

2013 Fourth International Conference on Intelligent Control and Information Processing

(ICICIP 2013)

**Beijing, China
9 – 11 June 2013**



**IEEE Catalog Number: CFP1389J-POD
ISBN: 978-1-4673-6248-1**

Table of Contents

Development of foot surface pressure distribution measurement system for the training of soccer players	Xuecan Fei, Peng Mo, Guozhong Liu	1
Crowd density estimation based on the normalized number of foreground pixels in infrared images	Guozhong Liu, Tianze Wang, Zheng Cao	6
Research on vector control method of neutral-point-clamped (NPC) three-level inverter with bootstrap driver	Ping Li, Qingxiao Zhang	10
Research on Oil Rig Automatic Feed Drilling System Based On MOBP Neural Network	Li Zhang, Jian Liu, Lei Wei	15
A heuristic algorithm for dispatching policy based on Vague Set's evaluation and optimization	Hongtao Zhao, Tao Wang, Qi Zhang	19
Vision Measurement Method with Single Camera and 3-Axis Accelerometer Sensor	Shidu Dong	25
Robust Visual Tracking via Adaptive Forest	Song Cao, Wenfang Xue	30
The Improved DOA Estimation Algorithm for Cross Array MIMO Radar	Zijing Zhong, Yu Shi, Hong Jiang, Yang Wang	35
A Selective Virtual Anchor Node Positioning Scheme for Wireless Sensor Networks	Lanhui Liu, Zhilong Shan	39
A new Scheduling Approach for Mix-Criticality Real-Time System	Shujuan Huang, Yi'an Zhu, Junhua Duan	43
Methodology for remanufacturing of industrial robotic manipulators using open control architecture	Marcelo H. Bomfim, Roberto A. Gontijo, Alexandre Q. Bracarense, Eduardo J. Lima II	47
Comparison of Several Lane Marking Line Recognition Methods	Haitao Ding, Bowei Zou, Konghui Guo, Cong Chen	53
The Adaptive PID Controller Design for Motor Control System with Backlash	Jinlong Dong, Bo Mo	59

Pairing Based Elliptic Curve Encryption Scheme with Hybrid Problems in Smart House	Rui Guo, Qiaoyan Wen, Zhengping Jin, Hua Zhang	64
Intelligent fault diagnosis of train bearings acoustic signals with Doppler shift based on the EMD and BPN	Ao Zhang, Fei Hu, Fang Liu, Changqing Shen, Fanrang Kong	69
Design and implementation of production management information system for an enterprise specialized in centrifugal casting	Jintao Deng, Ning Gao, Xiao Li, Xiangwan Tao, Jinhua Zhang, Yahong Zhao, Wei Sun	74
A data-driven method of product quality monitoring for industrial furnace tube centrifugal casting process	Xiao Li, Ning Gao, Jintao Deng, Xiangwan Tao, Jinhong Zhang, Lifeng Ma, Wei Sun	79
Stability Analysis of Singular Networked Control System with Long Time Delay and Date Packet Dropout	Ming Yang, Huaguang Zhang	84
A Modified Time-Domain Channel Estimation Method for OFDM Systems In Impulsive Noise Environment	Chaoyong Xu, Xiangning Chen, Shuang Yu	88
Optimization Design of Truss Structure Based on synchronous Cellular Genetic Algorithm	Yi Zhang, Fangjun Hu, Zheng Liu, Teng Zhan	94
Tuning of Auto Disturbance Rejection Controller Based on Multi-objective Genetic Algorithm	Zhengmao Tang, De Xie	98
On the Improvement of Sea Ice Classification by Fusing C- and L-band SIR-C Polarimetric Quantities	Qinchuan Xie, Wenhui Lang, Xi Zhang, Xuezhi Yang	103
An Exponential-Rayleigh Signal Strength Model for Device-Free Localization and Tracking with Wireless Networks	Yao Guo, Kaide Huang, Nanyong Jiang, Xuemei Guo, Guoli Wang	108
Steady-state Tracking Error Analysis of GPS Receiver Frequency Locked Loop	Dangwei Wang, Lihua Wang, Fangyao Lv	114
Stability Analysis of Nonlinear Singular System with Time-Varying Delay based on Neural Networks	Geyang Xiao, Huaguang Zhang	119
Z-Type and G-Type ZISR (Zhang Inverse Square Root) Solving	Yunong Zhang, Zhen Li, Yunjia Xie, Hongzhou Tan, Pei Chen	123

