

Contents

Signal Processing and Industrial Engineering

Automatic Reasoning Technology Based on Secondary CBR	1
<i>Haobin Shi, Wenjie Dong, Linquan Yang, Zhujun Yu</i>	
Experiments with Adaptable Multimodal User Interfaces for Mobile Devices	9
<i>Andreas Truar, Norbert Kuhn</i>	
A New Receiver for the Data Traffic of the EDEG System under High Speed Environments.....	17
<i>Leyu Zhang, Tao Wang, Jie Zou</i>	
Model-Based Human Pose Estimation with Hierarchical ICP from Single Depth Images	27
<i>Maoying Qiao, Jun Cheng, Wenchuang Zhao</i>	
Analysis of Motion Space for Modified Screwdrive Bending Mechanism	37
<i>Chihiro Ishii</i>	
Research on General Error Modeling and Instructions Correction Method of Multi-axis CNC Machine Tools	47
<i>Xiaofeng Wang, Jinwei Fan, Dongju Chen, Yun Li</i>	
Vehicle Routing Problem with Stochastic Demands and Simultaneous Delivery and Pickup Based on the Cross-Entropy Method	55
<i>Chuansheng Wang, Yue Qiu</i>	
Modeling and Simulation of Formed Milling Cutter for Screw Based on Non-instantaneous Envelope Method	61
<i>Yun Li, Jin-wei Fan, Dong-ju Chen, Xiao-feng Wang</i>	

Study and Design of an Inchworm-Like Micro-robot Walking Mechanism	69
<i>Li Zu, Yi Liang, Meili Song</i>	
Movement Status Based Vision Filter for RoboCup Small-Size League	79
<i>Yang Liu, Dong Liu</i>	
Study of Automatic Separation System of Coal and Gangue by IR Image Recognition Technology	87
<i>Jie Xu, Fengwen Wang</i>	
Research and Applications on Virtual-Hand Technology	93
<i>XiaoGang Wang, YueWei Bai, Kai Liu</i>	
A Method to Align POS Data and Linear Push-Broom Imaging Data.....	99
<i>Xiangang Meng, Aiwu Zhang, Shaoxing Hu, Weidong Sun, Jilian Yang</i>	
Evaluation Methods of Architecture for Intelligent Robotic System	107
<i>Wei Xie, Jiachen Ma, Qi Zhang, Mingli Yang</i>	
Research and Implementation on Resource Saving-Based Server Cluster Scheduling System	115
<i>Yang Cao, Jienan Cao, Zeyu Xiong</i>	
PID Control Based on Generic Alogorithm Friction Compensation in Sero System	121
<i>Dingdu Wen</i>	
The Analytical Research on Construction Project Cost Estimation Model Which Is Based on Artificial Neural Network	129
<i>Junming Hong</i>	
The Design of Stereoscopic Warehouse Stacker' Motion and Control System	135
<i>Jingtao Geng, Yongxia Lu, Huijing Yang, Dong Chen</i>	
Exploring the History of New Energy Vehicles	141
<i>Shuying Li</i>	
Establishment of the Personal Credit System in the Network Environment	147
<i>Sai Luo</i>	

Design and Implementation PLC Real-Time Control Based on NI-VISA	153
<i>Qingsheng Feng, Hong Li</i>	
Caculation of Resistance and Inductance of Laser Plasma.....	159
<i>Cai Feng Zhao</i>	
WLR-Normal Cryptogroups and LR-Regular Semigroups	165
<i>Aifa Wang, Lili Wang, Yinbin Li</i>	
The Inspecting and Controlling System for the Testing Platform of CO ₂ Air Conditioning Based on LabVIEW	173
<i>Bingqiang He, Huijuan Li, Chunling Liao</i>	
An Efficient Path Planning Method Based on State Automata Model for Mobile Robots	181
<i>Jingdong Yang, Jinghui Yang, Weiguang Wang</i>	
Parallelization of the Training for Face Detection with Transactional Memory	189
<i>Kun Zeng</i>	
Research and Application on Seismic Image Enhancement Based on Wavelet Transformation	197
<i>Ma Chang-Qing</i>	
Structural Optimization Method of Key Part of High Speed Machining Center	203
<i>Liu Yu, Liu Chunshi, Mao Lieqian, Zhang Yimin</i>	
Development of the Analysis Software of Reliability Based on the Matlab	209
<i>Liu Yu, Liu Chunshi, Li Zhichao, Zhang Yimin</i>	
Study of B-Spline Interpolation, Correction and Inverse Algorithm	215
<i>Liu Chunshi, Liu Yu, Zhang Yimin</i>	
Content-Related Features for Video Quality Assessment Based on Bit Streams	223
<i>Caihong Wang, Xiuhua Jiang, Yuxia Wang</i>	
Research of Non-equilibrium Urban Traffic Control System	231
<i>Shulin He</i>	
On the Offense and Defense Game in the Network Honeypot ...	239
<i>Hongxia Li, Xiaoqiong Yang, Lianhua Qu</i>	

