

# **2009 9th International Conference on Electronic Measurement & Instruments**

**(ICEMI 2009)**

**Beijing, China  
16 – 19 August 2009**

**Volume 1  
Pages 1-537**



**IEEE Catalog Number: CFP0933C-PRT  
ISBN: 978-1-4244-3863-1**

## ☆ Science Foundation of Instrument and Measurement

- 1.1 Development of a Didactic Platform for Acquisition and Processing of Biomedical Signals for the practice in Biomedical Engineering ..... Scolaro, G. R Azevedo, F. M Rathke, J. E Possa P. R C. Andrighetto E. Adur R. Marino Neto, J (1-1)
- 1.2 Verification of IEEE1588 Time Synchronization in NASA Agate Data Bus Standard ..... Paces P Sipos M Vesely M (1-5)
- 1.3 Trends in Ultrasonic Transducer Design ..... Bernd Henning (1-11)
- 1.4 A Novel Effective Channel Order Estimation Algorithm Based on Subspace Decomposition ..... Dai Songyin Yuan Sijie Dong Shupan (1-13)
- 1.5 High Precision Measurement of Dust Content in Gas ..... Lichun Xiao Zhijiang Ding Qiang Li Jingfei Yang (1-18)
- 1.6 Mixed-Hop Hierarchical Routing Protocol Based on Scale-Free Network Topology ..... Zhang Jie Jing Bo He Liming Yang Guang (1-22)
- 1.7 The Pulse Sequence Generator Based on CPLD in the Application of Pulse Nuclear Magnetic Resonance System ..... Wenli Wang Xia Zhang Hong Wang Zhiqiang Liu Xiaoting Li (1-27)
- 1.8 Performance Analysis and Measurement of micro-machined Gyroscope ..... Liu Haipeng Gao Shiqiao Liang Xinjian Jin Lei (1-30)
- 1.9 A Performance Analysis and Precise Temperature Control of Accelerometers for Airborne Gravimetry ..... Jilian Li Kaidong Zhang Qi Zhang (1-35)
- 1.10 Current-mode Bi-second-order Filter with the Minimum Components ..... Yongán Li (1-39)
- 1.11  $H_\infty$  Control Theory in Network Output Feedback Controller Design ..... Yuan Liu Jianwei Ji (1-42)
- 1.12 Feature Extraction of Somatosensory Evoked Potentials Based on ICA for classification of External Tactile Stimuli in rat ..... YaoMing Yu RongChin Lo (1-46)
- 1.13 On-condition Maintenance Based on Non-homogeneous Poisson Process Model ..... Hongzhi Teng Junhui Yin Longji Hu Feng Li (1-51)
- 1.14 Mathematical Model for Amplitude distortion in Nonlinear HPA ..... Hua Cui (1-55)
- 1.15 Set-membership Identification of T-S Fuzzy Models Using Support Vector Regression ..... Liqing He Xianfang Sun (1-59)
- 1.16 The Study of High Accuracy Capacitive Displacement Sensor Used in Non-contact Precision Displacement Measurement ..... Haima Yang Ruiting Li Qingzhong Wei Jin Liu (1-64)
- 1.17 Method for Lower Computation of Testability Analysis for Analog Circuit ..... Yong Lei Yongle Xie Guangju Chen (1-69)
- 1.18 Design and Simulation of an Electromagnetic Microactuator of Fuze Safety and Arming Device ..... Hongsheng Hu Jiong Wang Shan Bi (1-72)
- 1.19 Semantic Web Service Technology for Remote Intelligent Measurement ..... Hui Liu (1-78)
- 1.20 Study on The Acoustic Wave Flying Time Measurement Method Based on the Second Related Technology ..... Feng Tian Changhui Zhang Song Liu Tingting Bian Weijun Zhang (1-83)
- 1.21 Analysis and Error Compensation of Electric Sine/Cosine Encoder ..... Kun Xiao Lina Wang (1-87)
- 1.22 Research on Modeling and Experimentation on Detecting Buried Depth of Optical Fiber Submarine Cables Based on Active Detection Technique ..... Xuejun Zhou Yingjian Wang Yuanyuan Zhou (1-91)
- 1.23 High-sensitivity Capacitive Silicon micro-accelerometer ..... Ling Wang Yongtian Wang Hanyu Zhao (1-95)

1.24	Research for the Intelligent RMB Sorter Based on ANN	Zhongnian Li	Xin Zhou	Yonghong Chen	(1-99)
1.25	Pnn-Based Algorithm for the Recognition Of Speakers	Ye Fang	Yabin Zhou		(1-104)
1.26	Research on Polarization Characteristics of Hybrid Optical Structure IFOG	Yu Qiang	Li Xuyou	Li Xin	(1-108)
1.27	Research on Design and Technology of Ultrasonic Flow Measurement System	Guoheng Cui	Kejing Cao	Yinbing Zhu	(1-113)
1.28	Research on Error Compensation of Measuring System based on Closed Vector Chain Method			Yunfeng Li	(1-118)
1.29	A Cross-layer Designed Scheduling Algorithm for WiMAX Uplink	Wei Gan	Jiqing Xian	Xianzhong Xie	Juan Ran (1-122)
1.30	Comparison of Absorbing Boundary Conditions of FDTD in High Frequency Electromagnetic Field Simulation	Hui Xu	Hailian Huang	Yuqiu Chen	(1-128)
1.31	Method of Optimal Dynamic Structure Design	Weimin Yang	Chunping Niu		(1-132)
1.32	New Topology of DC/DC Converter for Battery Discharging Circuit in PV Syetem	Jiabin Wang	Chenghua Wang	Feng Hong	(1-136)
1.33	A Recognition Method of Petroleum Pipeline Safety-detection Events Using the largest Lyapunov Exponent and Wavelet Threshold De-noising	Jingchuan Zhang	Zhoumo Zeng	Feng Hao	Shijiu Jin (1-140)
1.34	A Novel Auto-calibration Method of the Vector Magnetometer	Xiaoming Zhang	Lizhen Gao		(1-145)
1.35	Research on New Test Lenses for Dioptric Power of Intraocular lenses	Zhang Jiyan	Li Fei	Liu Wenli	Hong Baoyu (1-151)
1.36	Sphericity Error United Evaluation Using Particle Swarm Optimization Technique	Xiulan Wen	Hongsheng Li	Fenglin Wang	Dongxia Wang (1-156)
1.37	The Analysis of Vehicles Electromagnetic Environment Based on TLM Method	Yufei Wang	Xiaohui Zhao	Shuxun Wang	Xiaoying Sun (1-162)
1.38	Research on UWB Indoor Positioning Based on TDOA Technique	Bai Yan	Lu Xiaochun		(1-167)
1.39	Research on Atomic time Algorithm of Time and Frequency Standard	LIU Xiaojin	ZHU Jiangmiao	GAO Yuan	LIU Mingliang (1-171)
1.40	Smoothing Treatment and Tool Compensation of Surface Scan Tracking Measurement Sampling Data	Xiaohong Lu	Zhenyuan Jia	Defeng Jia	Jiangyuan Yang (1-177)
1.41	A Novel Weighed Hidden Markov Autoregressive Approach for Trend Prediction of Electronic Systems	Liu Zhen	Huang Jianguo	Wang Houjun	Luo Xin (1-182)
1.42	Joint 3-D Parameter Estimation Method Without Parameters Pairing for Near Field Sources			Liguo Wang	(1-187)
1.43	3D Shape Reconstruction System with Feature Projection via Stereo Light Microscope			Shujuan Yin	Yuezong Wang (1-192)
1.44	A Better Engineering Method for Measuring Gyro Drift of INS Based on LabVIEW Platform			Jingjuan Zhang	Rong Zhao (1-196)
1.45	A Universal Fault Diagnosis Expert System based on Fault Tree	Zhou Jian	Yu Jinsong	Dai Jing	(1-200)
1.46	Engine Lubricant Warning System Based on the Dielectric Constant	Yumei Liu	Xiaoning Cao	Chenghui Qian	Jian Su Hongqi Li Lei Gu (1-205)
1.47	Suspension system fault diagnosis method based on fuzzy mathematics	Yumei Liu	Xiaoning Cao	Jian Su	Qiang Guo Fengying Lu Li Cui (1-210)

- 1.48 Suspension Gaps Identification Based on Cluster Analysis .....  
..... Yumei Liu Xuehai Li Sujian Xiaolai Jiang Xiaoning Cao (1-215)
- 1.49 An Improved Geometric Approach to Conflict Resolution in Curve Trajectory .....  
..... Zhang Zhong Zhang Xuejun (1-220)
- 1.50 Research on a Method of Facial Expression Recognition .....  
..... Fengjun Chen Zhiliang Wang Zhengguang Xu Donglin Wang (1-225)
- 1.51 Research and Implementation of License Plate Location Based on Histogram Division Method .....  
..... Jianxia Wang Guilong Gao Huili Yang (1-230)
- 1.52 Fuzzy Immune PID Control for Drying Process Based on LS algorithm and Genetic Algorithm .....  
..... Dequan Zhu Jixian Wang Liancun Qian (1-234)
- 1.53 Study on Stabilization and Tracking for SOTM ..... Guimin Xu Huachun Xu Wei Jin (1-240)
- 1.54 Study on Gyro Error Correcting for SOTM ..... Guimin Xu Huachun Xu Huihua Chen (1-245)
- 1.55 WSN Multilateration Algorithm Based on Landweber Iteration .....  
..... Lei Wang Yuntao Liu Xiaohui Xu Xiaopeng Wang (1-250)
- 1.56 Simulation Analysis of Sensitivity for Electrical Capacitance Tomography .....  
..... Tian Pei Wenliang Wang (1-255)
- 1.57 Mechanical Impedance Method and Stiffness Calculation Formula for Detecting the Foundation Pile ...  
..... Bo Liu Jun Hao Hongyue Ma Hongmei Cui (1-259)
- 1.58 Research on Combination Forecast Method of Instrument Precision .....  
..... Aihua Li Xinguo Wang Hualong Xu Shiping Li (1-264)
- 1.59 Research on the LiBr Solution Concentration of Electronic Measurement System .....  
..... Shilei Zhang Lianzhi Yu Xiaofei Zhu Wenlong Yang (1-268)
- 1.60 Analysis of the Leakage Inductance of Planar Transformer .....  
..... Jianbing Li Changchao Hu Xuemin Pang (1-273)
- 1.61 Study of High Voltage Nanosecond Pulse Reconstructing Based on LabVIEW .....  
..... Weifeng Chen Weiwang Zhang Yongjuan Cao Li Yu (1-277)
- 1.62 Research on the Truncated Volterra Series Model for Shortwave Power Amplifiers Linearization .....  
..... Zhixing Le Guojin Wan Limin Chen Xianghua Lu (1-282)
- 1.63 Design of Portable Performance Parameter Test System for Aviation DC Generator .....  
..... Shutuan Zhang Fang Lu Zhongshan Jiang Kai Zhang (1-286)
- 1.64 Digital Signal Processing Method and Implementation For Pulse Laser Rangefinder .....  
..... Jianke Li Baojun Zhao Linbo Tang Xiaoxia Zhao (1-289)
- 1.65 Amplifying Performance of Lever-type Flexure Hinge Amplifying Mechanism .....  
..... Jianying Shen Yun Zhao (1-294)
- 1.66 Effects of Combs on Coupling Error in the Vibratory MEMS Gyroscope with Various Air Dampings ...  
..... Wenwen Zhou Bin Zhou Zhiyong Chen Rong Zhang (1-298)
- 1.67 Research on Reliability Estimation and Performance Prediction Based on Step-Up-Stress Accelerated Degradation Testing .....  
..... Zhanqiang Jia Jinyan Cai Yuying Liang Chunhui Han (1-302)
- 1.68 Failure Mechanism Based Failure Rate Model ..... Liyang Xie Xiurong Zhao (1-307)
- 1.69 Research on Key Technique of General Purpose ATE Model .....  
..... Haiming Ye Shaolei Zhou Junyan Xu (1-313)
- 1.70 Research on Modulation Stability and Compensation Method of Y Waveguide in Fiber Optic Gyroscope .....  
..... Xuyou Li Zhou He Chen Zhang Gang Wang (1-316)
- 1.71 Force Acquisition System for Digital Impact Tester .....  
..... Yongling Fu Guohui Han Gangjun Li (1-322)
- 1.72 Research of Modeling and Simulation to Control Chaos in H Bridge Converter .....  
..... Wei Jiang Yuefei Zhou Junnin Chen Fang Yuan (1-327)

1.73	Comparison of INS based Angular Rate Matching Methods for Measuring Dynamic Deformation	Salman Majeed Fang Jiancheng (1-332)
1.74	Research on Precision Model Of Dynamic Metrology System For IATE	Hongyu Mao Qiongwei Li Zhuolin Hu Xiaohui Li (337)
1.75	IEEE1588 Clock Servo Algorithm	Weidong Ye (1-341)
1.76	Method with the Center of Graph for Point Pattern Matching	Shanli Xuan Dong Liang Ming Zhu Yizheng Fan Nian Wang (1-345)
1.77	Design of a Novel Biomimetic Tilt Sensor Based on Variable Reluctive Transducer	Lei Guo Qizheng Liao Shimin Wei (1-350)
1.78	Medical Image Registration Method Based on The Optical Flow Model Of Improved Regularization	Anna Wang Shiyao Li Silin Xue Yanhua Qu Ran Tao (1-355)
1.79	360A novel Method of Modeling and Simulation for Electrical Resistance Tomography System	Xiang Deng Zengwei Yan Zheng Wei (1-360)
1.80	Study on Fusion of Electromagnetic Flowmeter and ERT System in Slug Flow	Xiang Deng Zheng Wei Zengwei Yan (1-365)
1.81	Implementation of Hierarchical Design for Testability Methodology	Zhang Yansheng Chen Jianhui Jin Jianhui (1-369)
182	New Impact-based Method for Measuring the Velocity of Solid Granules	Yongqian Ding Weimin Ding Xiangze Lin (1-374)
1.83	EOM Bias Control Scheme in BOTDR System	Chengqun Yin Liguang Liu Anqiang Lv Yongqian Li (1-378)
1.84	Methods of Optimization of Milling Parameters Based on Genetic Algorithm	Chengqiang Zhang Jie Chen (1-382)
1.85	Design of Loading Pressure Measuring Circuit of Highway Accelerated Loading Test System	Jiwei Zhang Zhiguang Guan Xuguang Wang (1-386)
1.86	Primary Resonance of Coupled RLC Circuit and Spring System with Internal Resonance Considering Inductance Nonlinearity	Yang Zhi'an Cui Yihui Li Gaofeng (1-391)
1.87	The Application of Mixed Model in Dependent Data Analysis	Dengchao Feng Wei Cai Junhong Wang (1-396)
1.88	The Simulation for Damage Identification of wing model Basis on PNN	Jianbin Zhao Mei Yuan Qiang You (1-400)
1.89	Study on Genetic Algorithm Used in Damage Identification	Chong Du Mei Yuan Qiang You (1-404)
1.90	Simulation and Experiment Study of Space Vector Pulse Width Modulation	Baohua Lang Miao Miao Weiguo Liu Guangzhao Luo (1-408)
1.91	Identification of Parameters in a High-frequency Current Transducer Using for Partial Discharge Measurements	Xuefeng Zhao Zhenquan Sun Zhifeng Guo Yanming Li (1-413)
1.92	Research on Recognition of Work-piece Based on Improved SIFT Algorithm	Xiaohua Wang Weiping Fu Daixian Zhu (1-417)
1.93	Research of WSN Routing Algorithm Based on the Ant Algorithm	Wenxiang Zhang Yanying Wang Yinhua Ma (1-422)
1.94	Research on Measurement Technology of Dual-Mixer Time Difference	Wang Yuzhen CaiYing (1-427)
1.95	Summary on Weak Signal Detection Methods based on Chaos Theory	Chen Wei Meng Chen Wang Cheng Zhang Zhe (1-430)
1.96	Research on Electrostatic Between Metallic Particle and Semiconductor Matrixes	Gefei Yu (1-436)

☆ **Innovative Designing of Instrument and Test System**

1. 97 Virtual Instrument for Measurement of Firing Pulse of Electric Detonators .....  
..... Kuhinek Dalibor Igor Zori Č(1-440)
1. 98 A Standard-based Global Ocean Monitoring System ..... Eugene Y. Song Kang B. Lee (1-445)
1. 99 Reducing the Number of Measurements in Induction Cooker Design .....  
..... Bekir Sami Sazak Sevilay Cetin (1-450)
1. 100 FPGA Implementation of a Three-Level Power Amplifier for Magnetic Bearings .....  
..... Li Zhang Kun Liu Xiaofei Chen (1-455)
1. 101 Design of Arbitrary Waveform Generator Based on SDRAM .....  
..... Daqiang Qiu Qunzhan Li Fuling Zhou (1-461)
1. 102 Design and Application of a New TEC-based Constant Temperature Controller .....  
..... Gang Wang Feng Sun (1-465)
1. 103 Research of Auto Test System of Integrative Measurement Controller Based on PXI Bus .....  
..... Zhang Yanjun Yu Xiaoguang (1-468)
1. 104 Design for Test-node and Diagnosis Strategy of The Armored Vehicles Electrical System .....  
..... Yanwei Cheng Yongcheng Xie Guangsheng Li (1-472)
1. 105 Measurement of Winding DC Resistance Based on LabVIEW .....  
..... Xinxi Zhang Yong Li Jun Xu Lei Xu (1-476)
1. 106 A Method of High Efficiency Ultrasonic Excitation .....  
..... Zhixue Shao Lihua Shi Haitao Zhang Qin Yin (1-479)
1. 107 System of Wireless Temperature and Humidity Measurement Based onLabVIEW .....  
..... Hongqun Zhang Yuanyuan Yan (1-483)
1. 108 Design of the System for COD Monitoring online .....  
..... Rongxia Sun Na Ji Liang Guo Yan Yang (1-487)
1. 109 The Study on Synchronization Technology for Marine Controlled Source Electromagnetic Survey .....  
..... Meng Wang Ming Deng Qisheng Zhang Kai Chen (1-491)
1. 110 Modeling of The Conductive Ring Electrical Impedance Tomography Sensor .....  
..... Gu Jun Yin Wuliang Wang Chao Wang Huaxiang (1-496)
1. 111 Self-Constructing Simulation System for Propelling AAA .....  
..... Yuanyuan Liu Zheng Mao Fei Yuan Liang Wu Baolin He (1-500)
1. 112 Design of Measurement and Evaluation System for human exposure to mechanical vibration .....  
..... Zhang Zhifei Xu Zhongming He Yansong (1-504)
1. 113 New-type Ultrasonic Flow meter design based on FPGA High-speed DataSampling .....  
..... Yuhui Wang (1-509)
1. 114 Research and Design of IUR76-I Test System for Ultraviolet Flame Detectors .....  
..... GuoSheng Zhang Yang Li Yan Xu Jia Wang (1-513)
1. 115 Development of Monitoring System based on Virtual Instrument .....  
..... Yin Ming Pan Hongbing Li Xiaomin (1-516)
1. 116 Automatic Testing System for Parameters of High-current Thermoprotector .....  
..... Yanhong Wei Chang Xu (1-520)
1. 117 Measuring System for Micro Force Based on Electrostatic Theory .....  
..... Yongyue Qi Haitao Wang Yuchi Lin Meirong Zhao (1-524)
1. 118 Methodological Approach to GPS Disciplined OCXO Based on PID PLL .....  
..... Baojian Cui Xingbo Hou Dehai Zhou (1-528)
1. 119 Design and Realization of Arbitrary Radar Waveform Generator Based on DDSand SOPC Technology .....  
..... Wenfeng Dong Quan Liu Shirui Peng Haihong Li (1-534)