Forecast of Power Generation for Grid-Connected Photovoltaic System Based on Grey Theory and Verification Model	Yingzi Li, Zefeng Wang, Jincang Niu	129
Analysis of VANET Security Based on Routing Protocol Information	Lu Chen, Hongbo Tang, Junfei Wang	134
Deriving reflectance and shading components from a Single Image	Caixia Fan, Hong Zhu, Guangfeng Lin, Lei Cao	139
Fast Compression Algorithm of SAR Image Based on Compressed Sensing	Lina Guo, Xianbin Wen, Jinjin Yu	144
On the vertex-distinguishing proper total colorings of several classes of complete p-partite graphs with equipotent parts	Fang Yang, Xiang-en Chen, Chunyan Ma, Bing Yao	150
Dynamic Model and Fuzzy Adaptive Control of a Chinese Medicine Sugar Precipitation Process	Hongjun Duan, Qingwei Li	155
Improved Reversely A star Path Search Algorithm based on the Comparison in Valuation of Shared Neighbor Nodes	Weiteng Zhou, Baoming Han, Dewei Li, Bin Zheng	161
A Criteria of Passivity for Neural Networks with Discontinuous Activations	Jian Xiao, Zhigang Zeng	165
Robust Principal Component Analysis for Sparse Face Recognition	Ling Wang, Hong Cheng	171
Optimized H.264 Motion Estimation Algorithm Based on UMHexagonS	Chen Liu, Jian-Zhong Cao, Li-Nao Tang, Ji-Jiang Huang, Hui-Nan Guo, Xiao-Kun Dong	177
A Method for Automatic Generation of Track Layout Graph Based on Visio Secondary Development	Yong Zhang, Yaowei Su	182
New Delay-dependent Stability Criteria for Linear Systems with Multiple Time-Varying Delays	Qihe Shan, Huaguang Zhang, Feisheng Yang	188
Implementation of Face Cartoon Maker System Based on Android	Kairong Wang	193

A Tri-Stable Stochastic Resonance Model and its Applying in Detection of Weak Signal	Haibin Zhang, Fanrang Kong, Siliang Lu, Qingbo He	199
Object Tracking based on integrating the Genetic algorithm with Complex method	Xiaokun Dong, Jianzhong Cao, Hongtao Yang, Zhi Yu, Huinan Guo, Chen Liu	205
Public key cryptosystem and signature schemes over the ring of eisenstein integers	Xuedong Dong, Liqiang Hou, Yan Zhang	210
3D Hand Gesture Recognition Based On Polar Rotation Feature And Linear Discriminant Analysis	Yiding Wang, Lin Zhang	215
A Spatial Spectrum Estimation Algorithm based on Adaptive Beamforming Nulling	Yong J. Huang, Yu W. Wang, Fan J. Meng, Guo L. Wang	220
A Novel Feature Extraction Method for Motor Imagery Based on Common Spatial Patterns with Autoregressive Parameters	Mengqi Feng, Xiangzhou Wang, Shuhua Zheng	225
Joint Estimation of Angle and Doppler Frequency in MIMO Radar	Xiaoli Liu	231
Comparative Study of DMS and Conventional Stereo Based on Subjective Evaluation Experiment	Wei Zhao, Yin Wu, Cong Jin, Qin Zhang, Hui Wang	236
Model Parameter Adaptive Approach of Extended Object Tracking Using Random Matrix	Borui Li, Tianming Bai, Yongqiang Bai, Chundi Mu	241
Sliding Mode Control Using Switching Gain for a Vehicle Flexible Manipulator	Yang Li, Meng Wang, Yuanchun Li	247
A Flame Detection Method Based on the Amount of Movement of the Flame Edge	Hongke Xu, Yanyan Qin, Yong Pan, Hao Chen	253
Characteristic Analysis and Suppression Method Study of Seismic Scattered Waves	Junhua Zhang, Ming Zhang, Zhen Liu, Wenbo Zhu, Huaibang Zhang	257
Study on Message Scheduling of Time-triggered CAN with Improved Genetic Algorithm and Discretely Distributed Strategy	Jiangwen Wan, Jianxiang Huang, Renjian Feng, Gang Sun	261

