

Sensors, Mechatronics and Automation

Part 1

Edited by
Seung-Bok Choi, Prasad Yarlagadda
and Mohammad Abdullah-Al-Wadud



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Sensors, Mechatronics and Automation

PART 1

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Edited by

**Seung-Bok Choi, Prasad Yarlagadda
and Mohammad Abdullah-Al-Wadud**



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Preface

The objective of 2013 International Conference on Sensors, Mechatronics and Automation (ICSMA 2013) is to provide a forum for researchers, educators and engineers involved in the general areas of sensors, robotics, automation and sensors to disseminate their latest research results and exchange views on the future research directions of these fields. It will allow the attendees to interact and network within our multidisciplinary community that includes professionals from many branches of science and engineering.

The topics covered in the volume include Applied Materials Science and Processing Technology, Sensors and Applications, Measurement Theory and Its Application, Measurement Technology and Instruments, Signal and Information Processing Technology, Image and Video Processing, Structural Engineering Analysis, CAD Optimized Design and Intelligent Control, Design and Control in Modern Engineering System, Modern Circuits and Embedded Systems, Industrial Engineering, Robotics, Optimization and Control Algorithms, Control System Modeling and Simulation Technology, Electric Automation, Control, Design and Analysis, Software, Computer Applications and Numerical Methods. The editors hope that those interested in the area of sensors and automation, enjoy the reading that reflect a wide range of topics.

There is a long list of individuals we would like to thank for their support in organizing this conference. We would also like to thank you all for attending and helping in making it a success. We wish you a productive and enjoyable conference and a wonderful stay in Shenzhen.

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Table of Contents

Preface	v
Conference Organization	vi

PART 1

Chapter 1: Applied Materials Science and Processing Technology

A Novel Method to Dicing Anodically Bonded Silicon Glass MEMS Wafers Based on UV Laser Technique	
Z.S. Jing, Z.L. Zhou, C. Mei, X.Y. Su, Z. Yang and Y. Tao	3
A Microfluidic Device for Sample Pretreatment by Laminar Flow Extraction	
D.L. Li, X.F. Lv and Y.L. Deng.....	8
Determination of Uranium in Ore with Volumetry of H_2SO_4-$TiCl_3$-NH_4VO_3	
J.H. Yang, S.L. Dai, X.K. Pan, L. Liu, S.K. Zhou and J.S. Wang	12
Mechanical Properties and Microstructure Analysis of Aluminum and Steel Dissimilar Material Weld Joint	
J.B. Chen, C. Peng, D.H. Cheng, D.X. Cheng and Y.P. Chen	17
Sequence Determination of Cd and Pb in Honey by Incomplete Digestion-High Resolution Continuum Source Graphite Furnace Atomic Absorption Spectrometry	
H. Liu, S.L. Chen, C. Li, T.X. Li, Y.H. Wu and Y. Liu.....	22
Experimental Study on Axial Tensile Performance of Low Volume Fraction of Ternary Hybrid Fiber Reinforced Concrete	
B.R. Zhou, D.T. Xia and X.K. Liu.....	28
Mechanical Properties of Nanocrystalline Coatings Prepared by Thermal Spraying Process	
N.E. Bacha and S. Bouterfaya.....	32
Preparation and Ascertainment of Ingredient Contents of Uranium Ore Sandstone Standard Substance	
J.H. Yang, S.L. Dai, X.K. Pan, L. Liu, S.K. Zhou and J.S. Wang	37
Study on Corrosion Behavior of A3 Carbon Steel in the Manicipal Sludge	
X.F. Long, Y. Liu and B. Lou.....	41
Study on Effect of High Oxygen Treatment on Storage Quality and Anti-Browning of Fresh-Cut Apples	
C.Z. Leng, Q. Li, S.X. Wang, X.H. Li, L. Chen, Y.Y. Li and M.M. Hao.....	46
Study on Wall Slip in Pipeline Flow of Dense Paste	
F.Y. Lv, Z.M. Xia, J. Gao, X.D. Hao and M. Wu.....	50
Adsorption Characteristic Research of Sediments of Lake Baiyangdian	
Z. Qin, Q. Wang and Z. Liu	55
Microstructure Evolution of Ti-6Al-4V Laser Weld Joint HAZ in Superplastic Deformation Process	
Z.J. Huang, L. Chen, D.H. Cheng, Y.P. Chen and D. Hu	59
High Temperature Deformation Behavior and Dynamic Recrystallization Law of 33Mn2V Steel for Oil Well Tube	
R. Jia and F.Z. Wang.....	63