1. 120 Comparative Analysis of Mixing Performance and Pressure Loss of Three Types of Passive Micromixers .....  
 ..... Lei Guo Shusheng Zhang Lin Cheng Yinlin Song (1-538)
1. 121 The Design of Clock Distribution in the Parallel/interleaved Sampling System .....  
 ..... Cao Peng Wang Mingfei Qi Wei Fei Yuanchun Tian Haiyan Meng Fanjun (1-543)
1. 122 A Real-Time Simulation System of Wind Power Based on LabVIEW DSC Module and Matlab/Simulink ...  
 ..... Li Nailu Lv Yuegang Xi Peiyu (1-547)
1. 123 Feature Extraction Based on Supervised Kernel Locality Preserving Projection Algorithm and Application to  
 Fault Diagnosis ..... DeCheng Wang Hui Lin (1-553)
1. 124 A novel single chip implementation of MEMS INS data acquisition and processing system using FPGA and its  
 soft processors ..... Dai Gang Li Mei Su Wei Shao Beibei (1-558)
1. 125 Design of FPGA-Based Reconfigurable Intelligent Instrument Gao .....  
 ..... Jin Cheng Mingqing Xiao Yuhu Du (1-562)
1. 126 System Design to Measure the Large Dynamic Scope Signal of Shallow Seismograph .....  
 ..... Zihua Li Henli Song (1-566)
1. 127 A Design of Bi-verification Vehicle Access Intelligent Control System Based on RFID .....  
 ..... Xiaohu Fan Yulin Zhang (1-569)
1. 128 Intelligent Rehabilitation Training System Based on Multi-parameter Status Monitoring .....  
 ..... Wei Liang Hongfei Wei Feng Zhou (1-574)
1. 129 Wetness Measurement Theory Based on Microwave Differential Technique .....  
 ..... Shu-e Zhang Qiuyue Xia Hua Xiong Zhonghe Han (1-579)
1. 130 Double Sampling Architecture for Performing Fine Time Interpolation within a Limited Logic Density FPGA  
 ..... Liu Shubin Wang Jinhong Chen Kai An Qi (1-585)
1. 131 Design of MEMS Electrometer for Highly Sensitive Charge Measurement .....  
 ..... Zhuang Li Bintao Lin Chilai Chen Deyi Kong (1-590)
1. 132 Research and Realization of Signal Detector in DC Signal Injection Method .....  
 ..... Yulin Qi Yinghua Li Hongbo Xu (1-594)
1. 133 Industrial High-temperature Radar and Imaging Technology in Blast Furnace Burden Distribution Monitoring  
 Process ..... Xianzhong Chen Fengmei Liu Qingwen Hou Yifang Lu (1-599)
1. 134 Study on A Method of Steam Wetness Measurement based on Microwave Resonant Cavity .....  
 ..... Han Zhonghe Qian Jiangbo (1-604)
1. 135 Design and Implementation of Random Sample Circuit in Digital Phosphor Oscilloscope .....  
 ..... Yang Ming Gao Lizhong Chang Bin (1-608)
1. 136 New Approach of Imagery Generation and Target Recognition Based on 3D LIDAR Data .....  
 ..... Jinhui Lan Zhuoxun Shen (1-612)
1. 137 Virtual Ultrasonic Waveform Acquisition and Analysis System Based on LabVIEW and PCI-12400 A/D Card  
 ..... Haijun Niu Feng Sun Yuexiang Wang Lifeng Li Deyu Li Yubo Fan (1-617)
1. 138 Realization of Piezoelectric Gyroscope Drift Data Acquisition System and its LMI-based Robust Filter Design  
 ..... Lei Zhang Ahua Mu Jian Zhang Chenghu Qiang (1-621)
1. 139 Research and realization of Current Collection in Digital Substation ..... Zhaofeng Li Yulin Qi (1-626)
1. 140 Real-time Power Quality Monitoring and Analysis Platform of Rural Power Network Based on Virtual Instru-  
 ment ..... Yong Yang Xiaofeng Wang Chunling Chen (1-630)
1. 141 A Design of Calibration Circuit Based on Adjustable-Phase and Adjustable-Amplitude Synchronous Dual-  
 Channel DDS Technology ..... Huang He Shi YiBing Li YanJun (1-636)
1. 142 Measuring System for the Wall Thickness of Pipe Based on Ultrasonic Multisensor .....  
 ..... Wu Ang Zhu Juanhua He Fuyun Hu Jiandong Wang Ling (1-641)
1. 143 Research and Development of Non-magnetic Heat meters Based on ZigBee and GPRS .....  
 ..... Guang Shao Jialin Hou Bing Zou Zhen Wang (1-645)

1. 144 Calibration System for Electronic Instrument Transformers with Analogue and Digital Outputs .....  
..... Feng Pan Yan Xu Xia Xiao Shiyun Ren (1-650)
1. 145 Designation of an On-line Monitoring System of Transmission Line's Galloping .....  
..... Xinbo Huang Guanbo Huang Yun Zhang (1-655)
1. 146 Design of Field Sampling Unit of an On-line Monitoring System of Dielectric Loss in Capacitive High-voltage Apparatus .....  
..... Xinbo Huang Wei Liu Yun Zhang (1-660)
1. 147 Design of Sweep Generator Based on DDS Technology .....  
..... Tiejuan Chang Xiaojing Chen Wenjun Chen (1-667)
1. 148 Design of Loosely Coupled Inductive Power Transfer Systems for Instrumented Wheelset .....  
..... Hanbiao Nong Jianhui Lin (1-670)
1. 149 Design of a Remote-Monitoring System of MOA Based on GPRS .....  
..... Yuan Wu Jianjun Qiang Xinbo Huang (1-675)
1. 150 Research on Location of Single-Phase Earth Fault based on Pulse Injection Method in Distribution Network .....  
..... Yulin Qi Jinying Zhao Qiushi Du (1-680)
1. 151 Design and Implementation of Industrial Wireless Gateway Based on ZigBee Communication .....  
..... Guozhen Hu (1-684)
1. 152 Research on Monitoring and Pre-warning System for Security of Pipelines Based on Multi-Seismic Sensors .....  
..... Jiedi Sun Jiangtao Wen (1-689)
1. 153 A New Measurement Method for Group Delay of Frequency-Translating Devices Based on Software Defined Radio technology .....  
..... Changjun Yu Yunyun Chen (1-694)
1. 154 Design of Impulse Generation Circuit for Ultra-Wideband Range Sensor Testing System .....  
..... Quanmin Wang Gang Guo Chuncai Wang Kedi Huang (1-700)
1. 155 Axial High-temperature RF SQUID Gradiometer System for Geomagnetic Prospecting .....  
..... Jing Zhao Jun Wang Guangda Liu (1-704)
1. 156 Study on Rail Load Measurement Base on Finite Element Analysis .....  
..... Hanbiao Nong Jianhui Lin (1-708)
1. 157 Dielectric Loss Factor Measurement Based on Nuttall Self-Convolution Window Phase Difference Correction .....  
..... Yunpeng Gao Zhaosheng Teng Jingxun Wang He Wen (1-714)
1. 158 Synchronization Method Based on FPGA for Merging Unit of the Electronic Transformers .....  
..... Xia Xiao Yan Xu Feng Pan Ken Xu (1-720)
1. 159 Control Scheme for Chip-scale Atomic Magnetometer .....  
..... Jie Qin Jiancheng Fang Haifeng Dong (1-725)
1. 160 Research on the Three-Phase Four-Leg Aeronautical Static Inverter Based on Three-dimensional Space Vector Modulation in abc Coordinates .....  
..... Desheng Liu Miao Guan Lei Zhang Yong Wang (1-729)
1. 161 Design and Implementation of 60MPa High-precision Hydraulic Calibration System .....  
..... Shangchun Fan Ming Guan Dezhi Zheng (1-733)
1. 162 Design Of Image Nonuniformity Correction And Real-Time Record For CMOS Camera .....  
..... Huilong Yu Xin He Zhonghui Wei Donghe Wang (1-739)
1. 163 Recognition System for Pipeline Typical Abnormal Events Based on DSP .....  
..... Jian Li Guoxing Jiang Ping Lai Shijiu Jin (1-743)
1. 164 Novel Vehicle Detection System Based on Line Scan Camera .....  
..... Zhigang Xu Xiangmo Zhao Na Li (1-748)
1. 165 Fiber Optic DC Magnetic Field Sensor with Alternating Current Phase Tracing .....  
..... Jianguang Xin Mengchun Pan Dixiang Chen Qi Zhang JiaFei Hu (1-752)
1. 166 Design and Implementation of High-performance Lock Preamplifier for High-Field Nuclear Magnetic Resonance Spectrometers .....  
..... Chunliang Dai Changhong Bao Huijun Sun Zurong Ni Zhong Chen (1-756)
1. 167 Measurement of CH<sub>4</sub> by Differential Infrared Optical Absorption Spectroscopy .....  
..... Wang Yi Wang KeJia Wang Qi Tang Feng (1-761)



1. 168 Fault Record and Analysis System Based on LabWindows/CVI .....  
..... Haishen Zhang Zhengyou He Sheng Lin Xiaojiang Li (1-767)
1. 169 Design and Implementation of Multi-channel HDLC Space Communication System Based on SOPC .....  
..... Ye Youshi Tang Linbo Zhao Baojun Peng Jing (1-773)
1. 170 DCM: Data Collection Middleware Based on Instruments .....  
..... Pengpeng Chen Zhongwen Guo Feng Hong Yuan Feng Zhiqiang Lian (1-779)
1. 171 Angular Rate of Test Table based on High-speed Non-Contact Measurement .....  
..... Liang Yang Xiangheng Shen Ning Zhang Yi Yang Yuyan Zhao (1-786)
1. 172 Research on Dynamic Workflow in Product Quality Test System .....  
..... Zeng Qian Yuan Haiwen Yang Hao (1-790)
1. 173 Development of High-precision Temperature Measurement System Based on ARM .....  
..... Yi Xianjun Liu Cuimei (1-795)
1. 174 Application of Software Defined Radio in 500MHz NMR Spectrometers .....  
..... Minghua Tian Hongfei Liu Zhong Chen (1-800)
1. 175 All-Weather Automatic Solar Tracking Method Applied in Forest Fire Prevention .....  
..... Jing Xu Kaihua Wu Li Ma (1-805)
1. 176 Electrical Conductivity Measurement Method in Seawater Desalination Based on Variable Frequency Excitation .....  
..... Shaopeng Hu Kaihua Wu Haibo Wang Jiang Chen (1-810)
1. 177 Research and Design of Database for Distributed Bridge Data Acquisition System .....  
..... Weidong Ye Shenglong Li (1-814)
1. 178 Wireless Power Transmission System for Capsule Endoscope .....  
..... Wenhui Xin Guozheng Yan Wenxin Wang (1-820)
1. 179 Modeling and Simulation for a  $\mu$ -structure Silicon Pressure Sensor .....  
..... Ahmad Aldarouich Haiwen Yuan Mohamed El Mahdi Ali Jiaoying Huang (1-825)
1. 180 Display Terminal Design for Heavy-duty Engineering Vehicle Using embedded Rapid Customized Technology .....  
..... Mi Hanguang Yuan Haiwen Guo Xin (1-830)
1. 181 Remote Measurement and Control System Based on GPRS for Multi-frequency IP Instrument .....  
..... Hongchun Yao Runjun Chen Xiangyu Li (1-834)
1. 182 Mechanism Kinematic System of laser Guiding Measurement Robot Technology .....  
..... Yonggang Yan Xingqi Yuan Hongguo Yang Xiaobo Wang (1-840)
1. 183 Design of Portable High-Speed Data Acquisition Device for Transient Measurements .....  
..... Haiwen Yuan Qinghua Yang Aamir Akhtar Siddiqui (1-846)
1. 184 A Design of Novel Integrated Test Analyzer of PEM Fuel Cell .....  
..... Jie He Hui Jin Jieqiong Zhang Jindian Ye (1-850)
1. 185 Study on Concentration Measurement of Small Sample with Optical Fibers .....  
..... Yi Song Jiexiong Ding (1-856)
1. 186 Development and Application on Amplitude-frequency Characteristic Detection Instrument of Filter .....  
..... Bingyan Chen Juan Zhou Rong Shi Mingyuan Xin (1-862)
1. 187 High-precision Battery Test System Based on 24-bit ADC .....  
..... Ruijie Shen Rujun Chen Zheyuan Huang (1-867)
1. 188 Design of Analog Test Hardware Platform Based on IEEE 1149.4 .....  
..... Yanping Li Jia Lei (1-873)
1. 189 Research on Single Vibrator Gas Piezoelectric Pump .....  
..... Jingshi Dong Chuanliang Sheng Zhigang Yang Guangming Cheng Boda Wu (1-877)
1. 190 The Design and Implementation of Custom Protocol Testing Module Based on ARM .....  
..... Wang Bing Wu Jie Zhang Jie Yu Zhuan (1-882)
1. 191 Truncated D-optimal Design of Accelerometer Experiments on Centrifuge .....  
..... Jiang Xiaoxiong Liu Yu Su Baoku (1-886)

- 1.192 A data fusion algorithm for DR/GPS/Map-Match Integrated Navigation System .....  
 ..... Yongqiang Han Zhide Liu Jiabin Chen Ling Xie (1-891)
- 1.193 Research of Micro-positioning System Based on Piezoelectric Actuator .....  
 ..... Xuanze Wang Yufen Chu Zhongsheng Zhai (1-897)
- 1.194 Research on Ultrasonic Phased Array System for Automatic Defect Detection of Pipeline Girth Welds .....  
 ..... Jian Li Xianglin Zhan Shijiu Jin (1-903)
- 1.195 Homodyne laser interferometric displacement measuring system with nanometer accuracy .....  
 ..... Qiangxian Huang Xiaowei Liu Lala Sun (1-908)
- 1.196 High Resolution Multi-Channel Voltage Reference Generator for Experimentson Quantum-Dot Devices  
 ..... Dajun Huang Yonggang Wang Lijun Zhang Cheng Zhou Xiaojie Hao (1-913)
- 1.197 Principle of Direct-inscribing Diffractive Phase Elements by Linearly Polarized Light .....  
 ..... Shiyuan Duan Keyi Wang (1-917)
- 1.198 Research of Testing Technology for Gun's Initial Disturbance Based on Embedded PC104 and PSD Optical  
 Lever ..... JunhuiYin Jian Zheng Hongzhi Teng Feng Li (1-923)
- 1.199 Design of Synchronized Data Acquisition System based on Switched IntegratorAmplifier for the Industrial CT  
 ..... Yongshun Xiao Zhiqiang Chen Li Zhang (1-928)
- 1.200 Error Modeling of An Ultra-Wideband LFM Signal Generator .....  
 ..... Zhu Mingbo Li Tingjun Wanghongxing Xie Hongsen Fan Jiwen (1-932)
- 1.201 Development of Wide Band AC Measurement Device with High Accuracy .....  
 ..... Wu Zhu Xiangcun Tu Shuixiu Guan Ruifa Cao (1-935)
- 1.202 Realization of Foreign Fiber Detecting Algorithm Based on ADSP-BF533 .....  
 ..... Zhi Jiao Limin Song Xiao Wang (1-939)
- 1.203 Design of Automated Test System Based on GPIB .....  
 ..... Jianguang Jia Jingming Kuang Zunwen He Jun Fang (1-943)
- 1.204 Design of A Ceramic Mud Argil Content Detector .....  
 ..... Lixiu Ma Cuixia Sheng Jinfeng Pan Tianze Li (1-949)
- 1.205 High Resolution Code Acquisition Method Using Parabolic Interpolation for DSSS System .....  
 ..... Lanying Zhang Sijie Yuan Yuan Chen Jun Yang (1-953)
- 1.206 The Design of General-purpose Automatic Testing and Fault Diagnosis System Based on VXI bus .....  
 ..... Rui Guo Guoqiang Wang Yuhai Jiang Wei Ye (1-957)
- 1.207 Creating Hybrid Test and Measurement System Based on LAN/LXI .....  
 ..... Qiu Changquan Honglei Qin Yang Chen (1-960)
- 1.208 Weak Signal Phase Measurement Method Based on Duffing Oscillator .....  
 ..... Wei Chen Meng Chen Zhe Zhang Aihua Xu (1-964)
- 1.209 Design and Test of a Beam-Pulsing Electronics System for Low-Energy Positron Lifetime Spectroscopy ...  
 ..... Lei Zhou Hao Liang Tao Xiong XiaoQi Yu YongZhao Zhou (1-969)
- 1.210 4Research on a Method to Improve the Waveform Acquire Rate of DSO .....  
 ..... Hao Zeng Chuanyun Xiang Peng Ye Houjun Wang (1-974)
- 1.211 The Detecting System of the Dielectric Loss in Capacitive Equipment Based on Virtual Instruments .....  
 ..... Li Yunfeng Zhu Bin Wu Songlin (1-978)
- 1.212 A 4-Component 2-D CFDFD Method with Equivalent SIBC for Multilayer Metal-Coated Coaxial Waveguide  
 ..... Duanwei Zhang Hongwei Deng YongJiu Zhao WanShun Jiang YueMin Ning (1-983)
- 1.213 Analysis of Signal De-noising Method Based On An Improved Wavelet Thresholding .....  
 ..... Huaigang Zang Zhibin Wang Ying Zheng (1-987)
- 1.214 Analysis of Two Way Satellite Time and Frequency Transfer System ..... Hongwei Sun Yuli Li (1-991)
- 1.215 Development of Portable Integrated Signal Source for Circuit Unit Test of Radar .....  
 ..... Zengjun Bi Wen Sheng Wenjie Xiao Jiangping Yang (1-995)

- 1.216 Design of Low-power Consumption Ultrasonic Open Channel Flow Meter .....  
 ..... Songying Yang Guowei Liang Weiguo Zhao Dailiang Xie Zhenwei Huang (1-999)
- 1.217 Virtual Instrument Realization of Non-contact Silicon Wafer Test ..... Yan Youjun LI Yunfei (1-1003)
- 1.218 Software Design of Testing System for Frequency Converter Generator Sets Based on Virtual Instrument ...  
 ..... Qiang Zhang Peiyuan Cheng Bo Fan Xufeng Yang Tao Dong (1-1009)
- 1.219 Effect of Amplitude Extracted Algorithm to the Sampling Energy Resolution on Digital Spectrometer .....  
 ..... Yonggang Huo Peng Xu Feng Yang Xiaolin Qiu (1-1014)
- 1.220 Study of Integrated Parameter Acquisition and Fusion for High-pressure Water Pump Based on Virtual Instru-  
 ment ..... Jianxiong Zhu Tingli Cai Shenyou Liu Ran Tu Binghai Liu Yongming Zhang (1-1017)
- 1.221 Study on a Hybrid Control of Inverter for Programmable AC Power Source .....  
 ..... Chuanbiao Peng Zhenyi Hou Shaokun Wang Yaying Cui (1-1022)
- 1.222 Research and Implementation of a New Orientation & Incline Instrument Used in Oil and Gas Wells .....  
 ..... Chunhua Ren Yingjun Pan Tong He Ninxiang Xiong (1-1027)
- 1.223 Novel Design Of A Data Acquisition And Analysis System For Surface Plasmon Resonance Bioanalyzer Using  
 Labview Virtual Instrument ..... Jingfang Hu Mingyi Zhu Jiandong Hu Jiang Min (1-1031)
- 1.224 Micro-table Posture Measuring Based on Binocular Vision .....  
 ..... Hang Li Helei Zhu Jishun Li Songge Yang Yujun Xue (1-1036)
- 1.225 Traffic Light Control for a single intersection based on Wireless Sensor Network .....  
 ..... Fuqiang Zou Bo Yang Yitao Cao (1-1040)
- 1.226 Design of the Fully Digital Beam Position Monitor for Beam Position Measurement in SSRF .....  
 ..... Hao Zhou Shubin Liu Lei Zhao Kai Chen Han Yan Qi An (1-1045)
- 1.227 Electrostatic Force Generation Circuit for Single-side Electrostatic Suspension .....  
 ..... Qiuping Wu Fengtian Han (1-1052)
- 1.228 Design of PXI 32-channel Scanning A/D Converter Module .....  
 ..... Yu Peng Shuangwu Yao Shaojun Wang (1-1056)
- 1.229 A Design of PCI-Bus High Speed Serial Communication Card .....  
 ..... Yu Peng Yanmeng Ba Bo Li (1-1061)
- 1.230 Design of a High Precision Current Source ..... Yu Peng Yanchao Xia Shaojun Wang (1-1065)
- 1.231 VHDL Implementation of CAN Fieldbus Modeling Based on Petri nets .....  
 ..... Hui Hu Ruixue Cui Xuejie Wei (1-1070)
- 1.232 Study and Implementation of a Motherboard Measurement System for DVDRecorders Based on Virtual Instru-  
 ment Technology ..... Liang Yu Xiaotao Wang Hongbo Liu Haiyang Wang (1-1074)