Optimal Control based on temperature dynamic model of greenhouse crop germination period	Zhiying Yao, Zitian Xu, Shangfeng Du	267
An Expert System Approach for Generating Test Sequence for CTCS-3 Train Control System	Yong Zhang, Shuo Sha, Shu Wang	271
Different Zhang Functions Leading to Different ZD Models Illustrated via Time-Varying Square Roots Finding	Yunong Zhang, Yonghua Yin, Dongsheng Guo, Weibing Li, Zhende Ke	277
Behavioral Analysis and Modeling of Sensor Network System in Ambient Intelligence Environment	Xiaolong Zeng, Zhangqin Huang, Sheng Qian, Yiyuan Ren, Chunhua Xiao, Shuo Wang	283
Application of optimization model based on neural network in Softening Slope Stability by Strong Rainfall Infiltration	Zhigang Yang, Dong Zhang, Biao Deng, Weimin Chen	289
The Research of the Data Security for Cloud Disk Based on the Hadoop Framework	Jing Huang, Renfa Li, Zhuo Tang	293
A new ICA Method based on Chaos Artificial Fish Swarm Algorithm	Lu Huang, Hong Wang	299
Fast Detecting Moving Objects in Moving Background using ORB Feature Matching	Songyun Xie, Wanpeng Zhang, Ying Wang, Khalid Zakim	304
Running State Recognition in Videos via Frames' Frequency and Positions of Two Feet	Jinyan Yang, Guanlei Xu, Yu Li	310
A Scheme of Triangular-hiding Based on Two-dimensional Chaotic Maps	Hongmei Wang, Limin Qu	314
The Motion Decomposition of Power Descent Section of Soft Landing on Small Bodies Based on Sliding Mode and PD Control Algorithm	Lingli Gan, Yuanchun Li	318
Optimization Algorithms for Home Energy Resource Scheduling in presence of data uncertainty	Stefano Squartini, Matteo Boaro, Francesco De Angelis, Danilo Fuselli, Francesco Piazza	323
A Study of CMAC Neural Network Generalized Predictive Control for Generating Unit	Tao Sun, Hujun Ling, Licong Yuan	329

An Improved Dynamic-octree-based Judging Method of Real-time Node in Moving Geometry	Hongbo Li, Yuxin Wu, Yu Wu	333
A Fast Trend Extraction for the Analysis of Temperature Data	Da Yang, Xiaotong Wang, Guanlei Xu, Shipeng Su	338
A SVM-based Method for the Estimation of Fingerprint and Palmprint Orientation	Yanping Wu, Tong Zhao, Shuguang Wang, Yong A, Tiande Guo	343
Greenhouse air temperature predictive control using the Dynamic Matrix Control	Zitian Xu, Zhiying Yao, Lijun Chen, Shangfeng Du	349
A Fundamental Analysis-based Method for Stock Market Forecasting	Yuh-Jen Chen, Yuh-Min Chen	354
Research on State Differential Artificial Neural Network	Ziyin Wang, Mandan Liu, Yicheng Cheng	360
Multi Agent With Multi Behavior Based on Particle Swarm Optimization (PSO) for Crowd Movement in Fire Evacuation	Hartarto Junaedi, Mochamad Hariadi, I Ketut Eddy Purnama	366
A Robust Lane Detection Method for Autonomous Car-like Robot	Tao Sun, Shuming Tang, Jinqiao Wang, Weibin Zhang	373
Self-adaptive Prediction and Compensation Model for High-Accuracy MEMS Gyro's Startup Drift	Nan Yao, Zhonghua Liu, Feng Qian	379
The Driver Fatigue Monitoring System Based on Face Recognition Technology	Xiao-qing Luo, Rong Hu, Tian-e Fan	384
Analysis and Design of Internal Compensation for Peak-Current-Mode Converter	Suping Huang, Quanyuan Feng	389
Network Load Balancing Strategy Based on Supervised Reinforcement Learning with Shaping Rewards	Zhaohui Hu, Hao Chen	393
Adaptive Optimal Control for Nonlinear Systems with Control Constraints Using GDHP Technique	Dehua Zhang, Derong Liu	398

