce Weijian Huang, Yan An, Guanjun Li, Fei Wang	499
An Improved Algorithm for Frequent Patterns Mining Problem Thanh-Trung Nguyen	503
A Improved GAF Clustering Algorithm for Three-dimensional Underwater Acoustic Networks Guangzhong Liu, Wuzhong Wen.....	508
A F-MAC protocol For Underwater Acoustic Sensor Network Guangzhong Liu, Meijia Zhou.....	513
Optimized K-means algorithm and application in CRM system Xiaoping Qin, Shijue Zheng, Tingting He, Ming Zou, Ying Huang	519
A Novel Energy Efficient Converge Control in WSNs Based on ant Colony Optimization Ming Zou, Zhang ping, Shijue Zheng, Xiaoping Qin, He Tongzhi.....	523
A Novel Building Cooling Load Prediction Based on SVR and SAPSO Li Xuemei, Ding Lixing, Li lanlan	528

Hybrid Support Vector Machine and ARIMA Model in Building Cooling Prediction Li Xuemei, Ding Lixing, Deng Yuyuan, Li lanlan	533
Support Vector Regression and Ant Colony Optimization for HVAC Cooling Load Prediction Ding Lixing, Lv Jinhua, Li Xuemei, Li lanlan	537
Author Index	542