Finite Element Analysis of 1-3-2 Piezoelectric Composite Resonance Frequency Characteristics G.D. Luan and G. Li	70
Study on Novel Relaxor Ferroelectric Single Crystal PMNT/epoxy Composite Transducer Array G. Li and G.D. Luan	74
Preparation of Nd:YAG Nanopowders by the Urea Co-Precipitation F.M. Zeng, C. Li, H. Lin, X.D. Yang, D. Wang and J.H. Liu.....	78
Influence of Sulfur on the Long-Term Durability of SOFC Cathode R.R. Liu, D.J. Wang and L. Jing.....	81
Distribution Function for Nonlinear Potential Gradient High Pressure Plasma M. Sufi, Saktioto and J. Ali.....	85
Analysis of Copper Wires Short Circuited Melted Mark Q.S. Meng	94

Chapter 2: Sensors and Applications

A New Approach for Autonomous Robot Obstacle Avoidance Using PSD Infrared Sensor Combined with Digital Compass Y. Xue, J.T. Yang, Y.L. Dong, J.L. Shen, R. Peng, R.B. Huang and J. Ding.....	101
Design of Wind Speed Measurement System Based on Integrated Navigation and Atmospheric Data Fusion J.J. Zhang, W. Liu and M.Y. Liu	105
Design and Build of a Nine-Axis Digital Output Gyroscope-Based Percutaneous Puncture Ultrasonic Navigation System X. Zhou, C.M. Zhang, T. Xu, Y.X. Sun and J. Fu	111
Construction Principle and Application Test of 220kV Self-Healing Optical Voltage Sensor H.Y. Yang	116
A Survey on QoS-Aware Secure Data Transmission in Multimedia Sensor Networks Q. Ye, M. Wu and Y.F. Wang	120
The Influence of Implantable Actuators on Residual Hearing: A Computational Study H.G. Liu, L. Xue, G. Cheng and Z.H. Cheng.....	126
Wireless Sensor Networks for Structural Healthy Monitoring Applications-A Design Proposal J. Xu, W.H. Wan and K. Zhang	130
Dynamic Estimation of Water Hyacinth Area by Fusing Data from Satellite and GPS Sensors L. Sun and Z.S. Zhu	134
Optimal Ecological Restoration of Degraded Wetland Ecosystem by Using Satellite Sensors L. Sun and Z.S. Zhu	138
PZT Based Ultrasonic Wave Force Detecting Sensor Y.W. Ming, T.H. Cheng, K. Huang and B. Li	142
Research on Routing Protocol for Large-Scale Wireless Sensor Networks K. Zhang and M. Jin.....	146
Research on Wireless MAC Protocols Oriented to Smart Clothing Y. Liu, Y.J. Zhang, Y.W. Wei, W.Q. Lin and H. Liu	150
Sensor Node Identifier Resolution of IP-Based and Non-IP-Based WSN Z.Y. Luo, Q. Wang and T. Cai.....	154
Study on the Conductivity of DMEM by PASCO Sensors P.F. Shan, X.S. Tao, H. Xie, R. Gui, R.N. Ding and J.J. Chen	158
Study on Transient Temperature Generator and Dynamic Compensation Technology Z.X. Yang and X.F. Meng.....	161