## ☆ Applications on Instrument and Testing

- 2.1 Performance and Area Tradeoffs in Space-Qualified FPGA-Based Time-of-Flight Systems ..... Whitney Hsiong Steve Huntzicker Kevin King Austin Lee Chen Lim Jason Wang Sarah Harris Jörg-Micha Jahn (2-1)
- 2.2 A System for Obtaining a Frequency Reference Constantly Locked to L1 GPS Carrier for Distributed Power Quality Assessment ..... Caciotta Di Liberto Leccese Pisa PiuZZi (2-7)
- 2.3 Wholly Estimating Direction of Arrival of Convolutively Mixed Sources Using Independent Component Analysis ..... Weidong Jiao Yongping Chang (2-11)
- 2.4 Application Of Discrete Spectrum Correction Technology In Track Spectrum Estimation ..... Qiang Yang Jianhui Lin Jianming Ding (2-16)
- 2.5 Study on TCA2003 Compensator of Kinematic Mode in Girder United Fabrication Survey ..... Xu Chang Wang Yinghua (2-21)
- 2.6 The Design of an Embedded Intelligent Monitoring and Control System of the DC Power Supply Based on InternetworkingAnalysis ..... Yongjun Lv Shangzhen Zhu Hongtao Yu (2-26)
- 2.7 Position Accuracy Evaluation of GPS Receiver under Small UAV Flight Environment ..... Xiaojing Du Dacheng Du Kang Wang (2-29)
- 2.8 Application of Digital Communication Techniques to Plastic Extrusion Process ..... Jin Zhao Xiaofeng Wu (2-34)
- 2.9 Pinhole Defects Detection of Aluminum Foil Based on Machine Vision ..... Xuejun Xiang Jinhong He Sheng Yang (2-38)
- 2.10 A Research of RHEED in Analysis of Growth Model and Interplanar Distance of ZnO Films ..... Zhaoyang Wang Jie Zhao (2-42)
- 2.11 Study on Anti-roll Monitor and Early Warning System of Wheel Loader ..... Lei Zhang Xianwei Gao Li Li Yingjie Chen (2-45)
- 2.12 Synchronous Carrier Wave Interference Suppression Based on Accumulation and Average in Loran-C ..... Yinbing Zhu Jiangning Xu Taiqi Qiu Guoheng Cui (2-50)
- 2.13 Application of Stereo PIV Measurement to the Aeolian Sand Transport ..... Bin Yang Yuan Wang Jiang Liu (2-55)
- 2.14 Study on Impedance Tuner and Its Use in Voltage Controlled Oscillator Nonlinear Parameter Test ..... Min Guo (2-60)
- 2.15 New Method for Unambiguous Velocity Measurement in Low PRT Radar ..... Xin Wei Lifen Zuo Guangjun Mei Tao Wu (2-65)
- 2.16 Dynamic Structural Monitoring Using the Kinematic Positioning of a Robotic Total Station ..... Xu Chang Hu Qunge (2-69)
- 2.17 Dynamic Errors Analysis of CMM Touch Trigger Probes ..... Guan Wang Zai Luo (2-74)
- 2.18 Research and Design of IUR76-II Test System for Infrared Flame Detectors ..... Guosheng Zhang Yang Li Yan Xu Jia Wang (2-78)
- 2.19 Design of Temperature Monitoring System for Oil-immersed Power Ransformers Based on MCU ..... Suxiang Qian Hongsheng Hu (2-81)
- 2.20 Implementation of Non-destructive Test for Wall Hollowing Based on Virtual Instrument Technique ..... Min Li Xingwen Chen Yan Liu (2-86)
- 2.21 Measurement of Laboratory-simulated Atmospheric Turbulence by PSD ..... Xiwen Qiang Yan Li Fei Zong Junwei Zhao (2-90)

- 2.22 Realization of Monitoring the Photovoltaic System Based on Configuration Software .....  
 ... Haifeng Zhou Jingde Dong Zhonghua Lin Rongjie Wang Zhilong Xu Yuanqing Huang (2-95)
- 2.23 Design of an Unattended Laser-target Designator Based on Multi-sensor .....  
 ..... Cai KeRong Deng JiaHao Guo HuaLing (2-100)
- 2.24 Development of a High Resolution Micro-spectrophotometer for Biochemical Analyzer based on Virtual Instrument and Linear CCD .....  
 ..... Zhong Ren Guodong Liu Lvming Zeng Zhen Huang Wenping Zeng (2-106)
- 2.25 Study of Drill Measuring System Based on MEMS Accelerative and Magnetoresistive Sensor .....  
 ..... Guosheng Zhang Yang Li Yan Xu Jia Wang (2-112)
- 2.26 Novel Method of In-situ Ultrasonic Test of Aircraft Parts ..... Zheng Li Feilu Luo (2-117)
- 2.27 A New MEMS Accelerometer Applied in Civil Engineering and its Calibration Test .....  
 ..... Ming Zhao Xiaolei Xiong (2-122)
- 2.28 A High Precision Calibrator for Metal Oxide Surge Arrester On-line Monitor .....  
 ..... Peng Hui Wu Xiaowen (2-126)
- 2.29 Theoretical Analysis and Simulation in the Measurement of Active Energy in Polluted Distribution Power Systems .....  
 ..... Peng Hui Zhang Liping (2-130)
- 2.30 Image Features Extraction of Gas/liquid Two-Phase Flow in Horizontal Pipeline by GLCM and GLGCM .....  
 ..... Hongyi Wang Feng Dong (2-135)
- 2.31 Study of Image-Based Pavement Cracking Measurement techniques .....  
 ..... Sun Zhaoyun Wang Chaofan Sha Aimin (2-140)
- 2.32 Fault Diagnosis of Rotor Rub based on Ensemble EMD ..... Yang Yu Huihui Lang (2-144)
- 2.33 The Design of A Noninvasive Cardiovascular Function Automatic Detecting Instrument Base on Pulse Wave .....  
 ..... Weijun Song Song Zhang Yimin Yang (2-149)
- 2.34 Design of Pressure Test System Based on Wireless Communication Technology .....  
 ..... Xu Bai Yongjie Fu (2-154)
- 2.35 Adaptability Assessment and Validation of Balise Transmission Module in High-speed Railway .....  
 ..... Huibing Zhao Ruiyin Shi (2-159)
- 2.36 Investigation of Novel Ultraviolet Detecting System Used in Aero Magneto Ignition Energy Monitoring .....  
 ..... Deyin Zhang Ying Luo Wentian Luo Yong Bao Weidong Peng Shouqing Li (2-164)
- 2.37 Comparative Tests and Analysis of Ignition Energy and Ionic State in Lean Combustion .....  
 ..... Tao Huang Jing Jin Chuanshu Liao Li Yao (2-168)
- 2.38 Measurements on Mechanical Properties of Boron-doped Silicon Materials for Micro Inertia Sensor ...  
 ..... Haipeng Liu Shiqiao Gao Shaohua Niu Lei Jin (2-174)
- 2.39 Measurement of Arc Temperature in SF6 Model Circuit Breaker Based on CCD .....  
 ..... Chunguang Hou Yundong Cao Jing Li Changxue Lai (2-180)
- 2.40 Design of Ultrasonic Scaler Based on Embedded Microcontroller ... Jun Xu Helai Li Bo You (2-184)
- 2.41 Improvement on Coriolis Mass Flowmeter Closed-loop Control Based on Analysis of its Open-loop Characteristics .....  
 ..... Shangchun Fan Jing Tian Dezhi Zheng (2-189)
- 2.42 Application of Fuzzy PID Control in Polymerizing-kettle Based on Gray Prediction Model .....  
 ..... Shufen Qi Chong Zhao (2-193)
- 2.43 Computer Measure & Control System of Benzyl-cyanide Reactor based on Labview .....  
 ..... Chenglong Gong Zhaokui Ding Linhai Ji Jinming Tian Yongqiang Liu (2-197)
- 2.44 Analysis on Laser Spot Locating Precision affected by CMOS Sensor Fill Factor in Laser Warning System .....  
 ..... Jiaju Ying Yongqiang He Zhongliang Zhou (2-202)
- 2.45 Architecture of Out of Order TURBO51 Embedded Microprocessor ..... Xiaofei Wu (2-207)
- 2.46 Dynamic Detection System for Clutch of Real Vehicle ..... Lirong Wang Keming Li (2-213)

- 2.47 Design and Application for Environmental Air Quality Automatic Monitoring System ..... Haiming Zheng (2-218)
- 2.48 Electrical and optical characteristics of High Power Vertical GaN Light-Emitting Diodes on Si Substrates ..... Ting Wang Zhanzhong Cui Lixin Xu (2-222)
- 2.49 Design and Measurement of Compact Tapered Slot Antenna for UWB Microwave Imaging Radar ..... Bingheng Wu Yicai Ji Guangyou Fang (2-226)
- 2.50 Temperature Errors of IFOG and Its Compensation in Engineering Application ..... Xuyou Li Chen Zhang Zhou He Zhen Zhong (2-230)
- 2.51 Research on Harmonic Current Distribution of Beijing's Rail Traffic Power Supply System ..... Yuan Haiwen Qin Ye Zhao Cheng Jia Jia (2-235)
- 2.52 Research on a Measuring System of Lifting and Moving Rail Equipment Test Bench ..... Zhengyao Yi Wei Xiong Haitao Wang Jian Wu Zuwen Wang (2-239)
- 2.53 Design of Generic Embedded Memory Built in Self Test Circuit ..... Qiao Liyan Bai Shi Zhao Xin Wang Ge (2-244)
- 2.54 Precise Rate of Flow Piezoelectric Mini-pump with Built-in Self Test ..... Zunqiang Fan Zhigang Yang Jingshi Dong Fengjun Tian Bin Jiang (2-248)
- 2.55 A Design of Parking Space Detector Based on Video Image ..... Zhang Bin Jiang Dalin Wang Fang Wan Tingting (2-253)
- 2.56 Self-Tuning Fuzzy PID Applied to Direct Yaw Moment Control for Vehicle Stability ..... Zhang Wei Yu Guizhen Wang Jian Su Tianshu Xu Xiangyang (2-257)
- 2.57 An 8-Channel, Area-Efficient, Low-Power Audio Sampling Rate Converter ..... Haipeng Kuang Dejiang Wang Gang Zhou Yanyan Liu (2-262)
- 2.58 Study on Temperature Monitoring System of Electric Device Based On Optical-fiber Fluorescent ..... Hongli San Song Lin Danping Jia (2-266)
- 2.59 System Design and Experimental Research on Tip Clearance Measurement of Aero-Engines by Digital Radiograph ..... Yongshun Xiao Zhiqiang Chen Li Zhang (2-271)
- 2.60 Design and Implementation of Monitoring the Temporary Business via Communications Satellite by Spectrum ..... FengLei Wu Hui Xu Wei Zhang SaiJin Wang Gang Zhao XingXing Chen (2-275)
- 2.61 Single Light Path Quantum Efficiency Measurement System used for Multi-junction Solar Cells ..... Suoliang Zhang Lei Liu Yongqing Wang TianshuZhang Zhipeng Zhang (2-280)
- 2.62 Dynamic Multiple Fault Diagnosis Based on HMM and QPSO ..... Liu Xiaoqin Huang Kaoli Lian Guangyao Yang Hua (2-284)
- 2.63 Design of full-scale Highway Accelerated Loading Testing ..... Guan Zhiguang Wang Xuguang Zhang Jiwei Lin Mingxing (2-289)
- 2.64 Amplitude Distribution Estimation of White Noise Based on EMD and Parzen Window ..... Ying Zhang Zhengqi Zheng (2-292)
- 2.65 Air Compressor Flow Forecast in Fuel Cell Based on Elman NN ..... Jian Deng Wuxing Wei Xiang Gao Shuhai Quan (2-297)
- 2.66 Design and Realization of IF Digital Demodulator based on Software Radio ..... Ziye Long Chenxi Wang Derong Cai Xiaoli Li Jing Zhu (2-301)
- 2.67 Linux Transplantation Based on The Processor S3C2440 ..... Sun Yanpeng Peng Peng Zhang Yuan (2-306)
- 2.68 Development and Application of Data Acquisition System for Pressure Measurement ..... Qizhi Huang Yuxun Chen Zhuping Yang Jiansheng Hao Ke Li (2-310)
- 2.69 Improved Chaos-GA-PID Control in Digital Invert Power Supply ..... Duan Bin Sun Tongjing Li Zhenhua Mei Gaoqing Zhang Guangxian (2-315)

- 2.70 Detection and Location of Power Quality Disturbances Based on Mathematical Morphology and Hilbert-Huang Transform ..... Yong Huang Yongqiang Liu Zhiping Hong (2-319)
- 2.71 Development of Multilayer Parallel Connected Piezoelectric Ceramic Power Supply and Measuring Instrument for Electricity Generating Performance ..... Hui Li Min Gao Guanglong Wang (2-325)
- 2.72 TMS320LF2407-based Testing System for Liquid Crystal Materials ..... Meng Gao Yanhui Shi Huaping Liu Fuchun Sun (2-330)
- 2.73 Narrowband Interference Suppression in DSSS System Based on Frequency Shift Wavelet Packet Transform ..... Lanying Zhang Sijie Yuan Yuan Chen Jun Yang (2-333)
- 2.74 Design of Data Collecting Module Based on RTL8019AS ..... Jingwei Dong Dongwei Fei Ting Lu (2-338)
- 2.75 Design of a Low Voltage High Precision CMOS Bandgap Reference ..... Qin Su Yongsheng Yin Honghui Deng (2-342)
- 2.76 Active Disturbance Rejection Control for the Airborne Pmsm in Direct Drive Ema Application ..... Yongling Fu Hesong Liu Yao Pang Haitao Qi (2-346)
- 2.77 Mechanisms and Testing of Moisture Content Measurement of Transformer Pressboard ..... Wanquan Li Changyin Gao (2-352)
- 2.78 Nondestructive Testing of Dynamic ElasticModulus of Wood-BasedPanel by the Method of Stress Wave ..... Jiang Xiao Chao Sa Ying Han (2-357)
- 2.79 Research on Roundness Error Evaluation of Shaft Parts Based on Genetic Algorithms With Transfer-Operator ..... Liwen Yan Bing, Yan Lanrong Cai Guihua Hu Meiting Wang (2-362)
- 2.80 Kalman Filtering of MEMS Gyro Based on Time-series Model ..... Yang PeiPei Li Qing (2-367)
- 2.81 Design of The Harmonic Vibration Platform Based on AC Servo System ..... Yuan Lu Xinling Li (2-371)
- 2.82 Vehicle Detection from Video Sequence Based on Gabor Filter ..... Yuren Du Yuan Feng (2-375)
- 2.83 Integral Estimation Method of Reliability Growth Test Data inMulti-stage ..... Liang Ao Zhanyong Ren Yun Fu (2-380)
- 2.84 Improved Symmetrical Pulse-Density-Modulation Induction Heating PowerBased on FPGA ..... Zhijuan Zhang Chao Liu (2-383)
- 2.85 Research and Application of Genetic Algorithm-based Optimized Radial Basis Neural Network Model Parameter Design ..... Xiujuan Fan (2-387)
- 2.86 Application of New Stability Criterion on Hydropower Generator Control System ..... Zhang Xiaojiang Wang Huaqiang (2-391)
- 2.87 Method for Measuring Separation Multi-parameters of Releasable Explosive Bolts ..... Yaokun Ye Nan Yan Chunquan He (2-395)
- 2.88 Design of Embedded Multiprocessor Platform with Cooperating Synchrony ..... Haiyong Wang Bing Zhang Shu Xu Zhiyi Wang (2-399)
- 2.89 Data-reduction Method for Simultaneous Measurement of Permittivity and Permeability with a Short-circuited Transmission Line ..... Caijun Zhao Quanxing Jiang Shenhui Jing (2-404)
- 2.90 Research on Original Position Testing Method for Armored Vehicles Starting System ..... Guangsheng Li Dan Chen Ning Wei Yanwei Cheng (2-408)
- 2.91 Research on Performance Analyzing and Modeling of Quartzose FlexibleAccelerometer ..... Hongjie Cheng Yuan Zhao Zhibo Qian Binmao Li (2-412)
- 2.92 A Hybrid AC-DC-AC Matrix Converter with a Boost Circuit ..... Peilin Song Jingxue Lin (2-416)
- 2.93 Integrated Underwater Navigation System Based on INS and SSS ..... Hongmei Zhang Nan Shao Jianhu Zhao Xiankuo Meng(2-422)
- 2.94 wo-Dimensional Sound Intensity Probe and Error Analysis ..... Guanglin Zhou Xiuyan Guo (2-427)

- 2.95 New Method of Measuring Drop Liquid and Application ..... Zhenye Yang Jiexue Yang Jiancong Cai (2-432)
- 2.96 Weak Signal Detection Method of Adaptive Digital Lock-in Amplifier Based on Particle Swarm Optimization Algorithm ..... Shiwen Jiang Tianqi Zhang Shaosheng Dai Yuelei Li Qingshan Gao (2-436)
- 2.97 On-line Realization of Multi-scale Soft-threshold De-noising of MEMS Gyro byWavelet ..... Fengbo Li Qing Peipei Yang Guodong Fu (2-442)
- 2.98 Embranchment Labelling and Application on the Rail Measurement ..... CaiXia Li Yongping Huang HaiNan Long ChunHua Zhang (2-446)
- 2.99 Self-localization of Mobile Robot Based on Monocular and Extended Kalman Filter ..... Rongbao Chen He Zhao Benxian Xiao (2-450)
- 2.100 Study on Precise Frequency Measurement Based on Sound Card ..... Xu Xin-sheng Wang Guoqiang Wang Yulan Zhang Hui-jun Li Xiao-hui (2-455)
- 2.101 Nonlinear Optimization Method in Camera Calibration ..... Zhenzhong Wei Zhipeng Cao Guangjun Zhang (2-459)
- 2.102 Study on Algorithms of Acoustic Emission Source Localization in Complicated Environment ..... Aidong Deng Li Zhao Yan Zhao (2-462)
- 2.103 The Design of Online System for Multi-rang Measuring Sediment Concentration ..... Mingtang Liu Libin Fu Li Li Xuemei Liu (2-467)
- 2.104 Precise Angle-Measuring System Based on Data Fusion Skill by Applying BP Neural Network ..... Yueqing Zhu Zhili Zhang Lilong Tan (2-473)
- 2.105 The Research of Power Quality Analysis Based on Improved S-Transform ..... Zhang Shi Liu Ruirui Wang Qun Jeffers Teargun Heptol Yang Guimin (2-477)
- 2.106 Design A Piezoelectric Actuator for Micro-Vibration Isolation Plat and Research on the Affection Of Dynamic Capacitance property ..... Shuai Tao a Hongbai Bai Yutao Li (2-482)
- 2.107 Signal Analysis of Electrostatic Gas-Solid Two-Phase Flow Probe with Hilbert-Huang Transform ..... Rongjun Lu Bin Zhou Wei Gao (2-486)
- 2.108 Novel Barometric Altimeter System for Vehicular Testing of SINS ..... Qiang Zhou Yabin Liu (2-491)
- 2.109 Research of Artillery's Sound Recognition Technology ..... Changyuan Fan Zhenfeng Li (2-494)
- 2.110 The Research of Vehicle Power Li-ion Battery Pack Balancing Method ..... Xuezhe Wei Bing Zhu (2-498)
- 2.111 Correlating the I-V Curve of Solar Cell with IRAGA ..... Zhiming Wang Zhengbang Gong Yuhong Bu Guangpu Wei (2-503)
- 2.112 Research and Development of an On-line Instrument for Measuring Cooling Air Flow of Car Radiator ..... Aiqi Bian Xihan Wang Yuming Shen (2-509)
- 2.113 Design of Multi-channel Acoustic Signals Acquisition System Based on FPGA and TF Memory Card ..... Honggang Zhang Yu Xu Bingcheng Yuan (2-513)
- 2.114 Application of PSO Algorithm and RBF Neural Network in Electrical Impedance Tomography ..... Peng Wang Lili Xie Yicai Sun (2-517)
- 2.115 Laser Modulating Technology Realizing Harmonic Examination of Coal Mine Gas Concentration ..... Mengran Zhou Cangrong Zhao Yuliang Liu Haiqing Zhang (2-522)
- 2.116 A Built-in Self-test Design with Low Power Consumption Based on Genetic Algorithm ..... Enmin Tan Li Wang (2-526)
- 2.117 Research of Attitude Measurement and Data Storage System Based on ARM ..... Wenxin Li Guanglong Wang Yi Dun Qiusheng Liu (2-530)
- 2.118 Method of on-line Resistance and Capacitance Measurement of Piezoelectric Ceramic Hydrophones ..... Ping Cao Fuming Ruan Keli Zhang Yanfang Wang (2-535)