Virtual Tourism Interactive Product Design for Senior Citizens	247
<i>Zhongyan Hu, Zaihui Cao, Jinfa Shi</i>	
Staged Soft-Sensor Modeling for Batch Fermentation Process ...	255
<i>Qiangda Yang</i>	
High Accuracy Dynamic Adjusting Voltage Source for Cell Impedance Tomography Application	265
<i>Nan Li, Hui Xu, Yang Yang, Jietao Diao, Hongshan Nie, Hongqi Yu, Haijun Liu</i>	
Study on a New Approach of Face Detection under Video Environment	273
<i>Qing Lin, Xiang Zhao, Yi-jia Xu, Min Wu</i>	
A Novel Automated Experimental Approach for the Measurement of On-Chip Speed Variations through Dynamic Partial Reconfiguration	281
<i>Hasan Baig, Jeong-Gun Lee, Jeong-A Lee</i>	
Low-Dimensional Local Self-Similarity Descriptor for Image Matching	291
<i>Jingneng Liu, Guihua Zeng</i>	
Fast Algorithm for Lunar Craters Simulation	301
<i>Li Jian-sheng, Liu Wei-min, Lan Chao-zhen, Mao Xiao-yan, Lu Zhan-wei</i>	
A Research on the Relationship between Share Price of Chinese Gold Enterprises and Gold Prices	307
<i>Anyu Cai, Luzhuang Wang, Dandan Li, Shuyang Wang, Yi Zhong</i>	
Mixed Generalized Hermite-Legendre Spectral Method	315
<i>Zhang Xiao-yong</i>	
Artificial Neural Networks Based on Fractal Growth.....	323
<i>Li Zhao, Weidong Li, Liqing Geng, Yanzhen Ma</i>	
Phase Transitions of Traffic Flows Based on Traffic Flow Simulation in the Merging Section on Freeways	331
<i>Xingju Wang, Xiaoming Xi</i>	
Multi-Agent Systems Simulation Base on HLA Framework	339
<i>Xuehui Wang, Lei Zhang</i>	
A Novel Feature Selection and Extraction Method for Sequence Images of Lip-Reading	347
<i>Chuanzhen Rong, Zhenjun Yue</i>	

Pattern-Discovery-Based Response Time Prediction	355
<i>Lingshuang Shao, Yi Guo, Xiangping Chen, Yanxiang He</i>	
A Method to Check The Structure of Sequential Business Process Models	363
<i>Jian Deng, Zhi Chen, Jiazhi Zeng</i>	
Short-Term Wind Speed Forecast Based on Best Wavelet Tree Decomposition and Support Vector Machine Regression ...	373
<i>Deliang Zeng, Yu Liu, Jiwei Liu, Jizhen Liu</i>	
The Realization of Autonomous Roaming Combined with Eagle Eye Navigation in Large Virtual Scene	381
<i>YiJia Xu, Xiang Liu, ZiWei Liu</i>	
A Survey on Multimodal Biometrics	387
<i>Yu Wang, Zaiwen Liu</i>	
Population Bursts Management in Digital City	397
<i>Xiaojian Wang, Siyuan Liu, Ce Liu, Yanping Liu</i>	
Population Burst Trajectory Retrieval in Smart City	407
<i>Wei Zhang, Xiaojian Wang, Siyuan Liu, Ce Liu, Yanping Liu</i>	
Study on Transforming Formulas from Interval Valued Data to Vague Valued Data	417
<i>Guxin Li, Hongxu Wang, Weixia Li, Chengyi Zhang</i>	
Ultrasonic Scanner for Heat Treatment Qualification in CNG Cylinder Fabrication	423
<i>Asad Babakhani, Fereidoun A. Mianji, Ariya Parish, Mahdi Mozaffarian, Abdollah Dadkhah</i>	
The Theta Model: An Essential Forecasting Tool for Supply Chain Planning	431
<i>Konstantinos Nikolopoulos, Vassilios Assimakopoulos, Nikolaos Bougioukos, Akrivi Litsa, Fotios Petropoulos</i>	
Networked Control Systems Based on Modified Fuzzy Immune Control	439
<i>Weidong Zhang, Feng Du, Jinyu Li</i>	
The Research Networked Control Systems Based on Improved Fuzzy Immune Control	447
<i>Weidong Zhang, Feng Du, Jinyu Li</i>	
Adaptive Background-Updating and Target Detection in Motion State	455
<i>Zheng Mao, Anjie Gao, Wei Wei, Legong Sun, Silin Chen</i>	