Substation Equipment Temperature Monitoring System Based on Heterogeneous Wireless Sensor Network	
J. Yang, Y. Xiu, Y.T. Shi, L.T. Zhao and X.Y. Tan	165
Tamper Detection in RFID Tags Using Zero-Watermarks	
X.M. Yao, H.Y. Chen, H.L. Li and X.Y. Zhou.....	169
Tuning Characteristics of DFB Diode Laser and its Application to TDLAS Gas Sensor Design	
R.J. Lu, D.M. Shen, Q.Q. Du, B.Z. Huang and J.S. Shi.....	173
Theoretical Modeling and Error Analysis for Reflection Structure Fiber Optical Current Transformer	
D.L. Yuan, Z. He, H.Y. Wang and G.C. Yan	178
The Calibration Techniques of Paper Basis Weight Sensor	
L.H. Hu, X.P. Li and W. Tang.....	185
Modeling of Collaborative Context-Awareness for Smart Home	
H.J. Xu, Z.G. Xie and L.T. Wang	189
Sensor Fault Diagnosis Based on SOFM Neural Network	
S. Ding, X.H. Chang and Q.H. Wu	193
Design of Landslide Monitoring and Early Warning System Based on Internet of Things	
J. Li, C.K. Li, K. Li and Y. Liu.....	197
The Design of a Basketball Goal Automatic Detector	
J.J. Zhang, J.B. Yang, Z.M. Tang, H. Lan and H.J. Lin.....	202

Chapter 3: Measurement Theory and its Application

About the Future of UTC	
S.W. Dong.....	209
Numerical Analysis of the Effects Caused by Ground Reflection on Aperture Coupling	
H.L. Wu, H. Yin, W.D. Shen, H.J. Meng and X.C. Tan	213
Acoustic Wave Resonance of Stimulated Brillouin Scattering in a Single Mode Fiber Ring	
X.M. Zhang, Y.K. Ci and J.L. Yao	218
Rules of Harmonic Longitudinal Propagation in Various Voltage Classes	
Z.Q. Dai, X. Du, H. Lian, S.M. Wei, H. Liu and Y.G. Zhang	223
Study on the Multi-Optical Theodolites Positioning Method Based on Function Restriction	
Z.H. Gong, P.W. Duan, X. Xu and H.D. Lv	227
Suppressing of Nonlinear Phase Noise in Dispersion Managed Quasi-Linear Transmission Systems	
H.T. Chen and Y.C. Liang	234
Weight Size Determined Variable Step Size LMS Method for Identifying under Damped Systems	
H. Abbas and H. Hai.....	238
A Fuzzy Curve Detection Method Based on Lateral Acceleration	
X.H. Jiang, J.W. Guo, Y. Hu and C. Chen.....	242
Research and Performance Analysis on Pedestrian Detection Based on Optimized Hog and SVM	
Y.X. Zhang and K.P. Feng.....	247

Chapter 4: Measurement Technology and Instruments

A New Method for Calculating the Volume of Debris Flow Using GIS and RS Technology	
W.J. Du, B. Xie and H.X. Xu.....	253