2. 119 A Triple-laser Trackers Automatic Measurement System for Large-scale Parts Assembly .....  
 ..... Wen Sun Zhenzhong Wei Lijun Cao (2-540)
2. 120 The Dynamic Measurement of Thrust Misalignment in Solid Rocket Motors Based on Load Identification  
 Technique ..... Chunmei Zhu Xiaoli Xu (2-544)
2. 121 Design of Testing System for Accelerometer Based on GP-IB .....  
 ..... Hongjie Cheng Yuan Zhao Baomin Qiang Yan Liu (2-548)
2. 122 Developing of High Accuracy and Low Capacity Strain Gage Based Load Cell for Electronic Scale ...  
 ..... Baoxiang He Guirong Lu Kaibin Chu Guoqiang Ma (2-552)
2. 123 Thermal Nondestructive Testing Technology of Aircraft Composite Material .....  
 ..... Bo Yang Chengliang Wang (2-557)
2. 124 Design and Realization of Large Dynamic Range Low Pass Filter with Wide Tuneable Cut-off Bandwidth  
 ..... Peiyuan Wan Saijun Hu Pingfen Lin John Yu (2-563)
2. 125 Mold Non-sinusoidal Oscillating Mode Analyse And Control of Continuous Casting Machine .....  
 ..... Wentao Li Yuan Zhang Lei Yu Junsheng Xiao (2-567)
2. 126 Development of Hand-held Leaf Area Meter Based on S3C2440 .....  
 ..... Youwen Tian Xiaojuan Wang (2-571)
2. 127 A Survey of Algorithms for the Analysis of Diffused Liver Disease from B-mode Ultrasound Images ...  
 ..... SiRui Zhou Jiuqing Wan (2-576)
2. 128 Extracting road networks with the aid of Log Gabor filters .....  
 ..... Shaoguang Zhou Hao Li Ru An (2-583)
2. 129 Design of a laser pulse extractor based on an electromagnetic lock .....  
 ..... Ming Wen Jifei Ye Yanji Hong (2-587)
2. 130 Research on Large Power Computer Controlled Constant Current Power Source Technologies .....  
 ..... Zhou Yinggang Jiang Xue Xie Yangen (2-591)
2. 131 Laser-based Apparatus for Measuring Projectile Velocity ..... Ji Liu Lixia Yu (2-595)
2. 132 Design and Implementation of RLS Identification Algorithm based on FPGA .....  
 ..... Jia Li Xuezhe Wei Haifeng Dai (2-599)
2. 133 An Instrument for the Accurate Measurement of Water Content in Turbine Oil .....  
 ..... Bing Zhang Sha Huan Qi Zhao Yuanchun Fei (2-602)
2. 134 Research On The Over-voltage of 220kV Power System Caused by Traction Transformer's Commissioning  
 ..... Cheng Fangxiao Sun Ying Ma Weiping (2-607)
2. 135 Research of the Inverse Time Characteristic Curve for the Electronic Thermal Relay .....  
 ..... Liyan Cui Shuqiu Gong Jing Li Bin He (2-612)
2. 136 A New Pipe Cleaning and Inspection Robot with Active Pipe-diameter Adaptability Based on ATmega64  
 ..... Zhixiang Li Jin Zhu Changzhong He Wei Wang (2-616)
2. 137 Design for Ultrasonic Measuring Component of binary Gas .....  
 ..... Zhengwei Zhu Yanping Sun Baoxiang He Changchun Yang (2-620)
2. 138 Graph Fitting Test Method for the Interpolation Error of Moire Fringe .....  
 ..... Qiuhua Wan Ying Sun Ronghong She Lihui Liang Xinran Lu Yingcai Du (2-624)
2. 139 The Application of Boundary-Scan Technology to FPGA-Based Experiment System .....  
 ..... Hui Zhao Tiejun Xiao Xiaoru Han (2-629)
2. 140 Scheme for High Power Supply Efficiency of WSN Node .....  
 ..... Shaoqiang Liu Danlong Hong Lei Chen Xiaoping Fan (2-633)
2. 141 The Design of Excitation Control System based on DSP .....  
 ..... Yanjie Yang Yunlong Xu Jian Chen Zhiqiang Du (2-637)
2. 142 The Design of Composite Optical Encoder .....  
 ..... Lihui Liang Qiuhua Wan Lili Qi Jinqin He Yingcai Du Xinran Lu (2-642)

2. 143 Lunar Rover Positioning Based on TOA Estimation for UWB Signal Using Unitary-ESPRIT ..... Xinyang Li Hong Jiang (2-646)
2. 144 An Online Spindle Rotation Error Measurement System Based on Improved Three Point Method ..... Yun Zhang Tao Tao Xuesong Mei Yuqing Zhou (2-651)
2. 145 Test Study of Performance of Electronic Scanivalve System ..... Fuyou Xu Yanbin Tan Xu Zhao Zhe Zhang (2-657)
2. 146 Research on the Application of High-frequency Base Balance in Wind Tunnel Test ..... Fuyou Xu Binbin Li Zhe Zhang (2-661)
2. 147 Specification Design of Planar Feature Based on the New Generation Geometrical Product Specification and Verification ..... Li Xiangqian Huang Meifa Kuang Bing Wang Qiaoyi Bao Jiading (2-666)
2. 148 Research on Straightness Evaluation of the Machine Guideway Based on the New Generation Geometrical Product Specifications ..... Wang Qiaoyi Huang Meifa Zhong Yanru Kuang Bing (2-673)
2. 149 Measurement of External Leakage of Hydraulic Servo-motor Based on Robust Extended Kalman Filter ..... Xiao Cui Yanliang Dong Keding Zhao (2-680)
2. 150 Mixed Simulation to Predict Electromagnetic Susceptibility for Electronic Devices Dechun ..... Qin Pengjun Zhang Wei Lai (2-685)
2. 151 The Design of Wide BW frequency synthesizer based on the DDS&PLL hybrid method ..... Li YongKe (2-689)
2. 152 Direct Current Circuit model for landfill leakage detection ..... Guan Shaopeng Nai Changxin Sun Wenyan Dong Lu (2-693)
2. 153 Integration of Tolerance and Maintenance Design for Two-dimensional Multi-station Assembly Processes ..... Zejun Wen Deshun Liu Shuyi Yang Yongping Jin (2-697)
2. 154 Research on Measurement of Dc Power Supply Impedance ..... Min Liu Haiwen Yuan Yi Sun Chen Yang (2-703)
2. 155 A Study on Dynamic Error of the Measurement Machine with Low Stiffness ..... Chen Cheng Qiu Zurong Li Xingfei (2-707)
2. 156 A method of recoil brake interior chamber pressure test and calculation on gun's recoiling impact ... Zhang Xiaodong Zhang Peilin Fu Jianping Wang Cheng Kong Guojie (2-713)
2. 157 Design of Space Target Detection System Based on a Two-Dimensional Scanning Micro-Mirror ..... Chi Zhang Gaofei Zhang Zheng You (2-718)

### ☆Sensor and Non-electric Measurement

2. 158 Characterization of Temperature Sensor Using VT Extractor Circuit ..... Hazian Mamat Yuzman Yusoff Ismail Md Yusof Walid Suradi Tan Kong Yew (2-722)
2. 159 Infrared Isolation Effectiveness of Car Windows Film Tester ..... Yongqing Wang Zhipeng Zhang Suoliang Zhang Hong Wang (2-726)
2. 160 Investigation of Discriminator Grade CdZnTe Detector and Associated Electronics Applying For CBS System ..... Kuihong Hao Hao Bai Yanjun Li Huaxiang Wang Honglin Ding (2-731)
2. 161 Over sampling and Used in Temperature Compensation for Acceleration Sensor ..... Gang Huang Jianping Zhang (2-736)
2. 162 Research on Moving Base Alignment of Ship-borne Strapdown System based on Wavelet and AI Technology ..... Tao Zhang Xiaosu Xu (2-740)
2. 163 Study on the High Speed Measurement of Laser Diode Self-mixing Velocimeter ..... Zhaoyun Zhang Yang Gao Xinghai Zhao Xiang Zhao (2-744)
2. 164 Target Range Profiling Algorithm for Airborne Microwave Sensor Detection System ..... Hu Xiujuan Deng Jiahao Zhou Zhifeng Sang Huiping (2-748)

2. 165 Demodulation of Instantaneous Rotational Speed of Diesel Engine Based on Hilbert Transform ..... Zhou JiaDong Ouyang GuangYao Gao HongBin (2-753)
2. 166 A Digital Control System for Micro-comb Gyroscope ..... Niu Shaohua Gao Shiqiao Liu Haipeng (2-757)
2. 167 Real-Time Monitoring Method of Water Depth Using Oblique Incidence Sonar in Harbour Channel ..... Peng Hou Wenhai Xu (2-761)
2. 168 Design of FPGA Based on Linear Array CCD Driver Circuit ..... Tiexi Xu Xianming Xiong Mingjin Li (2-766)
2. 169 Search detection Modeling and Simulation for Missile-borne High Resolution Radar ..... Liu Zheng Zhang Yi Zhao Hong-Zhong Fu Qiang (2-770)
2. 170 Study on Self-sensing Actuator of Magnetically Controlled Shape Memory Alloy ..... Chengwu Lin Youqing Wei Hao Zheng Jun Lu (2-777)
2. 171 Multiresolution Analysis of Tube-wall Pressure Fluctuations Signal in the Static Mixers with Twisted Leaves ..... Huibo Meng Yanfang Yu Bin Gong Jianhua Wu (2-781)
2. 172 Adaptive MEMS Gyroscope Denoising Method Based on the à Trouis Wavelet Transform ..... Guofu Qu Fan Zhao Guizhong Liu Hongzhao Liu (2-787)
2. 173 Characteristic Research on Focused Acoustic Field of Linear Phased Array Transducer ..... Huang Jing Zhou Sheyu Zhou Shiguan Que Peiwen (2-792)
2. 174 1-V rail-to-rail constant trans-conductance operation amplifier ..... Deng Liang Deng Hong-Hui Yin YongSheng Zhang Guo-Min (2-798)
2. 175 Magnetic-thermal Coupling Analysis of Dual-redundancy BLDCM ..... Jinglin Liu zhaoyang Fu Xiaopeng Zhao (2-802)
2. 176 Coagulated Region Recognition of Microwave Ablation Based on Texture Analysis of B-mode Ultrasound Image ..... Hao Zhu Chunlan Yang Yanping Bai Shuicai Wu (2-806)
2. 177 Study on Oil Detection Technology Based on Inductive Wear Debris Sensor ..... Fan Hongbo Zhang Yingtang Ren Guoquan Chen Fei (2-810)
2. 178 Modeling and Simulation of Digital Sensor in Seismic Exploration Based on SIMULINK ..... Yu Zhuan Wu Jie Wang YanFang(2-814)
2. 179 Application of Fuzzy Algorithm Based on Distance in Hand-shape Identification ..... Jingmiao Zhang Weixiao Gao (2-818)
2. 180 Calibration Method for Fiber Bragg Grating Temperature Sensor ..... Jing Zhang Yongqian Li (2-822)
2. 181 Conductance Probe for the Measurement of Liquid Volume Fraction and Axial Velocity in Gas-Liquid Two Phase Flow ..... Yanyan Shi Feng Dong Chao Tan (2-826)
2. 182 A Force Sensor Based on Reverse Effect of Magnetically Controlled Shape Memory Alloy ..... Jun Lu Fengxiang Wang Chengwu Lin and Baiqing Sun (2-832)
2. 183 The Use of Long-period Fiber Grating Bending Sensing Rules of the Fiber-optic Hydrophone ..... Wang Kejia Wang Qi Wang Yi Zhang Shuai (2-836)
2. 184 Analysis on Vibration Characteristics of Coriolis Mass Flow Sensor ..... Shuai Wang Dezhi Zheng Shangchun Fan (2-842)
2. 185 A Virtual Binocular Vision Range Finding Method of Remote Object Based on Single Rotating Angle Indexing Camera ..... Hongyu Di Qi Shang Sun'an Wang (2-846)
2. 186 Comparative Study of Two Digital Phase Delay Estimators with Negative Frequency Contribution ..... Haitao Zhang Yaqing Tu Fenhua Su Liangbing Liu (2-850)
2. 187 A Modulation Depth Calibration in Orthogonal Demodulation for Optical Fiber Interferometric Sensor ..... Ge Yunsheng (2-854)
2. 188 Study of Fuzzy-PID control and Simulation of Electrical Heating in Calibration Device for Heatmeters ..... Cuicui Xu Mingjian Huang Hui Jin Zhenjuan Tang Defu Zhang (2-859)
2. 189 Design and Analysis of a Self-validating Pressure Transducer ..... Zhigang Feng Tao Xu (2-864)

- 2.190 A Calibration Method for Magnetic Sensors and Accelerometer in Tilt-compensated Digital Compass .....  
..... Zhi Li Xiang Li Yongjun Wang (2-868)
- 2.191 Based on wavelet transformation fire smoke detection method .....  
..... Yuan Wei Yu Chunyu Zhang Yongming (2-872)
- 2.192 Sensor Development and Application on the oil-gas pipeline Magnetic Flux Leakage Detection .....  
..... Yang Lijian Liu Gang Zhang guoguang Gao Songwei (2-876)
- 2.193 Research on Image Acquisition System Applied to Profile Measurement ... Zhu Jia Li Xing-fei (2-879)
- 2.194 Flow Rate Measurement System Using Thermal Air Flow Sensor .....  
..... Yundong Cao Zhengchun Xie Chunguang Hou (2-885)
- 2.195 Wireless And Batteryless Surface Acoustic Wave Sensors For High Temperature Environments .....  
..... T. Aubert O. Elmazria M. B. Assouar1 (2-890)
- 2.196 Improvement of the Dynamic Characteristics on Catalytic Sensor .....  
..... Minming Tong Mu Niu Ziyuan Tong Xiaowen Liu Xinlian Dai (2-899)
- 2.197 The Study on Prestressed Cable Stress Based on Brillouin-optictime Optic Fiber Sensor .....  
..... Dongsheng Wang Weiwei Pan (2-904)
- 2.198 Study of the Algorithm of Auto Wheel Speed Sensor Testing Based on LabVIEW .....  
..... Jinming Tian Chenglong Gong Linghai Ji Xiuqiang Chen (2-908)
- 2.199 Study on Speed Sensorless SVM-DTC System of PMSM .....  
..... Lang Baohua Yang Jianhua LIU Weiguo (2-914)
- 2.200 Application of Particle Swarm Optimization Algorithm in Soft Sensor Modeling .....  
..... Yujun Li Xiaojun Tang Junhua Liu (2-920)
- 2.201 Advanced Error Sensing Strategy for Estimating Amplitudes of the First Few Radiation Modes of Vibrating  
Surface ..... Jinwu Wu Yun Wang Ding Xiangyu (2-925)
- 2.202 )Gas Monitoring System Based on the Multi-Sensor Information Fusion .....  
..... Hua Fu Tao Wang Cui Yang (2-930)
- 2.203 Novel range-Free Localization Algorithm For Wireless Sensor Networks .....  
..... Libiao Tong Yanhong Wang Shijie He (2-934)
- 2.204 DOCW; Dynamic Overlapping Contention Window Algorithm of Wireless Sensor Networks .....  
..... Weiren Shi Yunjian Tang Yanxia Wang (2-937)
- 2.205 De-noising Based on Wavelet Analysis and Bayesian Estimation for Low-dose X-ray CT .....  
..... Ye Fang Yabin Zhou Dongwei Ge Zhan Zhou (2-944)
- 2.206 Tool Wear Identifying based on EMD and SVM with AE Sensor ..... Xu Tao Feng Zhigang (2-948)
- 2.207 Novel Intelligent Sensorless Control of Permanent Magnet Synchronous Motor Drive .....  
..... Jiangtao Wang Haiqin Liu (2-953)
- 2.208 Simulation Design and Realization of Axial Force Measurement Sensor of Pump .....  
..... Xinsheng Che Yifei Gao Hui Xu (2-959)
- 2.209 Wireless Sensor Network for Hydraulic System State Monitoring .....  
..... Wei Cai Yongchao Xiao Xianxiang Huang (2-963)
- 2.210 Real Time Prediction Method of Sensor Output Time Series .....  
..... Zhicheng Liu Xudong Pei Gang Huang (2-969)
- 2.211 Research on Locating Acoustic Sensor for Detecting Gearbox .....  
..... Liwei Tang Tongqiang Yang Junying Luan (2-973)
- 2.212 Study on the Sensor for the Pedal Push Force of Bicycle ..... Chunfu Gao (2-977)
- 2.213 A New-type Sensor for Monitoring Oil-water Interface level and Oil Level .....  
..... Guirong Lu Hao Hu Baoxiang He Shuyue Chen (2-981)
- 2.214 A Distributed Localization Scheme for Wireless Sensor Networks Based on Bounding Box Algorithm .....  
..... Peng Aiping Guo Xiaosong Cai Wei Li Haibin (2-984)

- 2.215 Soft Sensor Modeling of Moisture Content in Drying Process Based on LSSVM .....  
..... Dongyan Zhang Jun Cao Liping Sun (2-989)
- 2.216 Development of Knitted Fabric Sensors for Monitoring Human Respiration .....  
..... Liwen Li Kun Yang Guangli Song Liang Zhang Ming Liu (2-994)
- 2.217 Hybrid Method for Prediction of Coal and Gas Outburst Based on Data Fusion and Soft Sensor .....  
..... Xin Yan Naiwei Tu Hua Fu (2-997)
- 2.218 Study on the Influence of Multi-piezoelectric Effect on Performances of Piezoelectric Sensor .....  
..... Liping Shi (2-1002)
- 2.219 Collaborative Target Tracking in Wireless Sensor Network ..... Yuying Tai Yang Bo (2-1005)
- 2.220 Research on Wide Range Measurement System of Free-form Surfaces Using Laser Displacement Detector and  
Grating Displacement Sensor ..... Jiang Yuan Zixue Qiu Shufang Wang Jianxin Shao (2-1011)
- 2.221 Intruding Target Detection Using Wireless Sensor Network ..... Yitao Cao Bo Yang (2-1015)
- 2.222 A Design of Linear AGMI Sensor and Its Application for Tank Target Detection .....  
..... Caipeng Wu Jiahao Deng Ji Sun Yanli Yang (2-1021)
- 2.223 An Energy-Efficient Link Clustering Algorithm for Wireless Sensor Networks .....  
..... Dawei Pan Yu Peng Xiyuan Peng (2-1027)
- 2.224 The Real-Time Safety Monitoring of Railway Condition by FBG Sensor .....  
..... Fan Yang Dawei He Tao Wang Yongsheng Wang (2-1032)
- 2.225 A New Method for Measuring Magnetoelastic Sensor Resonance Frequency .....  
..... Tangsheng Yang Jin Wei Qingyun Cai Lingwen He (2-1036)
- 2.226 Modification of Displacement Signals Collected by Laser Sensors .....  
..... Fuyou Xu Zhang Zhe Cailiang Huang Yanbin Tan (2-1040)
- 2.227 Wavelet Energy Entropy Based Multi-Sensor Data Fusion for Residual Stress Measurement Using Innovative  
Intense Magnetic Memory Method ..... Zhang Lan Fan Jianchun Zhang Laibin Jia Yunhang (2-1044)
- 2.228 Stepping Motor Operating Status Monitoring System Based on Wireless Sensor Network .....  
..... Huang Yong Gao Shihong (2-1048)