An Implementation of Distance Measuring for Dynamic Scene	Sai Wei, Zhengyi Liu, Chuanwen Hu	402
A semi-explicit multi-symplectic Fourier pseudospectral scheme for the coupled nonlinear Schrödinger equation	Hao Fu, Xu Qian, Songhe Song	408
Adaptive Kernel-bandwidth Object Tracking Based on Mean-shift Algorithm	Le Zhang, Danhong Zhang, Yixin Su, Fei Long	413
A Design of Intelligent Transfusion Monitoring System Based on the DSP and Fuzzy Control Algorithm	Yongming Qiao, Xiangfu Wu	417
A New Method to Estimate and Calibrate Channel Amplitude and Phase Errors of Phased Array Radar in Jamming Environment	Ziqiang Meng, Yachao Li, Zheng Bao	422
Robust Visual Tracking with a Novel Online Semi-Supervised Multiple Instance Boosting Algorithm	Si Chen, Shaozi Li	426
Markov Reconstruction of Financial Time Series	Kecheng Tang, Bo Yuan	432
Design of distributed energy system based on artificial neural network approach	Yingya Zhou, Zhe Zhou, Dongxiang Jiang	437
Bayesian Detection in Partially Homogeneous Environment with Orthogonal Rejection	Long Cai, Yajun She, Honghua Wang, Tao Luo	443
An Energy Efficient Sampling Method through joint Linear Regression and Compressive Sensing	Bo Zhang, Yulin Liu, Jiwei He, Zhaowu Zou	447
LIDAR Based Terrain Slope Detection on Fractal based Lunar Surface Modeling	Xiaonan Jiang, Xuechen Sun, Chengshan Han, Xiangzhi Li, Yunlong Zhao	451
Maneuvering Frequency Adaptive Algorithm of Maneuvering Target Tracking	Liang Chen, Xin Gong, Huijing Shi, Junwei Yang	455
An Enhanced Histogram of Oriented Gradient for Pedestrian Detection	Daimeng Wei, Yong Zhao, Ruzhong Cheng, Guoliang Li	459

On the Control Algorithm of Nonlinear Systems with Backlash	Guochun Sun, Ce Ding	464
Exploratory Study on Memory Analysis of Windows CE Device	Shumian Yang, Lianhai Wang, Shuhui Zhang	470
Nonsampled Shearlet-Based Image Denoising Using Multiscale Products	Junliang Liu, Lin Lei, Shilin Zhou	476
A New Texture Feature Extraction Method for Image Retrieval	Zong Li, Ying Liu, Daxiang Li	482
Real Time Handwritten Digit Recognition on Mobile Devices	Qi Song, Zehua Gao	487
System Performance Analysis of Low-Altitude Relay Networks	Qingmin Meng, Mingkui Lu, Benli Sun, Lei Wang, Wenjing Yue, Feng Tian	491
Semantic annotation method of IOT middleware	Ming Zhou, Hong Fan, Yan Ma	495
The Sliding Mode Control for Speed System of the Variable Displacement Motor at the Constant Pressure Network	Shuhua Zheng, Xiangzhou Wang, Ye Lu, Yu Wang	499
Fingerprint Subclassification Using Rotation-invariant Features	Yong A, Tiande Guo, Yanping Wu, Guangqi Shao	504
Prediction of Multivariate Time Series with Sparse Gaussian Process Echo State Network	Min Han, Weijie Ren, Meiling Xu	510
Implementation and Performance of Image Filtering on GPU	Xi Chen, Yuehong Qiu, Hongwei Yi	514
A Novel Loop Adaptive Hardware Design for Coarse-Grained Reconfigurable Array	Wei Ge, Wen Wen, Zhi Qi	518
Speech Emotion Recognition using Combination of Features	Qingli Zhang, Ning An, Kunxia Wang, Fuji Ren, Lian Li	523

Quantum-behaved Particle Swarm Optimization Algorithm with Lévy Mutated Global Best Position	Yuming Peng, Yi Xiang, Yubin Zhong	529
Robust Strategies for Differential Games under Uncertain Dynamics and the Relation to Robust H^∞ Control	Xianwei Zeng, Ye Tang, Youzhi Ding, Guoqing Wang, Qingzheng Xiao	535
IDVR-PFM: A Connectivity-oriented VANET Routing Protocol in Urban Scenarios	Huijing Shi, Chong Ma, Liang Chen, Zhizhong Ding	541
A Novel Chaotic System and Design of Pseudorandom Number Generator	Lequan Min, Lijiao Zhang, Yuqun Zhang	545
Real-time Barrier Lakes Monitoring and Warning System Based on Wireless Sensor Network	Zhiqin Liu, Jun Huang, Qingfeng Wang, Yaobin Wang, Jie Fu	551
Image Quality Assessment Using Histograms of Oriented Gradients	Yazhou Yang, Dan Tu, Guangquan Cheng	555
An improved Single-Pass clustering algorithm Internet-oriented network topic detection	Xiaolin Yi, Xiao Zhao, Nan Ke, Fengchao Zhao	560
Implementation of BDS/DR System Based on CYGNAL Kernel	Nan Yao, Zhonghua Liu, Feng Qian	565
Wavelet-based Denoising: A Brief Review	Guangyi Chen, Wenfang Xie, Yongjia Zhao	570
Security Control System Research on a High-altitude Hot Washing Device	Shan He, Sijie Xiao, Jinbei Zheng, Guangming Li, Jingfei Lai, Dengguo Wu, Zhensheng Liu	575
Direct Adaptive Type-2 Fuzzy Logic Control of a Generic Hypersonic Flight Vehicle	Fang Yang, Ruyi Yuan, Jianqiang Yi, Guoliang Fan, Xiangmin Tan	581
Improved Extended Kalman Fusion Method For Upper Limb Motion Estimation With Inertial Sensors	Sheng Zhang, Kang Xiao, Qian Zhang, Hao Zhang, Yi Liu	587
Pitch Detection Using EMD-Based AMDF	Yuan Zong, Yumin Zeng, Mengchao Li, Rui Zheng	594