Design of Thermocouple Verification Data Records Table Based on Labview J.H. Zhao and B. Zhou	259
Development of a Transducer for Dental Implant Stability Measurement M.J. Lin, T.L. Tsai, X.R. Wu, E.H. Cheng and N.M. Yeh.....	265
Temperature Influence on Real-Time Ultrasonic Detection of Multi-Planetary Gear Transmission K.L. Mao	270
Application of Frequency-Voltage Converter Chip in the Vehicle Data Acquisition C.F. Li, Y.Q. Li and H.Z. Han	274
Measuring Model Deformation with Project Moiré Interferometry Technique L. Zhang, J.J. Yang and J. Zhang.....	278
Multi-Point Temperature Monitoring System for the LNG Storage Tank L. Zhao, G.W. Zhang, Q. Zhang and Y.K. Zhang.....	282
Research on the Impact of CNC Servo Dynamic Characteristic for the On-Line Detection Precision C.R. Pian, Q. Zhang and N. Wu.....	286
The Quality Test of TOPCON NET-G3A GNSS Receiver Z.G. Jia, Z.S. Chen, D.J. Wang, G. Liu and P.F. Yu.....	290
Weak Signal Detection and Application in Electronic Experiment Based on Virtual Instrument T. Tian, Z.Y. Li, T. Gao, F.Y. Liu and J. Wu	294
Design of a Constant Probing Force System for Profilometer S.B. Liu and Z.P. Li	301
Research on Sound Velocity Measurement Method by Three Microphones Based on LABVIEW R. Li, T. Feng, F.Y. Zang, J.J. Hu, L. Zhang and J. Wang	307
Study on Temperature Measurement Technology of Oil Immersed Transformer and Associated Prony Algorithm D.P. Jia, Z. Yuan and L.M. Zhao	311
Research of Film Thickness Online Measurement System P. He, H.J. Zhang, C. Liu and S.M. Cao	315
The Design and Application of the Groundwater Monitoring System Based on the Internet of Things in the HeiHe River Basin Y. Shi, L. Zhang and G.H. Wei.....	319

Chapter 5: Signal and Information Processing Technology

A New Method Based on Lyapunov Exponent to Determine the Threshold of Chaotic Systems Y. Liu and X.C. Zhang.....	329
An MMSE Approach to Channel Shorting for Underwater Acoustic FH-FSK Communication W.W. Fan, L. Liu, Y.W. Zhang, J.G. Dong and D.J. Sun.....	334
Application of Barcode Information and Acquisition System for the Machining Process Technology N. Wu, Q. Zhang and C.R. Pian.....	342
A New Cascaded Stochastic Resonance System and its Application to Weak Double-Frequency Signal Separation H.B. Zhang, S.L. Lu, S.B. Zhang, K.S. Ouyang and F.R. Kong.....	346
Capability Assessment of Satellite Communication System Based on Multi-Granular Modeling Z.K. Chen, W. Xiong and L.Y. Sun	352
312.5 Mbit/s Visible Light Communication System Based on OOK Modulation D.F. Zhang, Y.J. Zhu, T. Wang, Z.J. Tian and Y.Y. Zhang.....	357

Research on Discharge Signals Feature Extraction of Sealing Packaging Food Existing Pinholes Based on EEMD	
Q. Zhang, S.G. Zhang and Y. Ma	361
Dynamic Displacement Response Characteristics of a Solenoid Actuator for Electromagnetic Separation	
J.B. Lu, Y. Li, J.B. Xi and H.L. Liu	366
Error Processing Techniques of Integral Velocity Based on Frequency Spectrum Forecasting	
A.G. Chen, C.Y. Wang and J.W. Ye	370
FH-FSK Underwater Acoustic Control and Communication System Based on LDPC Code	
J.G. Dong, D.J. Sun, Y.W. Zhang and W.W. Fan	375
Monitoring System for Plant Growth Environment Based on Zigbee/RS485	
Q.H. Xiao, S.J. Weng and W.Q. Zhang	381
Query Recommendation Based on Document Content User Focuses on	
B. Zhang, F.Z. Yang and L.N. Fan	385
Feature Extraction of the Small Leakage Diagnosis of Oil Pipeline Based on Acoustic Signal	
J. Zhao, M. Shang and J. Tian	389
Pseudo Two-Hop Distributed Consensus with Noise	
H.X. Peng, B. Liu and W.K. Wang	393
Research on MWD Mud Pulse Signal Waveform Identification Algorithm	
B. Tu, G. Yu and T.X. Zhan	397
Ultralow Frequency Standard Vibration Calibration System Based on DSP	
T.L. She, S.L. Ma and F. Gao	402
Analysis on Graduate Employment Based on Data Warehouse	
X.Y. Zhan	406