# Vol. III

# Table of Contents

## ☆Communication and Network Test Systems

- 3.1 A Novel Acceleration Data Compression Scheme for Wireless Sensor Network Application in Fresh Food Tracking System ..... Jun Chen Zhibo Pang Zhi Zhang Jie Gao Qiang Chen Lirong Zheng (3-1)
- 3.2 Design and implementation of multi-channel CAN Communication Interface based on Embedded Linux ..... Gang Dai Guanghua Gong Beibei Shao Wei Su (3-6)
- 3.3 Remote Analysis of Mechanical Vibration Based on Client/Server Architecture ..... E-nuo Chen (3-10)
- 3.4 Multi-Robots' Communication System Based On ZigBee Network ..... Junli Wan Yanqiu Wang Qin Qin Yanqin Li (3-14)
- 3.5 Energy-Balanced Clustering with Master/Slave Method For Wireless Sensor Networks ..... Xuxing Ding Fangfang Xie Qing Wu (3-20)
- 3.6 Online Automatic Traffic Classification Architecture in Access Network ..... Jian Zhang Zongjue Qian Guochu Shou Yihong Hu (3-24)
- 3.7 Analysis of Magnetic Marker Localization Method for Non-invasive Detecting Capsule with Batteries in GI Tract ..... Wenhui He Guozheng Yan Xudong Guo (3-30)
- 3.8 The Application of Automatic Gating Clock in SoC Clock Network ..... Tao Li Yilei Wang Shixiang Jia (3-35)
- 3.9 Prediction of Muffler Flow Regeneration Noise with Neural Network ..... Haijun Zhao Zhaoxiang Deng Shiju Zhao Jie Yang (3-40)
- 3.10 Analysis and Measurement of Electric Field Distribution in Body Area Network based on Active Quasi-electrostatic Field ..... Xie Yu Li Yinlin Huang Zhonghua (3-44)
- 3.11 Improved Method to Increase AES system Speed ..... Dazhong Wang Xiaoni Li (3-49)
- 3.12 A Medicare System of Wireless Sensor Networks ..... Wu Suyu Yi Weidong (3-53)
- 3.13 Online Monitoring System of Slope Based on the RBF Neural Network ..... Xi Benqiang Liang Bing Xue Qiang (3-58)
- 3.14 Weak Current Signal Detection and Reception of Quasi-Electrostatic Field ..... Huang Zhonghua (3-61)
- 3.15 An Improved Re-connection Priority Dynamic Multi-Threshold Call Admission Control Algorithm based on QoS ..... Zhang Libin Shi Wenxiao (3-65)
- 3.16 Study on the Multimedia Data Models in the Network Automatic Test System ..... Xiaowen Yang Xie Han Liqun Kuang (3-70)
- 3.17 Wireless Thermometric System Based on the ZigBee Technology ..... Yuan Lu Jie Song Yongqing Wang Fang Gao (3-74)
- 3.18 An Equalization Algorithm for CMMB Systems over Fast Fading Channels ..... Xiqing Zuo (3-79)
- 3.19 A New Multipath Estimation Method for GPS Signals ..... Yanxin Yao Dongkai Yang Qishan Zhang (3-84)
- 3.20 Designer of Home network Measurement and Control System based on AT91SAM9260 ..... Xiang Yang Rongyang Zhao Yuanyi Zhang (3-88)
- 3.21 Design of Phone Remote Measurement and Control System in Intelligent Building ..... Yuanyi Zhang Xing Yang (3-92)
- 3.22 Development of A USB-Based Programmable SDLC Measurement Unit ..... Chen Pei Liu Baohui Han Chao Yang Lan (3-96)
- 3.23 Design of USB Multi-channel Temperature and Humidity Acquisition System Based on Wireless Commu-

nication .....	Mei Jianhong Sun Rongxia Dong Limei LiuYing (3-100)
3.24 Remote Measuring and Control Terminal Based on Linux Platform and Embedded Web Server .....	Guangyou Yang Ming Li Shuangqing Zhang (3-104)
3.25 Information Fusion technology for Underground Trackless Equipment on Fire Detection .....	Xin Liu Tianyou Hu Xuesheng Li (3-109)
3.26 The Research and Implementation of Interfacing Based on PCI Express .....	Qiang Wu Jiamou Xu Xuwen Li Kebin Jia (3-116)
3.27 A Modeling and Performance Evaluation Method about the Parallel Multi-task Radar Automatic Test System .....	Ma Min Huang JianGuo Chen GuangJu (3-122)
3.28 Prediction of Cutting Parameters Based on Improved Neural Networks .....	Wu Wang Yuanmin Zhang (3-126)
3.29 Design of a Non-contact On-line Moisture Measurement System .....	Weizhi Huang Jian Li (3-131)
3.30 Stability Analysis and Controller Design for Networked Control Systems with Random Time Delay .....	Yeguo Sun Jin Xu (3-136)
3.31 The Design of the Height Navigation System of Target Missile .....	Wang Hai Sun Li Yan Jie (3-142)
3.32 Syncretic Scheme for PAPR reduction in OFDM system .....	Maokai Hu Xihong Chen (3-146)
3.33 Test Investigation of the Influence of Injection Rate Shaping on the Spray Characteristics in High-pressure Common Rail System .....	Hongjun Xu Kun Yang Zhenming Liu Dongjia Zhou (3-151)
3.34 Study on the Magnetostrictive Actuator of Dual Pressure Common Rail System .....	Jingqiu Zhang Guangyao Ouyang Minghe Wang (3-155)
3.35 Research on Universal Test System of A Missile Launcher in Line and Shop .....	Huayong Xie Mingqing Xiao Wenchao Wu (3-160)
3.36 New generation Troposcatter Communication Based on OFDM Modulation .....	Hu Maokai Chen Xihong Shu Tao Dong Shaoqiang (3-164)
3.37 Computer System Security Model Based on System Call Related to Security .....	Jimin Li Zhen Li Kunlun Li (3-168)
3.38 High-Rate Low-Delay Complex Orthogonal Space-Time Block Codes for Eight Transmit Antennas .....	Bao Tao Jia dong Xu Huisheng Zhang (3-174)
3.39 Monitor System of the Intelligent Power Earth lines Based on GSM SMS Protocol .....	Jinxiu Xiao Shumei Xu Guohe Wu (3-178)
3.40 Color Tracking Vision System For The Autonomous Robot .....	Shushang Zhao Bin Liu Yan Ren Jianhai Han (3-182)
3.41 A Parallel Test System Based on C/S Mode .....	Jingsong Yu Xiongzi Chen Diyin Tang (3-186)
3.42 Hybrid Control based on a Novel Fast Convergence and High Precision CMAC for Electric Loading System .....	Bo Yang Zhe Wang (3-190)
3.43 Research on the Anti-collision System of Surface Coal Mine Based on the Highly Accurate GPS Location Technology .....	Wei Wang Runjing Zhou (3-196)
3.44 PC/104 and FPGA based Automatic Test Research for Airborne Power Distribution Equipment .....	Bo Yang Yunlu Wang Guang Yang (3-200)
3.45 Automatic Transmission Test Data Acquisition System Development Based on Virtual Instrument .....	Chunfu Li Huiyan Chen Yanqin Li guangjun Zheng2 (3-205)
3.46 Control Strategy and Experimental Research on Girder Hoister Steering System Based on RBF Neural Network PID .....	Bingyu Sun Jingyi Zhao Zhiyong Wang Chengyu Yao rui Guo (3-210)
3.47 Correspondence Optical Fiber Automatic Monitoring System Development .....	Changjun Li Qingfu Xu Mingzhu Jiang Shangsong Chen (3-215)

- 3.48 Design of Optimum Filter for Blend of GPS Height and Heave .....  
..... Hongmei Zhang Jianhu Zhao Xueling Bai (3-218)
- 3.49 Wireless Sensor Networks Routing Protocol based on Self-organizing Clustering and Intelligent Ant Colony  
Optimization Algorithm .....  
..... Lida Qiu Ying Wang Yulang Zhao Delian Xu Qingfeng Dan Jian Zhu (3-223)
- 3.50 Research on Tele-operation For Open Multi-robot System By Combination of Embedded Internet Technol-  
ogy And Field Bus Technology .....  
..... Xiaojun Zhao Fei Wang Haixia Su Mingwei Ren Lei Chen Yong Cao (3-229)
- 3.51 Internet-based Automation Equipment Intelligent Monitor System .....  
..... Xiaojun Zhao Haixia Su Mingwei Ren Yong Cao Lei Chen Fei Wang (3-233)
- 3.52 Study on Underwater Synthetic Navigation System Based on Inertial Navigation System and Multibeam Ba-  
thymetric System ..... Hongmei Zhang Xiankuo Meng Jianhu Zhao Nan Shao (3-237)
- 3.53 Interharmonics Monitoring of Power Network Using Modified Covariance Arithmetic and Virtual Instru-  
ment ..... Peiyu Wei Jing Li Zhenmei Li (3-242)
- 3.54 RCS Reduction of Missile-borne Quasi-traveling Wave Microstrip Antenna .....  
..... Yimin Li HongYi Liu (3-246)
- 3.55 Design and Realization of Network Test system for Inertial Instrument .....  
..... Jianhui Zhang Yongyuan Qin Bin Shan (3-250)
- 3.56 Study on Underwater Navigation System Based on Geomagnetic Match Technique .....  
..... Jianhu Zhao Shengping Wang Aixue Wang (3-255)
- 3.57 Research on Deterministic Communication of Industrial Wireless Based on WLAN .....  
..... Yangbo Zheng Aidong Xu Yan Song Wei Zhao Mingzhe Liu (3-260)
- 3.58 Estimation of Time Delay of INS/GPS Navigation in Airborne Gravity .....  
..... Yangming Huang Kaidong Zhang Bing Luo (3-265)
- 3.59 Restudying on the Concept, Mechanism and Composition of Instrumentation Flexible Developing System  
..... Xiaoli Xu Qiushuang Liu Guoxin Wu (3-269)
- 3.60 Design and Research on the Computer Control System of New Shell-Feeding Platform .....  
..... Shenghai Hu Peng Xu Wei Fu (3-275)
- 3.61 Designing Industrial Batching System Based on Touch Panel And PLC .....  
..... Huang Qian QingHai Heng Jian Sun (3-281)
- 3.62 Design Wireless Multi-sensor Fire Detection and Alarm System Based on ARM .....  
..... Haibing Hu Gang Wang Qixing Zhang Jinjun Wang Jun Fang Yongming Zhang (3-285)
- 3.63 Research on Soft Measurement Algorithm of Torque Measurement in Transmission System .....  
..... Xiuchun Lu Xiaoliang Yan Herong Jin (3-289)
- 3.64 Real-time Leak Location System for Geomembrane Liners .....  
..... Shaopeng Guan Changxin Nai Lu Dong Qi Wang (3-294)
- 3.65 Performance Study of Error Resilience with Multiple Reference Frames in H.264/AVC in Conditions of  
Low Bit-rate ..... Zhenghua Zhang Zhen Hu Aicheng Hai Dawei Lu (3-298)
- 3.66 Force Measurement System of a Low-Speed Wind Tunnel .....  
..... Yan Li Xingzhi Ding Yankui Wang (3-302)
- 3.67 Mobile Beacon Node Path Scheme Based on Particle Swarm Optimization in Wireless Sensor Networks  
..... Bing Hu Sumin Liu Hongsheng Li (3-306)
- 3.68 MImplementation and Evaluation of Object-Oriented Flexible Measurement System .....  
..... Fusheng Yu Xiaoqin Shen Xianchun Song Jiwen Chen (3-310)
- 3.69 Test System of External Properties in Magnetically Controlled Shape Memory Alloy of Using Labview  
..... Qingxin Zhang Ming Yang Jing Zhang (3-315)



- 3.70 Design and Implementation of an Improved 3G Turbo Codes Interleaver for 3GPP System ..... Xianhua Yin Jianqiang Liu (3-319)
- 3.71 Application of the visual auscultatory blood pressure measuring system ..... Wang Yuqi Xiang Haiyan Li Yinhua Yu Mengsun (3-322)
- 3.72 Performance Discussion on Space Integrated Navigation based Three GPS Satellites ..... Weihua Ma Jianjun Luo Mingming Wang Bo Yang (3-326)
- 3.73 Research and Comparison of Display Color Conversions Based on Standard of ICC Color Management ..... Baohui Xu Yan Li Jie Zhang (3-330)
- 3.74 Calibration Method of Teradyne J750 SOC Test System ..... Han Wang Zhao Zhao Rongxin Xing Jie Li (3-334)
- 3.75 Development of Multisensor Integrated Navigation System based on Distributed Multiprocessor ..... Qiuping Wu Fengtian Han (3-338)
- 3.76 Analysis Framework for Networked Control Systems of Multiple Guided Weapons: Switched System Approach ..... Yongliang Yu Chaoyang Dong Yanze Hou Qing Wang (3-342)
- 3.77 Networked Control of Guided Weapon using Time-delay Switched System with Compensatory Model ... Zhigang Xue Chaoyang Dong Lijie Xu Qing Wang (3-348)
- 3.78 Application on Kalman Filtering of SINS/GPS Navigation System ..... Yang PeiPei Li Qing (3-354)
- 3.79 Design and Realization of Remote Synchronous Data Transmission System Based on Distributed Architecture of Serial Concurrent Bus ..... Sifeng Zhang Keli Zhang Ping Cao Yanfang Wang (3-358)
- 3.80 Research on Motion Control of Mobile Robot with Fuzzy PID Arithmetic ..... Tian Qi Cheng Li Wang Kai Liu Yan (3-363)
- 3.81 The Design of Hybrid Bus Architecture for Military Automatic Test System ..... Shaojun Wang Xiyuan Peng Honghui Zhao Xiaodong Ma Dali Hao (3-367)
- 3.82 Design of Distributed Environmental Monitoring System for Energy-Saving Controlling System ..... Yu Peng Laiping Wu Datong Liu (3-372)
- 3.83 Traffic Forecasting for Mobile Networks with Multiplicative Seasonal ARIMA Models ..... Jia Guo Yu Peng Xiyuan Peng Qiang Chen Jiang Yu Yufeng Dai (3-377)
- 3.84 Establishment of Remote Measure and Control System Based on Complex Dynamic Objects ..... Yang Dong Shuangxin Wang Hairui Liu (3-381)
- 3.85 The Research of Traceability of CAPS System Time ..... Huijun Zhang Xiaohui Li Danni Wang (3-386)
- 3.86 Analysis On EPS Mechatronic Fuzzy-PID Closed-loop Control System ..... Wei Wanying Yin Guofu Tian Daqing (3-390)
- 3.87 Design and Realization of Unmanned Mobile Platform Control System ..... Li YongKe Chen ZiLi (3-394)
- 3.88 Design for Battery Management System Hardware-In-Loop Test Platform ..... Yuheng Li Zechang Sun Jiayuan Wang (3-399)
- 3.89 The Temperature Compensation Application of The Improved Fuzzy Neural Network in the Oil Viscous Force System ..... Shiru Zhou Jingwen Tian Meijuan Gao (3-403)
- 3.90 An Automatic Evaluation System for IEEE1588 Synchronization Clock Unit ..... Yu Peng Qinghua Luo Zhaoqing Liu (3-408)
- 3.91 An Improved Algorithm for IP Alias Resolution in Network Topology Measurement ..... Yong Zhang Shize Guo Kangfeng Zheng Yixian Yang (3-414)

## ☆ Control Theory and Application

3. 92 From Ancient Machines to Intelligent Robots-A Technical Evolution -Volker Graefe and Rainer Bischoff ...  
..... Volker Graefe and Rainer Bischoff (3-418)
3. 93 Simulation Experiment of Breast Cancer Detection Using an Ultrashort-Pulse Radar System .....  
..... Dan Zhang Atsushi Mase (3-432)
3. 94 Return-to-center Control of Electric Power Steering .....  
..... Shengbing Yang Xuexun Guo Bo Yang Gangfeng Tan (3-435)
3. 95 Nonlinear Identification and Self-learning CMAC Neural Network Based Control System of Laser Welding  
Process ..... Xi Ye Luona Hu Yusheng Liu (3-440)
3. 96 Simulation & Realization of PMSM Servo System Based on Fuzzy Active-disturbance Rejection .....  
..... Hongmei Shi Wei Si (3-446)
3. 97 Research on the Real-time Simulation System of Dual Stator Winding Induction Generator with Variable Speed  
..... Lingshun Liu Jianhai Li Chenghai Lu (3-452)
3. 98 Electric Power Steering System Based on Fuzzy PID Control .....  
..... Zhanfeng Gao Wenjiang Wu Jianhua Zheng Zhanpeng Sun (3-456)
3. 99 An Online Detection Method for Incipient Motor Faults Based on MultitaperSpectrum Estimates .....  
..... Chidong Qiu Yue Tan Ren Guang (3-460)
3. 100 Neurofuzzy Velocity Tracking Control with Reinforcement Learning .....  
..... Xue Jinlin Zhang Weigong Gong Zongyang (3-465)
3. 101 Design of a High Voltage Signal Source for Landfill Leakage Detecting System .....  
..... Ligang Wang Changxin Nai Qingyi Zhang Shaopeng Guan (3-469)
3. 102 Rough Set Theory Based Robot Stiffness Tel-control .....  
..... Yunhong Lei Jianxin Wang Guanzhen Wu Yongqing Zhou (3-474)
3. 103 Small-Sized Large Travel Nano-Positioning System Based on Tubular Permanent Magnet Synchronous Linear  
Motor ..... Congyu Xu Xiaofen Yu Lingli Cheng (3-479)
3. 104 Modeling and Analysis of the Wood Flexible Manufacturing System Based on TCPN .....  
..... Zhao Yuerong Cao Juna Sun Liping (3-483)
3. 105 Path Planning for UAV Based on Improved Heuristic A \* Algorithm .....  
..... LiXia XieJun Cai Manyi XieMing Wang Zhike (3-488)
3. 106 Research on the Controller of the Digital Cabin Pressure Regulating System Based on the Fuzzy Gain Schedu-  
ling ..... Lei Zhu Yongling Fu Jingquan Zhao Dong Guo (3-494)
3. 107 Fuzzy based Adaptive Dynamic Surface Control for a Class of Uncertain Nonlinear Systems in Strict-feedback  
Form ..... Oakka Aung Yan Lin Qichao Zhao (3-499)
3. 108 Slow Switching Adaptive Model Inversion Control of Helicopter .....  
..... Jia Zhao Gongzhang Shen Shenggong Chen (3-506)
3. 109 Adaptive Sliding Mode Control for Bank-To-Turn Missiles .....  
..... Duan Chaoyang Zhang Yingxin Dong Chaoyang Sun Rui (3-512)
3. 110 Design of Active Control System Based on MSMA Self-sensor Actuator .....  
..... Chengwu Lin Na He Juyao Qiao (3-518)
3. 111 Fuzzy Control and Simulation for Inverted Plasma Cutting Power Supply .....  
..... Deli Jia Jinsong He Changjiang Zhao (3-523)
3. 112 Simple Calculation of the Duty Cycle Based Double Space Vector Modulation for Matrix Converter .....  
..... Lei Zhang Miao Guan Yong Wang (3-528)
3. 113 The Research of Electronic Service Applied to Medical Industry .....  
..... Shiching Ke Chihhsiung Shen (3-533)