Reliability Prediction for Components of Robotic Systems	463
<i>Zdenek Vintr, Michal Vintr</i>	
A Domain Upper Ontology for Smart Home	471
<i>Moji Wei, Jianliang Xu, Xinjun Song, Linlin Xu</i>	
Development of a Six-Torch Automatic Welding System for Aluminium Vacuum Chambers	479
<i>C.L. Chen, C.C. Chang, C.K. Chan, S.N. Hsu, G.Y. Hsiung, J.R. Chen</i>	
Application of Feedforward and Feedback Control Strategy in the Speech Acquisition and Production Model	489
<i>Shaobai Zhang, Liqin Gao</i>	
An Improved Phonetic Learning Algorithm Based on the DIVA Model	495
<i>Shaobai Zhang, Xin Zhang</i>	
Comparing Different Feature Extraction Methods of Pump Dynamograph Based on Support Vector Machine	501
<i>Wei Wu, Yangyang Meng</i>	
Analysis for Height Control-Loop of Cruise Missile to Different Kinds of Autopilot	507
<i>Qiuqiu Wen, Qunli Xia, Chuntao Cai</i>	
An Optimized Scheduling Strategy Based on Task Type in Xen	515
<i>Yuxin Wang, Xiaogang Wang, He Guo</i>	
The Design of Machine Olfactory System Experiment Device and the Experiment on Meat Products Smell Recognition	523
<i>Xiaojing Yang, Ju Yang, Jing Zhu, Zhenghu Yan, Fujie Zhang</i>	
Activity Analyzing with Multisensor Data Correlation	529
<i>GuoQing Yin, Dietmar Bruckner</i>	
Enterprise Architecture and Business Intelligence: An Analysis of the Joint Application in the Sanitation Sector	535
<i>Marcio Romero, Renato José Sassi</i>	
Research and Implementation of E-Commerce Workload	543
<i>Qingsong Bao, Fang Yang, Bing Su</i>	
Knowledge Discovery from Noisy Datasets	549
<i>Hong Li, Yu Zong, Enhong Chen</i>	

Modeling and Simulation for Dynamics of Anti-HBV Infection Therapy	557
<i>Xiao Chen, Lequan Min, Yongan Ye, Yu Zheng</i>	
Signal Processing for Active Power Filters	567
<i>Petr Simonik, Pavel Brandstetter</i>	
Steel Billet Recognition in the Heavy Rail Production Line	575
<i>Hanyu Hong, Xiuhua Zhang, Yijun Yang, Zhejun Yu</i>	
Study on Vehicle Coupling Control for Automated Tracking Maneuver	583
<i>Xinyu Liu, Yulin Ma, Qing Wu, Zichao Huang</i>	
Reviews on Planar Region Detection for Visual Navigation of Mobile Robot under Unknown Environment	593
<i>Z.L. Wang, B.G. Cai, F.Z. Yi, M. Li</i>	
Research of Information Search Engine in Forestry Based on the Lucene	603
<i>Yanling Cui, Yu Chen, Jingyu Li</i>	
The Design of Broadband Electromagnetic Method System with GPS Simultaneous Localization	611
<i>Xiaoliang Zheng, Shengdong Liu</i>	
Intelligent Vision-Based Computerized Numerically Controlled (CNC) Machine	619
<i>Ghassan Al-Kindi, Hussien Zughraer</i>	
Robotic Arm, Wrist and Hand Using Pic Microcontroller	629
<i>Nurul Huzaimi, Mohamad Basir, Fuziah Sulaiman</i>	
A New Video Object Segmentation Algorithm by Fusion of Spatio-temporal Information Based on GMM Learning	641
<i>Qingsong Zhu, Yaoqin Xie, Jia Gu, Lei Wang</i>	
Author Index	651