Chapter 6: Image and Video Processing

Air Quality Evaluation Based on Local Normalized Image Contrast	
W.M. Yang, X. Chen and Q.M. Liao	413
Inexact Distributed Reconstruction via Alternating Direction Method	
L.Y. Wang, A.L. Cai, B. Yan, L. Li, H.M. Zhang and G. Hu	417
Reasoning Method of Remote Sensing Imagery Based on Topological Transformation	
X.L. Liu, G.B. Zhu, J.G. Jin and X. Li	421
Research on Infrared Thermal Imaging Technique for the Sidewall of LNG Storage Tank	
J. Jiang, W.D. Zhu, G.S. Yang, J.P. Yan, N.J. Gao, L. Zhao and Q. Zhang	425
Extraction of the Palm Vein Texture Features Based on Gabor Wavelet Transforms	
Y. Shi, L.W. Wang, H.Y. Lan and G. Zeng	429
Facial Expression Recognition Algorithm Based on Gabor Texture Features and Adaboost Feature Selection via Sparse Representation	
Q.W. Wang and Z.L. Ying	433
Facial Expression Recognition Based on Monogenic Binary Coding	
X.X. Xia, Z.L. Ying and W.J. Chu	437
HVS-Based Low Bit-Rate Image Compression	
Y. Wang, Z.J. Zhu and W.D. Chen	441
A Novel Method of Macro Block Motion Prediction Using Particle Filter	
L. Ye, D.J. Liu, W. Zhong and Q. Zhang	447
An Effective Multi-Feature Extraction Method for Manually Plotted Well-Log Curve Line	
Z. Xia, H.J. Gao and X.H. Zhang	452

An Image Segmentation Method of Underwater Targets Based on Active Contour Model T. Liu, L. Wan and X.W. Liang	457
Infrared and Low-Light-Level Image Fusion Method Based on Sparse Representation and Color Transfer S.H. Xu, G.Q. Huang, C.C. Liu and C.P. Xiong	462
Outdoor Navigating Scene Labeling Using Importance Factor Based I-RELIEF and Feature Weighted Support Vector Machines J. Tu, C.L. Liu and Z.H. Miao	467
Removal of Glass Reflection Using TV-Retinex Model K.F. Cheng and D.N. Li	475
Recognition Method of Cotton Blind Stinkbug Hazard Level Based on Image Processing J.H. Zhang, F.T. Kong, W. Chen, J.Z. Wu and M.S. Zhu	481
Stereoscopic Images Enhancement Based on Edge Sharpening of Wavelet Coefficients Y.M. Qiu, S.H. Chen, Y. Zhou and X.H. Liu	490
The Bistatic MIMO Imaging Algorithm Based on Waveform Diversity C. Huang, D.L. Zhang, D.J. Sun and T.T. Teng	495
The Algal Blooms Prediction in the Lakes Based on Remote Sensing Information X.Y. Ma, J.P. Xu, X.Y. Wang, Q.W. Zhu, Y. Shi, L. Wang and H.Y. Zhang	500
The Image Information Recognition of Large Structures Based on CAD Model Characteristics Y.K. Zhang, Q. Zhang and L. Zhao	506
Topological Equivalence in Multi-Scale Remote Sensing Image Segmentation X.L. Liu, G.B. Zhu, J.G. Li and X. Li	510
Study on Regression Model of Measuring Weld Position Z.Y. Li and X.D. Gao	514
Fast Automatic Failure Detection System Preliminary for LED Lamps Based on Machine Vision Technology Z.H. Shen and Q.X. Liu	518
The Change and Management for Surveying Achievement of Real Estate Using GIS Technology G. Yang and X.S. Bi	524
Intelligent Video Surveillance System Based on Sound Source Localization Technology Y. Zhang, C.R. Zhao and L.G. Guo	530
Decision Method of Optimal X-Ray Digital Imaging Parameters L. Tao, Y.J. Tong and H. Zhao	536
Gesture Acquisition and Tracking with Kinect under Complex Background Y.X. Zhang, Y.J. Liang, D.W. Wu, Q. Wen and H.Y. Yang	541
A Novel Approach of Edge Detection Based on Vector Morphology Q. Chen	545
Edge Detection of Color Images Based on Improved Morphological Gradient Operators J.Y. Liang	550
The Filtering and Streamline of Three-Dimensional Point-Cloud Data Z.C. Zhang	554