3. 114 Comparison Research on PID Controller and Model-free Controller Based on Multi-innovation Theory ..... Pinle Qin Xie Han Yan Lin (3-537)
3. 115 High-Precision Simulation of Star Map Using Forward Ray Tracing Method ..... Yang Yan-de Wang Jiang-yun Zhu Yu-tong (3-541)
3. 116 A Dynamic Simulation System for Secondary Cooling Process in Continuous Slab Casting ..... Liu Rujia Zhang Zhenshan Chai Tianyou (3-545)
3. 117 Integrated Control Of Automotive Four Wheel Steering And Active Suspension Systems Based On Unifrom Model ..... Fei Lai Zhaoxiang Deng (3-551)
3. 118 Flying Qualities Specifications Criteria and their determination for Unmanned Aerial Vehicles ..... Tahir Hameed Wang Wei Ren Zhang (3-557)
3. 119 Simulation System Model of Independent Power-supply Based on Reusable Object-Oriented Technology ... Li Zhang Haiwen Yuan Hong Lv (3-564)
3. 120 Elimination of Chaotic Ferroresonance in Power System With Nonlinear Core Loss ..... Meng Hui YanBin Zhang ChongXin Liu (3-568)
3. 121 Diversity Guided Immune Clonal Quantum-Behaved Particle Swarm Optimization Algorithm and the Wavelet in the Forecasting of Foundation Settlement ..... Jiwen Dong Ruihai Wu (3-573)
3. 122 Pressure Loop Control of Pump and Valve Combined EHA Based on FFIM ..... Youzhe Ji Song Peng Li Geng Zhanlin Wang Lihua Qiu (3-578)
3. 123 Adaptive Control for a Class of Uncertain Chaotic Systems with Saturation Nonlinear Input ..... Hongchun Li Tianping Zhang Zhenmin Guo (3-583)
3. 124 High-power Constant Current Technique for the Excitation Source of Electromagnetic Exploration on Land ..... Fusheng Shi Ming Deng Meng Wang Yingying Liu (3-588)
3. 125 Robust Two-degree-of-freedom Control for AC Speed Regulating System ..... Xiaojia Wang Jinggang Zhang Runhua Zhao (3-593)
3. 126 Parametric-Primary Resonance of Current-Carrying Ferromagnetic Beam in Coupled Magnetic-Temperature Fields ..... Yihui Cui Zhián Yang Chao Yun (3-598)
3. 127 Simulation and Experimental Research of Non-linear Friction Compensation for High-Precision Ball Screw Drive System ..... Hongbiao Xiang Zurong Qiu Xingfei Li (3-604)
3. 128 Extended State Observer-based Robust Fault-tolerant Controller for Flight Control Surface Failures ..... Wei Wang Tahir Hameed Zhang Ren (3-610)
3. 129 Multi-rate system identification based on improved PSO ..... Weixing Lin Qiting Gu Yanhai Chen (3-616)
3. 130 Research of the Control System of PEM Fuel Cell ..... Hui Jin Jindian Ye Jie He Jieqiong Zhang (3-621)
3. 131 Research on Detection System of Ceramic Tile Based on Image Processing ..... Bo You Chao Yan Ming Qiao Jiazhong Xu (3-628)
3. 132 A New Scheme of VVVF Inverter Using Line Voltage Direct PWM ..... Lin Jiaquan Pi Jun (3-633)
3. 133 Application of Backstepping Control in PMSM Servo System ..... Liu Dongliang Zhou Lixin (3-638)
3. 134 Research of Fuzzy Adaptative Vector Control of Asynchronous Motor Based on DSP ..... Ting Wu Junda Hu (3-642)
3. 135 The Application of Active Disturbance Rejection Control Method to Tactical Missile Electro-Hydraulic Actuator ..... Hui Chen, Zhaoqin Peng Yongling Fu Xiaoye Qi (3-647)
3. 136 Virtual Sensors Design in Vehicle Sideslip Angle and Velocity of the Centre of Gravity Estimation ..... Wei Zhang Nenggen Ding Guizhen Yu Wei Zhou (3-652)
3. 137 Situation Awareness Enhancement of Cockpit Synthetic Vision System; Visualization of Tunnel-in-the-Sky ..... Huang Xuelin Wang Jiangyun Han liang Ma Shidong (3-657)
3. 138 Development of Pressure Control System of Lifting and Moving Rail Equipment Test Bench ..... Zhengyao Yi Wei Xiong Haitao Wang Jian Wu Zuwen Wang (3-662)

3. 139 Improved Virtual Vector Direct Torque Control of Induction Motor Based on Three-level NPC Inverter ...  
 ..... Liming Hou Yunfeng Li Xiaoyun Feng Hengbin Cui (3-668)
3. 140 Mixed  $H_2/H_\infty$  Gain Scheduled State Feedback Control for an Airborne Dispenser Pitch-Axis Autopilot ...  
 ..... Li Hui Yu Huang Zhang Tao Song Jingyan Wang Tianshu (3-673)
3. 141 The Application of Predictive Functional Control to New Motor Pump-Valve Compound Control System ...  
 ..... Gaocheng An Zhaoqin Peng Yongling Fu (3-679)
3. 142 A Relative Bias Estimation Algorithm on Airborne Radar Networks ..... Zuomei Lai (3-685)
3. 143 Study of Decoupling Control for Airborne Hydraulic Pump in the Cyclic Stress Accelerated Life Test .....  
 ..... Mingxia Wang Zhaoqin Peng Yongling Fu Xin Wang (3-690)
3. 144 Robust  $H_\infty$  Control in Active Vibration Control of Piezoelectric Smart Structure .....  
 ..... Xiaojin Zhu Jinsong Liu Quanzhen Huang Shouwei Gao (3-694)
3. 145 Study of the Electro-hydraulic Load Simulator Based on Double Servo Valve Concurrent Control .....  
 ..... Jianying Li Junpeng Shao Zhongwen WangBo WU Guihua Han (3-699)
3. 146 Performance Improvement of Angular Rate Matching Shipboard Transfer Alignment .....  
 ..... Salman Majeed Jiancheng Fang (3-706)
3. 147 Conceptual Designing - Unmanned Aerial Vehicle Flight Control System .....  
 ..... Tahir Hameed Wang Wei Ren Zhang (3-712)
3. 148 Development of an Embedded Control System for Magnetorheological Fluid Damper Under Impact Load ...  
 ..... Juan Wang Hongsheng Hu Jiong Wang Zhaochun Li Zhiwei Gong (3-717)
3. 149 Temperature Control in Big-Scale Rotary Kiln by Using Grey Neural Network .....  
 ..... Jiaoyu Liu Xin He (3-723)
3. 150 Electric and Control Technique Research of a Coal Mine Detect Robot .....  
 ..... Junyao Gao Jianguo Zhu Xueshan Gao Wei Zhu Boyu Wei Shilin Wang (3-729)
3. 151 Unmanned Vehicles Intelligent Control Methods Research .....  
 ..... Junyao Gao Jianguo Zhu Boyu Wei Shilin Wang (3-736)
3. 152 Simulation of the Atmosphere-temperature Decoupling System on Grey Predicting PID Control of the Gas-  
 burning Roller Ceramic Kilns in SIMULINK ..... Jiaoyu Liu Kun Chen Yi Deng (3-742)
3. 153 Design and Application of CPLD in Vehicle Exhaust Gas Measurer .....  
 ..... Qilan Huang Zhendong Zhang Haitang Wang (3-747)
3. 154 Application of Hough Transform In Eye Tracking and Targeting .....  
 ..... Jingge Gao Shuqiang Zhang Wei Lu (3-751)
3. 155 Design and Implementation of Plastic Film Length Measurement Device in Blow Molding Machine .....  
 ..... Huijing Miao Boxue Tan Jin Shen Xianqiang Wang (3-755)
3. 156 Application of PLC and Touch Screen in Two-way Extrusion of Biomass Block Fuel Prototyping Machine  
 ..... Na Huang Jiang Xiao Guosheng Yu (3-761)
3. 157 Fuzzy Sliding Mode Control and Synchronization of Uncertain Willis Chaotic Systems .....  
 ..... Shuhua Peng Zhong Su (3-765)
3. 158 Scale Invariant Control Points Based Stereo Matching for Dynamic Programming .....  
 ..... Kunpeng Li Sunan Wang Mingxin Yuan Naijian Chen (3-769)
3. 159 Design of Electrical Transmission Control System for Furniture Coating Pipeline .....  
 ..... Xiaolian Pu Yan Gao Shilong Xue (3-775)
3. 160 An ARX Model Based Predictive Control Strategy for Sintering Process .....  
 ..... Huanyu Liao Xin Peng Yiwei Li (3-779)
3. 161 Simulation of Reverberation Time Series Based on Multipath Propagation Theory .....  
 ..... Xiye Guo Shaojing Su Yueke Wang (3-785)
3. 162 Stationary wavelet-based analysis and simulation of unsteady wind in aeolian sand transport .....  
 ..... Liu Jiang Wang Yuan Zhang Yang (3-789)

3. 163 Optimal Task Assignment for Serial-Parallel Hybrid Robots Cooperation via Ant Colony Optimization .....  
 ..... Yongling Fu Wanqin Luo (3-795)
3. 164 Application of Sliding Mode Control to Design of the Inverted Pendulum Control System .....  
 ..... Zhiping Liu Fan Yu Zhi Wang (3-801)
3. 165 Experiment Study On Control Methods Of Common Rail Pressure By Entering Flow .....  
 ..... Shijie An Guangyao Ouyang Jingqiu Zhang Kun Yang (3-806)
3. 166 Development of Sample Wheel Control System Based on AFM Used in Deep Space Exploration .....  
 ..... Yingzi Li Jianqiang Qian Wenliang Liu Yuan Li Baocheng Hua Yong Yang (3-810)
3. 167 Study on the Target Association Arithmetic of the Marine Radar and AIS .....  
 ..... Yangping Ou Changchuan Lin Jianwen Zhou Guoquan Chen (3-815)
3. 168 Application of Complex Cepstrum Filter in TDR Waveform Analysis .....  
 ..... Feng Wei Ji Yicai Fang Guangyou (3-819)
3. 169 Research on the Warship Operation Training Simulation System Based on the HLA .....  
 ..... Jinhui Hu Dabin Hu Minlin Liu (3-823)
3. 170 Decision Tree Algorithm for Tank Damage Analysis in Combat Simulation Tests .....  
 ..... Zhiwu Tang Qing Xue Meng Zhao Yang Wei (3-830)
3. 171 Compromise Control Tactic For Intelligent Mobile Welding Robot .....  
 ..... Zhang Ting Li Kai Yang Jing (3-836)
3. 172 Application of Dynamic IR Scene Generation Technique in Airborne Electro-optical Detecting Simulation Systems .....  
 ..... Jingsong Yu Diyin Tang Xiongzi Chen Leili Hu (3-840)
3. 173 Study on Reconstruction Algorithm of Two-Dimensional Temperature Field Based on Simulation of Sound Propagation Path .....  
 ..... Feng Tian Song Liu Changhui Zhang Weijun Zhang (3-844)
3. 174 Application of Fuzzy Pattern Recognition in Felting Quality Ultrasonic Detection of Composite Material .....  
 ..... Pengfei Zhang Runjing Zhou (3-848)
3. 175 Application of Dynamic Tunneling Fuzzy C-Means Algorithm in Dissolved Gas of Transformer Oil .....  
 ..... Tao Chang Xiaoxing Zhang Hao Xiong Caixin Sun (3-852)
3. 176 Online Omnidirectional Walking Patterns Generation for Biped Robot .....  
 ..... Guoqiang Shi Hao Wang Baofu Fang (3-856)
3. 177 Research On Intelligent Vehicle Steering Control Based On Fuzzy Control .....  
 ..... Xiaofei Xu Peirong Xia Denghua Li Jingbo Zhao (3-862)
3. 178 A Radial Basis Function Neural Network Based Efficiency Optimization Controller for Induction Motor with Vector Control .....  
 ..... Zhanyou Wang Shunyi Xie Yinghua Yang (3-866)
3. 179 Research and Application on the Method for Measuring Rotational Speed and Pre-processing the Signals of Armored Vehicle Engine .....  
 ..... Jin Ying Qiao Xinyong Xu Haiwei (3-871)
3. 180 Recognition of Infrared Spectrum Data of Coal Mine Gas Based on Multiple Hyperplanes Classifier Method .....  
 ..... Mengran Zhou Cangrong Zhao Yuliang Liu (3-875)
3. 181 Integrating Multimedia and Artificial Intelligence for Pest Prediction and Aeration Control of Stored Grain Bins .....  
 ..... Xiujuan Liu Chunguang Wang Yunhong Su Tiewu Hu (3-880)
3. 182 An Application of New Direct Digital Frequency Synthesizer .....  
 ..... Baoxue Li Bing Zhang Yuanchun Fei Qi Zhao (3-884)
3. 183 Research and Simulation of superenvelopes UV communication system .....  
 ..... Ping Wang Jun Gao Hongxia Wang Zhijun Xu Peigeng Tian (3-889)
3. 184 Key Technology Discussion of Automatic Monitoring about the Weather Modification Operation .....  
 ..... Changyuan Fan (3-894)
3. 185 Application of Hybrid Active Power Filter in Net short's Harmonic Suppression of Electric Arc Furnace .....  
 ..... Wei Wei Peng Xue Lai Wei (3-898)
3. 186 Research on the Application of Model Free Adaptive (MFA) Control in Gas Turbine .....  
 ..... Aidong Xu Yangbo Zheng Haibin Yu (3-902)

- 3.187 A Study Of The Jacking System For Ferroalloy Electric Furnace Electrode Based On Linear Motor Controlling ..... Xue Peng Zhu Jiwei (3-909)
- 3.188 Study on Positioning Control of Transfer Robot with Solar Cell ..... Zhiming Wang Zhengbang Gong Yuchao Wang Guangpu Wei (3-913)
- 3.189 Micro-system for Shock and Vibration Measurement ..... Ming Li Mingjie Liu (3-920)
- 3.190 Towards An Efficient Prototype of RPC Detector Readout System in the Daya Bay Neutrino Experiment ... Heng Yang Hao Liang Yuan Yuan Xiaoqi Yu Yongzhao Zhou (3-924)
- 3.191 The Simulation and Analysis on Engine and Hydraulic Retarder Continual Braking Performance of the Tracked Vehicle on Long Downhill ..... Bin Song Jiangang Lv Yun Liu Fan Kong (3-928)
- 3.192 Study on Online Monitoring System of PEMFC Resistance based on Electrochemical Impedance Spectroscopy ..... Rui Quan Liang Huang Qihong Chen Shuhai Quan (3-932)
- 3.193 A Path Planning Algorithm for Mobile Robot based on Combined Map ..... Yijie Sun Bin Jing Jing Zeng (3-937)
- 3.194 Study on High-speed High-temperature Adaptive Fuzzy PID Control System ..... Jinquan Hu Qing Guo (3-942)
- 3.195 Research and Realization of Algorithms for Gene-chip PCR Temperature-Tracking Control ..... Liu Jun Weijun Liu Tianran Wang (3-946)
- 3.196 A Control System Design for the Optimal Bias Point of External Modulator ..... Yinan Chen Xiaoqing Zhang Dong Li (3-950)
- 3.197 Trajectory Tracking Control of Wheeled Mobile Robots Based on Integrated Intelligent Steering ..... Kunpeng Li Sunan Wang Hongyu Di Hongliang Li (3-955)
- 3.198 Research on Drive and Control Technology of External Modulated DFB Laser Diode ..... Xiaoqing Zhang Dong Li Yinan Chen Lei Liao Zhengjie Dong (3-961)
- 3.199 Study of Real-Time Simulation System Based on RTW and Its Application in Warship Simulator ..... Jinhui Hu Dabin Hu Jianbo Xiao (3-966)
- 3.200 Research on Motor Model Reference Adaptive Control System Based on ARM ..... Zhihong Tian Wenjie Yang Wenfeng Bai Wei Jiang (3-971)
- 3.201 Design and Simulation of a Micro Gyroscope with Decoupled and High Linearity Structure ..... Xinjian Liang Shiqiao Gao Feng Gao Shengtao Lv (3-975)
- 3.202 Application of Fuzzy-evaluation-based Information Fusion in Coal Mine Environment Monitoring System ... Hongge Sun Xin Yan Xiaoli Li Tiejun Zhao (3-980)
- 3.203 Robust Face Tracking based on Bayesian Probability ..... Guishan Xiang (3-985)
- 3.204 Study on Optimization for Vehicle Power Train Parameters ..... Fangxiao Cheng Hongguo Xu Ying Sun (3-989)
- 3.205 Application of MATLAB Image Processing Technology in Sewage Monitoring System ..... Huidan Cao Yuming Shen (3-993)
- 3.206 Aircraft Multiplex Mechatronic System Control Strategy Based On Task Management ..... Juan Chen Xiaoye Qi Jun Liu Zhanlin Wang (3-996)
- 3.207 Fingerprint Verification Based on Wavelet and Edge Detection ..... Zhou Weina Han Jun Zeng Xiaoyang Yan Weiwei (3-1001)
- 3.208 Comparative Study of the Performance on a Constant Flow Annular Hydrostatic Thrust Bearing Having Multi-Circular Recess and Sector Recess ..... Xiaodong Yu Xiuli Meng Junpeng Shao Yanqin Zhang Bo Wu Zhimin Shi (3-1005)
- 3.209 Design and Implementation of Multi-mode Composite Homing Guidance System ..... Xiang Wang Yongshu Xiao Rui Guo Bo Cai Yan Cui (3-1011)
- 3.210 Research on State Prediction of Flue Gas Turbine Based on Elman Neural Network ..... Chen Tao Xu Xiaoli Wang Shaohong (3-1017)

- 3.211 Design and Control Algorithm of Road Spectrum Simulation Equipment .....  
..... Fan Jiang Chunman Huang Chun Wang Yijun Wang Xiaochu Liu (3-1021)
- 3.212 Detection Scheme And Numerical Simulation of Noxious Gas Density Field in the Automobile Indoor .....  
..... Fan Jiang Chun Wang Yijun Wang Xiaochu Liu (3-1025)
- 3.213 Application Research of PWM Inverter in the Cascade Speed Control System of Inner-feedback Motor ...  
..... Xiaodong Zhang Bingshu Wang Yongjun Lin Ruiqing Zhang (3-1029)
- 3.214 A New Algorithm of Rapid and Precise Position and Azimuth Determination Based on Vehicular Optical-electronic Detector .....  
..... Yanhong Lu (3-1032)
- 3.215 Analysis and Research on Terminal-Guidance Projectile's Program-Controlled Time .....  
..... Weidong Song Fei Lu Qinglan Zhao Zhenxin Li (3-1036)
- 3.216 Emotional Speech Recognition Based on ECG ..... Bo Li Yutai Wang Lihao Wang (3-1039)
- 3.217 The Research of Stress Monitor and Broken Testing for Steel Wire Rope ..... Xiaochun Zhang (3-1044)
- 3.218 Fast Optimizing Parameters Algorithm for Least Squares Support Vector Machine Based on Artificial Immune Algorithm .....  
..... Fugang Yang (3-1048)
- 3.219 Backstepping Based on Model Reference and Sliding Mode Control .....  
..... Qizhi Wang Xiaoxia Wang (3-1054)
- 3.220 A New Method on Power Quality Comprehensive Evaluation ..... Mei Liang Yongqiang Liu (3-1057)
- 3.221 Hybrid Vehicle Motor Test Platform Development and Application .....  
..... Xiao Ye Zhenhua Jin Biao Liu (3-1061)
- 3.222 Simultaneous determination of Soil Nitrate and Chlorine by ISE ..... Chen Li Li Li (3-1064)
- 3.223 A Dynamic Model for Aircraft Route Optimizing in Airport Surface Management .....  
..... Zhen Li Jun Zhang Xuejun Zhang (3-1068)
- 3.224 Feedforward Controller Based-on Piezoelectric Actuator's Hysteresis Model and Its Performance Simulation of an XY Plane Motion Stage .....  
..... Pan Lizhi Zhan Min Wang Wendong Liang Yakun (3-1073)
- 3.225 Image Recognition for On-line Vibration Monitoring System of Transmission Line .....  
..... Lizhi Pan Xiaohui Xiao (3-1078)
- 3.226 The Research and Analysis of the Gear Shafts Bending-Torsional Coupled Vibration Test .....  
..... Xiang Changle Sun Tiantian Liuhui (3-1082)
- 3.227 A Combined Kalman Filter - Discrete Wavelet Transform Method for Leakage Detection of Crude Oil Pipelines .....  
..... Zhang Yu Li Jian Zeng Zhoumo Shijiu Jin (3-1086)
- 3.228 Modelling and Simulation about Rarefaction Wave Gun Interior Ballistics Applying Inertial Breech .....  
..... Jianzhuang Zhi Changchun Di Lei Zhang Chaochun Jiang (3-1091)
- 3.229 Study on a Recurrent Functional Link-based Fuzzy Neural Network Controller with Improved Particle Swarm Optimization .....  
..... Zhirong Guo Shunyi Xie Wei Gao (3-1095)