Dual tree complex wavelet transform and Bayesian estimation based denoising of Poission-corrupted X-ray Images	Lingyan Du, Yuqiao Wen, Jiang Ma	598
The implementation of FIR low-pass filter based on FPGA and DA	Guo-Wei Cui, Feng-Ying Wang	604
Research on PLCC Network and Routing Optimization for Advanced Metering Infrastructure in Intelligent Microgrid System	Guoqing Weng, Wenwei Zhou, Jun Qi	609
Wireless M-Bus Sensor Nodes in Smart Water Grids: the Energy Issue	Stefano Squartini, Leonardo Gabrielli, Matteo Mencarelli, Mirco Pizzichini, Susanna Spinsante, Francesco Piazza	614
Unmanned Combat Aerial Vehicles Path Planning Using a Novel Probability Density Model Based on Artificial Bee Colony Algorithm	Bai Li, Ligang Gong, Chunhui Zhao	620
Modeling of Thermal Comfort Words Using Interval Type-2 Fuzzy Sets	Chengdong Li, Jianqiang Yi, Guiqing Zhang, Ming Wang	626
Research of GrabCut Algorithm for Single Camera Video Synopsis	Lili Hao, Jianrong Cao, Chengdong Li	632
Optimal Binary Thresholding Segmentation for Medical Images in Rough Fuzzy Set Framework	Jinhong Yang, Tingquan Deng	638
A New Traffic Light Detection and Recognition Algorithm for Electronic Travel Aid	Jie Ying, Xiaomin Chen, Pengfei Gao, Zhonglong Xiong	644
Adaptive Phased-Array Tracking in the Standoff Jammer Using H Infinity Filter	Jing Hou, Zhanrong Jing, Tian Gao, Yan Yang	649
Backstepping Adaptive Control of Dual-motor Driving Servo System with Backlash Nonlinearity	Haibo Zhao	655
Design of a New Predictive Functional Control Algorithm Based on Linear Difference Equation Model	Zhiyun Zou, Dandan Zhao, Yue Huang, Yusong Pan, Yuqing Guo, Meng Yu	661
A Review of Control Strategies for DC Micro-grid	Zhihui Jian, Zhengyou He, Junbo Jia, Yuhong Xie	666

Optimization for Four-sample Rotation Vector Attitude Estimation Algorithm	Shuyuan Yang, Baokui Li, Qingbo Geng	672
Controllers' design and verification based on the method of undetermined coefficients for satellite formation	Zhaohui Dang	677
Intelligent Control for Air-Fuel Ratio of Compressed Natural Gas Engine	Pengwei Li, Jing Wang, Wenyuan Cai	684
Experimental Research on Laser Material Processing Used in Quartz MEMS Gyroscope	Ke Zhao, Qianqian Wang, Lihui Feng, Benguo Wang, Fang Cui	689
The Study of Archimedean Spiral Antenna for Partial Discharge Measurement	Qingyan Wu, Guoqiang Liu, Zhengwu Xia, Liang Lu	694
Salient Region Detection Based on Color-Complexity and Color-Spatial Features	Zhicheng Wang, Lina Li, Yufei Chen, Weidong Zhao	699
Research on Data and Workflow Security of Electronic Military Systems	Wei Wang, Haining Luo, Huiyu Deng	705
Wave Following Control Based on Robust Adaptive Method and ADRC for a Flying Boat	Huan Du, Guoliang Fan, Yinggu Zhu, Jianqiang Yi	710
Discrete-Time LQR Optimal Tracking Control Problems Using Approximate Dynamic Programming Algorithm with Disturbance	Qingqing Xie, Bin Luo, Fuxiao Tan	716
Alternating Direction Algorithm for Optimal H2 Model Reduction	Taishan Zeng	722
Design and Implementation of A Solid-state Flight Data Recorder Using Multichannel Technique	Guojie Qin, Guoman Liu, Hui Feng, Butugeqi	726
Exponential Stability of Stochastic MJSNNs with Partly Unknown Transition Probabilities	Chunge Lu, Linshan Wang	730
Formal Analysis of A Fault Tolerant GNC System Architecture	Songtao Fan, Yanan Gao, Yue Lin, Lei Wan	736