☆Signal & Image Processing

4.1 An Automatic Selection of WGN-Dominated Frequency Bands with Noise Measurement System .....  
..... Seung Min Shin Young Soo Kim Sang Tae Kim Mi Kyung Suk  
Seong Yun Lee Hoon Gee Yang Jong Gwan Yook (4-1)

4.2 Development of an Electromechanical Sensor System to Monitor SportsActivities .....  
..... Yull Heilordt Henao Fabiano Fruett(4-6)

4.3 An Algorithm Based On the Harris Corner Detector to Identify the Palmprint Extraction .....  
..... Lei Wang Yuming Shen (4-11)

4.4 A Kind of Algorithm Similar to Amplitude Demodulation for Sonar Array Direction of Arrival .....  
..... Wei Guo Zhongming Pan Yueke Wang (4-15)

4.5 Shadow Fading Correlation on CDMA system ..... Zhang Yuyan (4-19)

4.6 Data Process and Signal Analysis Based On LabVIEW ..... Liu Yan (4-23)

4.7 Method to Remove the Interference in Reflected Wave of Passive Radar Based on the Improved FastICA  
..... Shuzhao Wang Guibin Jin Guimei Jin Yinhe Wang (4-27)

4.8 Select on Wavelet in the SK Static Mixer with the Velocity Pulse Signal Analysis .....  
..... Bin Gong ZhongPing Bao ChengCheng Guo JianHua Wu (4-31)

4.9 Design of a High-speed Spectral Signal Processing System with a Floating-point DSP for FTIR spectrometer  
..... Dong Da-ming Fang Yonghua Xiong Wei Lan Tiange (4-35)

4.10 Multi-feature Target Tracking Based on Lifting Scheme .....  
..... Xinli Yang Huixian Yang Jinfang Zeng Hong Yu (4-40)

4.11 High-temperature Physical Properties Tester Research Based On Image Processing .....  
..... Jin Wu Haohua Xiao (4-46)

4.12 Calibration for Structured-light Vision System Based on Homography .....  
..... Zhang Yongbin Ji Fang (4-51)

4.13 Face Detection Based on Half Face-template .....  
..... Wei Chen Tongfeng Sun Xiaodong Yang Li Wang (4-54)

4.14 Macromodeling of the Electrostatically Actuated Circular Plate Based on Mode Superposition Method  
..... Jun Li Ji Ying Liying Xue (4-59)

4.15 Design Of High-Speed Image Processing System Based On FPGA .....  
..... Xinxi Zhang Yong Li Jinyang Wang Yulin Chen (4-65)

4.16 Boundary Scan with Parallel Test Access Mechanism .....  
..... Han Ke Deng Zhongliang Huang Jianming (4-70)

4.17 PCB Level SI Simulation Based on IBIS Model for High-speed FPGA System .....  
..... Huanghui Shen Zhensong Wang Weimin Zheng (4-74)

4.18 A Mobile Telephone Locating Method with Erroneous Observer Positions Based on TDOA .....  
..... Bo Xu Jianyun Chen Xiaopeng Zhong (4-80)

4.19 Design of Digital Filter Based on VB and Matlab ..... Xueling Bai Hongmei Zhang (4-85)

4.20 Design of Fuzzy Control and Expert System Based MIG Arc Welding Invert Power Source .....  
..... Pang Qingle (4-89)

4.21 A Fast Invariance Direction Motion Estimation Algorithm .....  
..... Qi MeiBin Zhang ChengFeng Jiang JianGuo (4-93)



4.22	Determination of the Repose Angle of Stuff in Rotary Kiln Based on Imaging Processing	M. He J. Zhang X. Y. Liu (4-97)
4.23	High-Order DDFS Applied in Simulated High-Dynamic GNSS Signal Synthesis	Bo Zhang Guangbin Liu Wei Jiao Dong Liu (4-102)
4.24	SLFM: A New DOA Estimator for Wideband Signals	Zuo Wei Gao Jun (4-107)
4.25	New De-noising Method for Laser Active Image Based on Wavelet Transform	Jun Xu Yibin Xu Jijun Luo Xiaolei Ning Falin Zhao Xiaofeng Li (4-112)
4.26	Comparisons on Segmentation of Brain MR Image	Chunlan Yang Shuicai Wu Yanping Bai Hongjian Gao (4-116)
4.27	Regularization Parameter Selection for Electrical Impedance Tomography Measurement	Wenqin Wang Jingye Cai Lian Yang (4-120)
4.28	Transient Disturbance Detection Based on Hilbert Phase-shifting and Wavelet De-noising	Chunling Chen Weiwei Liang Tongyu Xu (4-125)
4.29	Data Compression of Engineering Curve Based on Non-Uniform Cubic B-Splines Fitting	Li Li Rongsheng Zhang Na Li Shengling Zhang (4-131)
4.30	Video Object Segmentation Algorithm Integrating Temporal and Spatial Information	Yudong Guan Ying Wang Hong Zhang (4-136)
4.31	Image Fusion Using MGA Based on Sub pixel	Yong Chai You He Changwen Qu (4-141)
4.32	Real-Coded Generic Algorithm for Optimized Digital Watermarking Embedding in Time-Domain	Li Xiaoni Sun Xiaoying Wang Dazhong (4-144)
4.33	Research on Dissolved Oxygen Classification based-on Image Processing and Neural Network	Liu Liping Yu Naigong Sun Jinsheng (4-149)
4.34	A Near Infrared Imaging Detection System Based on Davinci Platform	Li Hua Zhang Shi-chao Han Chao Zheng Ming Meng Xiao-feng (4-154)
4.35	A FPGA-based 7-order 1-bit Sigma-Delta Modulator for High-precision Signal Generation	Song Hongzhi Wu Jie Ma Yichao Kong Yang Zhang Jie (4-160)
4.36	A Blind Identification Algorithm Based on the Filtering In Frequency Domain for Degraded Images	Li Dongxing Wang Yichang Zhao Yan (4-165)
4.37	A Novel Restoration Algorithm of the Turbulence Degraded Images Based on Maximum Likelihood Estimation	Li Dongxing Han Jinhong Xu Dong (4-171)
4.38	A Method of Aircraft Image Target Recognition Based on Modified PCA Features and SVM	Donghe Wang Xin He Wei Zhonghui Huilong Yu (4-177)
4.39	Application of Eigenvector Estimation and SVM for EEG Signals Classification	Enping Lou Sheng Zhang Shini Qiao (4-182)
4.40	Study of 3D Splicing Method Based on Control Net in Stereo Vision Measurement System	Qiaoyu Xu Haichao Cai Rensheng Che (4-186)
4.41	Ultrasound Image Enhancement for HIFU Lesion Detection and Measurement	Sheng Yan Jianping Yuan and Chaohuan Hou Fellow IEEE (4-193)
4.42	License Plate Location Method Based on Modified HSI Model of Color Image	Cheng Zhangfan Chen Rongbao (4-197)
4.43	An Object Color Recognition Algorithm Based on Study-expansion Method	Jinxue Sui Li Yang Yongqiang Wang Zhen Hua (4-202)
4.44	Novel Scheme for Sar Image Compression Based on JPEG2000	Peng Zhou Baojun Zhao (4-206)
4.45	Tagged Cardiac MR Image Segmentation By Contrast Enhancement and Texture Analysis	Xiaomei Yang Kenya Murase (4-210)
4.46	Study Of Stochastic Resonance Based On a Nw Pecewise-Lnear Mdel	Linze Wang Xin Liu Wenli Zhao (4-215)

4.47	Improved Fast Fourier Transform Processing on Fast Acquisition Algorithms for GPS Signals .....	Lin Zhao Shuaihe Gao Yong Hao (4-221)
4.48	Using Multi-scale Density for Local Feature-based Registration in SAR Imagery .....	Hui Zhang Baojun Zhao (4-225)
4.49	Filtering Ultrasonic Echo of Bottom Sediment in Drilling Hole by Parameters Constrained Gabor Filter .....	Di Fan Maoyong Cao Nongliang Sun Kaihua Liu (4-230)
4.50	Similarity Measures of Sectional Contour based Surface Feature Extraction From Point Clouds .....	Hongjuan Yang Jiwen Chen Yiqi Zhou (4-234)
4.51	Parallel Visualization of Large Medical Datasets Based on Computer Cluster .....	Min Tang Zixue Qiu (4-238)
4.52	Research on Directed Fault Propagation Graph Model and Optimization .....	Yuan Haibin Li Jia Wang Qiusheng (4-241)
4.53	A Self-localization Method Through Pose Point Matching for Autonomous Soccer Robot Based on Omni-vision .....	Bo Liu Junbo Fan Jun Zhou Kui Li Yongzhao Xie (4-246)
4.54	Survey of Data Association of Moving Objects tracking in Video Sensors Network .....	Zhifeng Ma Jiuqing Wan (4-250)
4.55	The Research and Implementation of Digital Scene Simulator System .....	Jiajing Sun Baojun Zhao Lili Ge (4-255)
4.56	Optimization Design of UWB Passive Bandpass Filter's Standing Wave Ratio .....	Peng Li Hongmei Ma (4-259)
4.57	SAR and Visible Image Fusion based on Local non-negative Matrix Factorization .....	Youshi Ye Baojun Zhao Linbo Tang (4-263)
4.58	A Review on Fault Prognostics in Integrated Health Management .....	Liu Hao Yu Jinsong Zhang Ping Li Xingshan (4-267)
4.59	Passive Millimeter-wave Metal Target Recognition Based on Manifold Learning .....	Lei Luo Yuehua Li Yinghong Luan (4-271)
4.60	A Method Using Black Model to Prognosticate the Load Dynamic Characteristics of Power Source .....	Yuan Haiwen LvJianxun YuanHaibin CuiYong Triaki Merouane (4-275)
4.61	The Application Research of Chaotic Stream Cipher in Aircraft Co-operation Data Classified Transmission System .....	Lin Jinyong Dong Wenjie Ding Qun Sun Shenghe (4-278)
4.62	Improving AMDF for Pitch Period Detection .....	Kang Guangyu Guo Shize (4-283)
4.63	A Wideband Pulse Detection Algorithm based on Autocorrelation .....	Zou Simin Zeng Deguo Tang Bin (4-287)
4.64	Tracking and Imaging Algorithm of Walking Human Bodies for Ultra WideBand Radar .....	Qiong Huang Shengwei Meng Shiyou Wu Jie Chen Guangyou Fang Hejun Yin (4-290)
4.65	Air voids measurement on asphalt mixes section surface based on image analysis .....	Yang Hao Yuan HaiWen Liu YuanQuan Zhang HaiXia Zhang Lei (4-296)
4.66	An Algorithm of Extracting Infrared Image Edge Based on Lateral Inhibition Network and Wavelet Phase Filtration .....	Kanglin Gao Mei Dong Desheng Li Wei Cheng (4-303)
4.67	Real-Time Electronic Digital Image Stabilization System Based on Multi-core Computation .....	Yubin Zhou (4-308)
4.68	Improved Reduced Difference Expansion Based Reversible Data Hiding Scheme for Digital Images .....	Hu Yi Song Wei Hou Jianjun (4-315)
4.69	A Directed Quantile Cross-Entropy Method for 0/1 Knapsack Problems .....	Libao Deng Liyan Qiao Xiyuan Peng (4-319)
4.70	Fitting and Reconstruction of Three-dimensional Curve Based on Orthogonal Curvature .....	Xiaojin Zhu Lingxiao Ji Xiaobin Jin Jincong Yi (4-323)

- 4.71 Research on Monitoring Technology of Bolt Tightness Degree Based on Wavelet Analysis ..... Pengyu Bao Mei Yuan Zhong Fu (4-329)
- 4.72 Detection of Bolt Tightness Degree Based on HHT ..... Mei Yuan Zhong Fu Pengyu Bao (4-334)
- 4.73 Research on Signal Processing for Bridge Health Monitoring ..... Jing Chen Chun Wan Chun Xiao Liqiao Li (4-338)
- 4.74 Power System Harmonic Analysis Based on Improved Hilbert-Huang Transform ..... Shi Zhang Qun Wang Ruirui Liu (4-343)
- 4.75 Research on an aerial-image multipurpose processing system based on C/S architecture ..... Chen Chao Zhou Jianjun Guo Wei Li Jiang He Jun Sun Bo (4-348)
- 4.76 Design and Data Processing of a Real-Time Power Quality Monitoring Instrument ..... Zhenghua Zou Yongqiang Liu Fuqiang Zhao Mingzhi Peng (4-353)
- 4.77 3 Dimensional Multi-body Frictional Elastic Contact Boundary Element Method ..... Xia Yang Hong Xiao Zejun Chen (4-358)
- 4.78 Analysis of Vehicle Surroundings and Driver Status from Video Stream based on a Single PAL Camera ..... Guo Yu Xiao Xiao Jian Bai (4-363)
- 4.79 Scatter Detection and Correction Method of FPD-Based DR/CT Imaging Systems ..... Kuidong Huang Dinghua Zhang Mingjun Li (4-368)
- 4.80 Lanczos Algorithm Based L-Curve and Curvature in Image Resolution Enhancement ..... Kai Xie Likun Lu (4-373)
- 4.81 High-speed Real-time Data Acquisition System Based on FPGA ..... Jinqiu Xiao Xinglong Wang Yi Feng (4-378)
- 4.82 Application of 3D Laser Scanner in Topographic Change Monitor and Analysis ..... Yang Zhou Meng Cui Lei Yang (4-382)
- 4.83 Research on Data Acquisition System based on FlexRay ..... Hui Li Hao Zhang Daogang Peng Wen Huang (4-386)
- 4.84 Development and Application of ECG Bedside Monitor ..... Lijuan Yang (4-390)
- 4.85 Acquisition Performance Analysis of a Synchronization Scheme of DS/FH Hybrid Spread Spectrum Signals for TT&C ..... Wenge Yang Shengyun Meng Jinbao Wang Jia Liu (4-395)
- 4.86 A Real-time Vehicle Recognition Method based on Video Sequence Images ..... Yuren Du Caiyun Liu Wen Shi (4-400)
- 4.87 A Signal Processing Method for Dynamic Weighing System by SSA-LVQ Network ..... Qisheng Wu Ruoyu Pan Xianglong Luo Lei Li (4-403)
- 4.88 Software Development of Marine Geomagnetic Data Processing ..... Shengping Wang Jianhu Zhao Aixue Wang (4-408)
- 4.89 Research of Intrinsic Safe Distributed 4-component Seismic Data Acquisition System and Its Application ..... Guowei Zhu Huaixiu Wang (4-413)
- 4.90 Improved Method of Multi-focal Plane Micro-image Fusion ..... Li Le Le Jing Yang Jie (4-417)
- 4.91 Modified Three-loop Design and Simulation of Servo System for IR Imaging Seeker ..... Yingping Fan Mingang Wang Jie Yan Tao Xu (4-422)
- 4.92 Research on the Edge detection of the Cashmere and Wool fibre Images ..... Yaxia Liu Shuyuan Shang Fei Guo Haiyan Yi (4-426)
- 4.93 Extraction and Diagnosis of Rotor Fault Characteristic Based on Signal Processing ..... Li Wang Dongxu Wang Da Wu Xuan Wang (4-429)
- 4.94 Colour Tag Design of Robot Soccer Based on Computational Verb Theory ..... Qiushui Yu Zhiyong An Ruining Yang Shuang Liang (4-433)
- 4.95 Improved Iteration Centroid Algorithm Based on Linear CCD Light-spot Location ..... Shengjin Tang Zhaofa Zhou Xiaosong Guo Yongchao Xiao (4-438)

4. 96 Performance Evaluation of Underwater Range-gated Viewing Based on Image Quality Metric .....  
 ..... Hongwei Han Xiaohui Zhang Weilong Ge (4-441)
4. 97 Machine Vision Based 3D Scanning System ..... Chaoching Ho (4-445)
4. 98 Vortex Signal Processing Method Based on Flow Momentum .....  
 ..... Jie Chen Bin Li Guangyu Dai (4-450)
4. 99 VLF Transmitting Antenna Radiation Efficiency; Measurement Principle and Data Processing .....  
 ..... YuJun Liang LongGen Zheng Jing Zhang Lin Zhao (4-453)
4. 100 Development of 4-DOFs Carrying Robot for Identifying Work-piece Shape and Centroid Based on CCD  
 ..... Fusheng Yu Xiaoqin Shen Xue Wang Jiwen Chen (4-457)
4. 101 Reading System for 2D Code Based on Machine Vision .....  
 ..... Yongyue Yang Guang Zhu Peng Wang (4-462)
4. 102 3D Model Retrieval Based on Visual Shape and Relevance Feedback .....  
 ..... Zhi Liu Chenghua Wang Feng Hong (4-466)
4. 103 A New Method of 4D Trajectory Generation in the Airspace Simulation System .....  
 ..... Kun Sun Xuejun Zhang Kaiquan Cai (4-472)
4. 104 Research of Photovoltaic Charging System with Maximum Power Point Tracking .....  
 ..... Jun Pan Chenghua Wang Feng Hong (4-478)
4. 105 Numerical Modelling of A Slag-Metal Behavior of Smelting Reduction Process: Ironmaking Technology  
 Based on the Hismelt ..... Yue Zhengchao Qing Shan Wang Hua (4-482)
4. 106 A Reversible Authentication Scheme for JPEG2000 Images .....  
 ..... Jiafu Wen Jiazhen Wang Fan Feng Bin Zhang (4-486)
4. 107 Image Processing Based on PC-104plus Bus ..... Lili Liu Shaojing Su Junpeng Hu (4-490)
4. 108 Research on the Correction Method of Three-dimensional Non-uniform Errors in the Parallel Acquisition  
 System ..... Peng Ye Hao Zeng Chuanyun Xiang Houjun Wang Shulin Tian (4-494)
4. 109 The Study on Data Processing Based on CCD Scanning and Detecting Device on Wavelet Transform  
 ..... Yumei Wang Guosheng Xu (4-500)
4. 110 A Blind Extraction Algorithm of Periodic and Statistically Independent Signals .....  
 ..... Yunxia Li Changyuan Fan (4-504)
4. 111 Study on the Application of Mathematic Analytical Methods in Signal Distortion Measurement by Digiti-  
 zing Means ..... Jianbo Song Lei Zhang Wenbo Chi Xinyun Zhang (4-508)
4. 112 Adaptive Local Contrast Enhancement of High Dynamic Range Image .....  
 ..... Linan Jiao Zhaoyun Sun Aimin Sha Juan Zhang (4-514)

#### ☆ Fault Diagnosis and Other Test Techniques

4. 113 Ultrasonic Transducer Interface-circuit for Simultaneous Transmitting and Receiving .....  
 ..... Andreas Schröder Christian Hoof Bernd Henning (4-519)
4. 114 Selection of Optimization Methods for Estimating Muscle Parameters During Walking .....  
 ..... Weijie Wang (4-523)
4. 115 Reducing Measurement Noise in Rock Bolts Detecting .....  
 ..... Jiulong Cheng Xiaoyun Sun Donghui Liu Jianpeng Bian D. H. Steve Zou (4-527)
4. 116 A Model to Calculate the Joint Movements and Forces in the Foot .....  
 ..... Sumanth Yalamanchili Rami Abboud Weijie Wang (4-532)
4. 117 Acquisition and Analysis System of the ECG Signal Based on LabVIEW .....  
 ..... Lina Zhang Xinhua Jiang (4-537)
4. 118 Implement Fault Diagnosis High Speed Reasoning Expert System with CPLD .....  
 ..... Jingyan Xue Laijun Sun Changming Qiao Guangzhong Ye (4-540)

4. 119 Rotatory Stepping Piezoelectric Motor With Micro-angle .....  
..... Changde Hu Yongqiang Li Meirong Zhao Sha Zhu (4-545)
4. 120 Self-reconfiguration Robot of Isomorphic Module Modeling and Topology Configurations of 3 Modules Robot  
Enumerating ..... Wanjing Ding Yi Liu (4-550)
4. 121 Design of Novel Voltage Reference Based on Depletion Device .....  
..... Zhang Hongnan Zhang Zhiwei (4-556)
4. 122 A New Type of Three-phase Emergency Power Supply (EPS) ..... Guiyin Yu (4-559)
4. 123 Research on High-Speed Fuzzy Reasoning with CPLD for Fault Diagnosis Expert System .....  
..... Jingyan Xue Laijun Sun Changming Qiao Haibo Qian (4-564)
4. 124 New method of DOA Estimation for Coherent Sources Under Unknown Noise Field .....  
..... Shujing Su Zenggang Wang Jinglong YAN (4-569)
4. 125 Research on the Technique of Accurately Measuring Temperature with Infrared Thermal Imagers .....  
..... Yunhong Li Xiaogang Sun Yannian Wang (4-573)
4. 126 A Multi-channel Distributed Monitoring Platform Based on Ethernet and Virtual Instrument Technology ...  
..... Lei Wang Zhigang Liu Gang Zhang Leitong Zhao (4-579)
4. 127 Determination of Capacitance of DRAM Capacitor as Encountering Roll-Off Problems .....  
..... Hsinchia Yang (4-585)
4. 128 Analysis and Improvement of TCP RTO Mechanism in Heterogeneous Networks .....  
..... Changbiao Xu Yue Wu Xue Li (4-589)
4. 129 Dependence of Breakdown Voltage on Drift Length and Linear Doping Gradients in SOI RESURF LDMOS  
Devices ..... Shaoming Yang Wenchin Tseng Gene Sheu (4-594)
4. 130 Analysis on the Displacement Performances of Parallel Four-bar Flexure Hinge Mechanism .....  
..... Jianying Shen (4-598)
4. 131 Application of Fuzzy Neural Network in Fault Diagnosis of Gasoline Engine .....  
..... Pan Lian Tong Yao bin Ning Ning Chen aiping (4-602)
4. 132 A Modified Rate-Monotonic Algorithm for Scheduling Periodic Tasks with Different Importance in Embedded  
System ..... Jiwen Dong Yang Zhang (4-606)
4. 133 Limitations of Residual Error Estimate for Classic Coning Compensation Algorithm .....  
..... Rong Peng Gongmin Yan Yongyuan Qin (4-610)
4. 134 The Experimental Investigation on Measuring Sound Absorption in the Seawater Containing Suspended Sedi-  
ment Particles ..... Yongwei Liu Qi Li Mengying Chen (4-616)
4. 135 Transformer Fault Diagnosis Based on Homotopy BP Algorithm .....  
..... Jiyin Zhao Ruirui Zheng Jianpo Li (4-622)
4. 136 A Novel Method for Extraction of In-Pulse Feature of Multi-Component LFM Signal .....  
..... Changxiao Chen Minghao He Hongbin Jin Haihong Li Zhengyi Shen (4-627)
4. 137 Navigation Radar Signal Acquisition and Measurement System ..... Shaowei Li Xinqing Zhuang (4-631)
4. 138 Modeling and Analysis of  $C_{dv}/dt$  Induced Effects in Power MOSFETs Driving Circuits .....  
..... Shen Xu Xia Liu Weifeng Sun (4-635)
4. 139 Digital Knowledge Learning Strategies and Individual Creativity .....  
..... Hsin-Te Hsu1 C. Joe Lin Chu-Yun Su and Yu-Ming Fei (4-640)
4. 140 Study on Multi-agent Cooperation and Control ..... Song Chen Zhong Su Zhifeng Xin (4-646)
4. 141 Test generation for combinational circuits Based on DNA computing .....  
..... Wang Jiejun Xu Chuan-pei (4-650)
4. 142 Navigation and Slope Detection System Design for Autonomous Mobile Robot .....  
..... Boyu Wei Junyao Gao Kejie Li Hu Chen (4-654)
4. 143 Parallel High-power Inverting Power Supply for DJI Locomotive ..... Deli Jia Lin Yang (4-659)
4. 144 Experiment Study and Fatigue Life Prediction of Torsion Shaft of Self-propelled Gun Based on Stochastic Re-  
sponse Surface Method ..... Li Yadong Zheng Jian Jia Changzhi (4-664)

4. 145 Research on Electronic Cam Based on Nurbs Interpolation Algorithm .....  
..... Xu Jiazhong Zhang Lei Qiao Ming (4-669)
4. 146 Simulation Based Heavy Truck Driveline Components Thermal Analysis System .....  
..... Gangfeng Tan Xuexun Guo Tao Yang (4-675)
4. 147 Research on Harmonic Compensation Effects for a Kind of Isolated Power System .....  
..... Yuan Haiwen Guo Xin Mi Hanguang (4-681)
4. 148 A Novel Tunable Low-pass Filter Based on MEMS and CPW .....  
..... Chao Wang Xinglong Guo Weixia OuYang Yonghua Zhang Zong-sheng Lai (4-687)
4. 149 Scheme for Buffer Management Based on QoS .....  
..... Yan Zhang Wenyu Yu Lingling Yuan Qin Wang (4-691)
4. 150 Effect upon vehicle position precision of errors in measuring magnetic field device .....  
..... Huang Yu Sun Feng Hao Yan Ling (4-696)
4. 151 Circular Balanced Erasing Algorithm for Flash Solid-State Disks .....  
..... Jun Yang Wei Ni Bin Wu Minglun Gao (4-702)
4. 152 Fault Diagnosis of Rotating Machinery Based on Evidence Theory of Evidence Entropy .....  
..... Xiaodong Zhang Ping Zhang Chunxiang Liu (4-706)
4. 153 Research and Implementation of Heterogeneous Data Integration Based on XML .....  
..... Xiong Fengguang Han Xie Kuang Liquan (4-711)
4. 154 Research and Implementation of Security Mechanism in ISA100.11a Networks .....  
..... Xuan Zhang Min Wei Ping Wang Yeon Kim (4-716)
4. 155 Research on Low Voltage Unit of Photoelectric Hybrid Current Transformer .....  
..... Yu Guangping Zhang Dan Zhou Yinggang (4-722)
4. 156 Full Working Condition Thermal Reliability Analysis for 3D-integrated Photo-mos SSR Package .....  
..... Dongmei Gao Haiwen Yuan Wenbing Li Haibin Yuan (4-727)
4. 157 Phase Noise Analysis and Design of CMOS Differential Ring VCO .....  
..... Honghui Deng Yongsheng Yin Gaoming Du (4-731)
4. 158 Software Design for Mini-type Ground Control Station of UAV .....  
..... Yiqi Kang Mei Yuan (4-737)
4. 159 Research on Metastability based on FPGA .....  
..... Jie Wu Yichao Ma Jie Zhang Yang Kong Hongzhi Song Xiaoquan Han (4-741)
4. 160 A Deterministic Scheduling Mechanism for Industrial Wireless Networks .....  
..... TongBo Li Heng Wang Ping Wang Yeon Kim (4-746)
4. 161 Scarani-Acin-Ribordy-Gisin Decoy-State Protocols in Quantum Key Distribution with a Heralded Single Photon Source .....  
..... Yuanyuan Zhou Xuejun Zhou Jun Gao (4-751)
4. 162 Fault Diagnosis of Frequency Convert System Based on Networked Virtual Instrument .....  
..... Yunfei Li Ge Chen (4-757)
4. 163 Study of Fault Tolerance Control for Power Management System .....  
..... Yongfa Xu Huayao Zheng Shilong Xue (4-761)
4. 164 A Novel Model Variable Selection Method Based on Energy Variation and Its Application to Predictive Modeling for Achromic Power .....  
..... Qiliang Du Hongqiang Mo Lianfang Tian Ling Yuan (4-764)
4. 165 Construction of Command Car for Geological Disaster Emergency Monitoring and Investigating .....  
..... Wenbiao Peng Xinqiong Liu Yingfa Lu Qinglin Yi (4-769)
4. 166 Study on the Influence of Electronic Injector Nozzle Geometry on the Injection Rate .....  
..... Limin Shao Zhenming Liu Jiadong Zhou Kun Yang (4-773)
4. 167 Algorithm of Transformation from PLC Ladder Diagram to Structured Text .....  
..... Liuwen Huang Wei Liu Zhanqing Liu (4-778)
4. 168 Study on Fault Diagnosis of Gear Wearing Based on Non-stationary Acoustic Signal .....  
..... Guang Tian Xinjie Shao Qiao Ma Jinhua Liu (4-783)

4. 169 Research on Aggregative Index Number Method in Water Quality Assessment Based on SVM .....  
..... Jian Cao Hongsheng Hu Suxiang Qian Kewen Xu (4-787)
4. 170 Particle Swarm Optimization Method for Resource-Constrained Project Scheduling Problem .....  
..... Kai Zhang Guorong Zhao Jing Jiang (4-792)
4. 171 One Effective Method of Outlier Detection in Flight Data .....  
..... Xiuzhen Jiao Hui Lu Rongling Lang (4-797)
4. 172 Research upon the Submarine High-capacity Lead-acid Battery Discharge Characteristic Model .....  
..... Kun Yang Guangyao Ouyang Jingqiu Zhang (4-802)
4. 173 Development of in-line Oil Contamination Sensor for Lubricant of Scraper Conveyor Reducer .....  
..... Zhengduo Pang Nianfeng Shi Guoying Meng Wei Li1 (4-808)
4. 174 Research of UAV Engine Fault Prediction based on Particle Filter .....  
..... Li Baoan Liu Zhihua Li Xinjun (4-813)
4. 175 Analysis of the Business Customer Churn Based on Decision Tree Method .....  
..... Hongxia Ma Min Qin Jianxia Wang (4-818)
4. 176 Manufacture of the New Drilling Dynamometer Based on the Piezoelectric Deformation Effect .....  
..... Changyin Gao Wanquan Li (4-822)
4. 177 Socket Connector Recognition Based on SVM with Speeded Up Robust Feature (SURF) .....  
..... Ming Zhao Shiyin Qin (4-827)
4. 178 Fuzzy Diagnosis Method Based on Multi-frequency Responses for Tolerance Analog Circuit .....  
..... Jianlin Zhong You He (4-832)
4. 179 Effect of Smoke Screen Interference on the Dimension of the Laser Spot .....  
..... Tao Shen Jianshe Song (4-837)
4. 180 A Method of Calculation Based on Wind Field Diagnosis Mode for Smoke .....  
..... Tao Shen Jianshe Song (4-840)
4. 181 Fast Method of Locating Metallic Foreign Body in the Human Body .....  
..... Da Jing Erping Luo Guanghao Shen Jing Cai Chi Tang Yili Yan Bin Jing (4-843)
4. 182 Adaptive Prediction of Intake Manifold Absolute Pressure for a Coal-Bed Gas Engine .....  
..... Peng An Qin Teng Xiao-Xia Cai Cheng-Ji Zuo (4-847)
4. 183 Condition Detection and Fault Diagnosis System for Recoil System Based on Simulation .....  
..... Lijun Cao Huibin Hu Junqi Qin (4-852)
4. 184 Study on Establishing Local Marine Geomagnetic Field Model .....  
..... Jianhu Zhao Hongmei Zhang Shengping Wang (4-856)
4. 185 Maintenance Resource Scheduling Modeling by Petri net .....  
..... Changzheng Qu Liu Zhang Bo Zhang Mingjun Gao (4-861)
4. 186 Research on Target Grasping of Autonomous Mobile Operation Platform .....  
..... Haitao Song Guoliang Zhang Bin Jing Yuan Pu (4-866)
4. 187 A Visual Tracking Control Strategy Based on Human Vision Physiological Mechanisms .....  
..... Xiaobo Mao Tiejun Chen (4-870)
4. 188 Research on the Fault Diagnosis of Rotating Machinery Based on Wavelet Analysis and Fuzzy Cluster ...  
..... Liu Xiaobo Li Jianping (4-876)
4. 189 Wavelet-based Non-zero order Joint Transform Corrlator for Target Recognition in Noisy Scenes .....  
..... Yu Zhao Xiaoying Sun (4-882)
4. 190 Fault Detection and Isolation Based on Multivariate Statistical Analyzing for the Satellite Attitude Control Sys-  
tem ..... Lin Su Chaoxuan Shang Yunhong Su Yihua Zhai (4-886)
4. 191 Application of Nonlinearity Fitting Order Analysis Arithmetic in Nonstationary Signals Analysis .....  
..... Haiying Kang Yanjie Qi Wen Yan Haiqi Zheng (4-890)
4. 192 Experimental Study on the Partial Discharge Characteristics of Four Typical Defects in GIS .....  
..... Jisheng Li Xuefeng Zhao Xiu Yao Yanming Li (4-894)

4. 193 Actuator Fault Diagnosis Based Fuzzy Multiple Model Structure for Moving Systems ..... Zhiqiang Zheng Haiwen Yuan Hao Yang Qinghua Yang (4-899)
4. 194 Propagation Characteristics of Rectangular Waveguide with Fractal-regular Rough Surfaces ..... Lu Zhang Hongwei Deng Yongjiu Zhao Wanshun Jiang Yuemin Ning (4-903)
4. 195 A Synthesized SVM and its Application in Fault Diagnosis for Circuit Board Based on Virtual Instrument ..... Shen Yuhao Meng Chen Fu Zhenhua (4-907)
4. 196 Estimating Algorithm of Angular Velocity on Assisted Motor ..... Wu Wenjiang Sun Zhanpeng Gao Zhanfeng (4-912)
4. 197 A Generalized CHNN Method for Track-to-Track Association ..... Baolin He Zheng Mao Yuanyuan Liu Liang Wu (4-917)
4. 198 Deduction of Coordinate Transform for Instantaneous Reactive Power Theory and Analysis on Relationship between  $\alpha$ - $\beta$  and dq0 Transformation ..... Yanwei Zhu Xinchun Shi Yangqing Dan (4-922)
4. 199 Influence of Thickness of Armor on the Burst-Effect of Steel Shell PELE ..... Shengyuan Tu Junbo Wang Zhentao An Yue Chang (4-926)
4. 200 Method of Three-point for Measurement of Micro-table Position and Posture ..... Li Hang Yang Songge Xue Yujun Zhu Helei Li Jishun Li Yang (4-930)
4. 201 Transformation of Hydrology Cableway Observation System Based on EKL-3 ..... Bing Zhu Bin Tan Xuyan Zhou YingXiao Xuange Peng Xiuhong Kang (4-934)
4. 202 Fast Computation of Electromagnetic Scattering Based on Optimized Solution of Matrix Equations ..... Xiaofei Gu Jianshe Song Wenchang Sun Meng Yang (4-938)
4. 203 The Research and Realization of Brain Surgery Path Planning System ..... Xiuxia Yu (4-941)
4. 204 Gear Fault Detection Utilizing Adaptive Multi-scale Morphological Gradient Transform ..... Bing Li Peilin Zhang Shuangshan Mi Dongsheng Liu Guoquan Ren (4-945)
4. 205 Characteristic Research and Analysis of EMAT's Transduction Efficiency for Surface Detection of Aluminum Plate ..... Shujuan Wang Lei Kang Penghao Xin Guofu Zhai (4-949)
4. 206 Estimation of the Source Parameters in the Strong Jamming Environment ..... Wenqun Tan Youguo Hou Zhen Yu (4-956)
4. 207 Sub-pixel Surface Fitting Algorithm in Digital Speckle Correlation Method ..... Yong Lv Qibo Feng Liangyu Qi Qingshan Chen (4-959)
4. 208 A Robust Fault Diagnosis System of Packaging Process Based on Multisensor and Probabilistic Neural Networks ..... Lamei Yan Gengsheng Hu (4-963)
4. 209 Composite Fault Location Method of Single-Phase-to-Earth about Rural Distribution Networks ..... Feng Yan Zengwei Guo (4-968)
4. 210 Optimised Reference Wave Generation Method for Cell-Fault Treatment of Cascaded Inverter ..... Yi Zang Hongge Sun Tiejun Zhao Xiaoli Li (4-973)
4. 211 Failure Modes and Failure Analysis of White LEDs ..... Fugen Wu Wei Zhao Shaohua Yang Chunhua Zhang (4-978)
4. 212 Rapid Detection of Pesticide Residues in Vegetables with Mini-colorimeter ..... Wang Changlong Zhang Shengwei Yuan Ting Shen Maosong (4-982)
4. 213 Hydrocracking Air Coolers Real-time Diagnosis System Development Based on Failure Analysis of Flow induced Corrosion ..... Guofu Ou Huifen Hong Zhijian Zheng Haozhe Jin (4-986)
4. 214 Experimental Teaching System of Series-parallel Hybrid Power Vehicle ..... Ruiming Wu Deyu Song (4-991)
4. 215 The Design of Digital Fault Recorder Module Based on S12XD ..... Wenling Zhang Yanjie Yang Jianfeng Shang Jian Chen Zhiqiang Du (4-994)
4. 216 An Improved Grey Model for Short-term Electricity Price Forecasting in Competitive Power Markets with Punishment Function ..... Mingli Lei Zuren Feng (4-999)



- 4.217 Study on Algorithm for Interference-free Tool path Generation of Free-form Surfaces Based on Z-map Model ..... Zhixiang Shao Ruifeng Guo Jie Li Jianjun Peng (4-1005)
- 4.218 Data-based Adaptive Fault Prediction Method and Its Application ..... Jie Ma Di Li Shaohong Wang Xiaoli Xu (4-1011)
- 4.219 Radome Slope Estimation in Flight Using Fuzzy Adaptive Multiple Model for Active Homing Missile ..... Xiaorui Cao Chaoyang Dong Qing Wang Yu Chen (4-1017)
- 4.220 An Algorithm of Soft Fault Diagnosis for Analog Circuit Based on The Optimized SVM by GA ..... Hua Li YongXin Zhang (4-1023)
- 4.221 Fault Diagnosis of Elevator Braking System Based On Wavelet packet algorithm and Fuzzy Neural Network ..... Peiliang Wang Wuming He Wenjun Yan (4-1028)
- 4.222 Charge Equalization for Series Connected Lithium-ion Batteries ..... Hanxin Shen Wenlong Zhu Wenxiang Chen (4-1032)
- 4.223 Evaluation of Flatness Error Based on the Improved Particle Swarm Optimization ..... Xiao Yu Meifa Huang (4-1038)
- 4.224 Research on Feature Points Positioning in Non-contact Eye-gaze Tracking System ..... Bei Yan Lifeng Gao Xigong Zhang (4-1042)
- 4.225 Emotional Feature Analysis and Recognition in Multilingual Speech Signal ..... Yutai Wang Bo Li Qingfang Meng Ping Li (4-1046)
- 4.226 Analog Circuit Fault Diagnosis Using Higher Order Cumulants ..... Taiwen Yuan Yongle Xie Guangju Chen (4-1051)
- 4.227 A Novel Method for Feature Extraction of Multi-layered Structure Ultrasonic Echo Signals ..... Yi Dun Jianhui Chen Guanglong Wang Yansheng Zhang Xiaohong Shi (4-1055)
- 4.228 Experimental Study on Kinetics of Smelting Reduction for High Phosphorus Iron Ore ..... Qing Shan A Wang Hua Zhao Lumei Tang Cunjiang Yue Zhengchao Qi Yiliong (4-1060)
- 4.229 Declaration of RoHS Compliance based on Smart Document and XML Database ..... Chuanhong Zhou Zhixue Liu Liang Gao (4-1063)
- 4.230 Design and Realize the Electromotor Choice Expert System of Sewing Machine Based on UML ..... Chuanhong Zhou Liang Gao Zhixue Liu (4-1069)
- 4.231 Adding VBScript Support to Measurement Applications by Visual C + + ..... He Lingsong Yang Zhenhua (4-1074)
- 4.232 Wave Swash Velocity Estimation Using Ridgelet Transform ..... Suoping Zhang Chuntian Zhang Zhanhui Qi (4-1078)