An IoT-based Appliance Control System for Smart Homes	Ming Wang, Guiqing Zhang, Chenghui Zhang, Jianbin Zhang, Chengdong Li	744
Research on Regulation Performance Evaluation of Automatic Generation Control in Power Plants and Its Application	Chen Chen, Ping-kang Li, Wu-bin Wen	748
Near-optimal control for continuous-time nonlinear systems with control constraints using on-line ADP	Chunbin Qin, Huaguang Zhang, Yanhong Luo	754
Novel adaptive VSS-NLMS Algorithm for System Identification	Haiquan Zhao, Yi Yu	760
Research of UAV's Multiple Routes Planning based on Multi-Agent Particle Swarm Optimization	Xuzhi Chen, Wei He, Zhe Wu	765
A New Higher Sliding Mode Control Scheme for Underactuated system	Zhuang Lin, Benjie Dong, Zhiqun Guo	770
Force Feedback Assisted Balancing of Inverted Pendulum under Manual Control	Jianning Hua, Yujie Cui, Pu Shi, Yanhua Yang, Hongyi Li	776
3D Hybrid Mesh Generation for Complex Geometry	Yamin Wang, Yafei Zhang	782
Implementation of Rössler Chaotic System through Inherent Exponential Nonlinearity of a Diode with Two-Channel Chaotic Synchronization Applications	Sura Larptawee, Wimol San-Um	787
A Universal Simulation Control Service based on HLA	Fei Jie, Yufeng Chen, Fengxia Li, Feifei Li	792
Cooperative Multiagent Reinforcement Learning Using Factor Graphs	Zhen Zhang, Dongbin Zhao	797
Context-Aware Multi-Agent Model of MicroGrid Optimization Using Fuzzy Preferences Evolutionary Algorithm	Hongbin Sun, Chunjun Zhou	803
A Task Multi-Resolution Modeling Method in the Aggregated CGF	Fei Jie, Sanyuan Zhao, Zimu Li, Ke An	809

Indirect Adaptive Control of Nonlinear System via Dynamic Multilayer Neural Networks with Multi-Time Scales	Zhi-Jun Fu, Li Liu, Wen-Fang Xie	814
The Performance of Differential Evolution Algorithm for Training CSFNN Using a Pattern Recognition Application	Ali Rıza Yilmaz, Burcu Erkmen, Oguzhan Yavuz	820
A Hybrid Method for Online Rotor Parameters Estimation	Huiyuan Li, Yixin Su, Min Hong, Fei Long	824
Multi-step evolution strategy based DNA generic algorithm for parameter estimation	Duan Zhang, Yanling Xia, Xiongxiang He, Sheng Li	828
An Ensemble Approach to Estimate the Fault-Time Instant	Cesare Alippi, Giacomo Boracchi, Vicenc Puig, Manuel Roveri	836
Quantitative recognition of rolling element bearing fault through an intelligent model based on support vector regression	Changqing Shen, Fei Hu, Fang Liu, Ao Zhang, Fanrang Kong	842
Study of micro-vessel recognizing using sequence image spatiotemporal relationship	Zhongming Luo, Zhuofu Liu, Shaojie Zhou	848
Design and Realization of Strain Measurement System Based on FPGA and ARM	Lifeng Xiao, Xinguang Chen, Baihong Lin	853
A Novel Control System Design Method for Missile with Lateral Jet and Aerodynamic Surfaces	Zhen Shi, Wenqiao Ma, Yufang Zhang	858
Balance Control of Two-wheeled Self-balancing Robot Based on Linear Quadratic Regulator and Neural Network	Chenxi Sun, Tao Lu, Kui Yuan	862
Research on Performance of a T/F-Domain MC-SS System over AWGN Channels	Jinbao Wang, Wenge Yang, Xiaohuan Dong, Jiaqing Zhou	868