Chapter 7: Structural Engineering Analysis, CAD Optimized Design and Intelligent Control

Compressive Strength Analysis of MWD Microchip Tracer J.B. Li, W.N. Ni, S.G. Li and Z.Y. Zhu	561
Analysis of Mechanical Fatigue Behavior for MEMS Structures Q.W. Huang, X.G. Li and Y.H. Wang	565

LNG Tank Dome Air Raising Technology Research Based on Closed-Loop Tension Control W.D. Zhu, J. Jiang, G.S. Yang, N.J. Gao, J.P. Yan, C.R. Pian and Q. Zhang	569
Feature Based Parametric Design of Piston Reliability F.J. Wang	573
Numerical Study on Effect of Wall on Upwelling Flow H.C. Pan and B. Guo	578
Influence of Technical Parameters on Contact Pressure in Straight Bevel Gear Meshing Q.P. Luo, J. Cai, X.S. Xiong, S. Deng and F.Q. Li	582
Modeling of Electrostatic Chuck and Simulation of Electrostatic Force X.K. Wang, J. Cheng, K.S. Wang, Y.Y. Yang, Y.C. Sun, M.L. Cao, C.K. Han and L.H. Ji	588
Optimization of Flame Arrester Structure of Explosion-Proof Valve with Flame Arrester for Diesel Engine L.F. Jiang, H. Liu and H. Liang	595

PART 2

Chapter 7: Structural Engineering Analysis, CAD Optimized Design and Intelligent Control

Research of a Dynamic Vibration Absorber with Tunable Resonant Frequency and its Vibration Attenuation Characteristics Q. Ma, J.J. Di, X.W. Du and Q.L. Zhao	601
Research on Finite Element Static Analysis in Mechanical Vehicle Structure Design X. Li	606
Research on Vault Plate Installation Technology of LNG Storage Tank G.S. Yang, Y. Yang, W.D. Zhu, N.J. Gao, Y.K. Zhang and Q. Zhang	611
Seal Optimization Technology Research of Large LNG Storage Tank Dome Gas Lift J.P. Yan, G.S. Yang, X.B. Wei, J. Su, Q. Zhang and Z. Lv	615
Study on Elevator Drive System Dynamics Simulation of Rail Transport Conveyer S.C. Li and X.J. Wang	619
Transmission Efficiency Analysis and Experiment Research on Screw Oscillating Hydraulic Cylinder S.B. Li, Y.L. Liu and J.Q. Li	623
Multiple Instance Space Description Method in the Application Research of Complex Product Conceptual Design B. Hao, H.L. Xu and Y.L. Hu	628
Design of Multi-Mode PID Controller and Application in Time-Delay Process Y.M. Chen, F. Tan and T. Fan	637
Remote Household Appliance Control System Based on Internet H.Y. Sun and W. Fan	643
The Simulation Investigation of Matlab in Intelligent Control Course M. Yang, M.H. Li, R.X. Qu and Z.G. Zhang	648
Blast Vibration Response of Tunnel Influenced by Confining Pressure and Surrounding Rock Type T.J. Tao, C.M. Xie, E.A. Chi and M.S. Zhao	652

Chapter 8: Design and Control in Modern Engineering System

Optimal Power Management of Final Load and Electrolyser in a Solar Hydrogen Power Generation System
X.X. Dou, J. Andrews, M. Simic, R. Hoseinnezhad and J. Mo 661

Design of MFL Inspection Device for Underground Oil Tanks Based on Independent Calibration Method
F.J. Liu, S. Kong, K. Ding and M.L. Zheng..... 669

Design of Absorbing Wave Maker Control System Based on Trio Controller
X.L. Zhang and Y.J. Hu 674

Design of a Chaos Phenomenon Exhibition System
K.S. Ouyang, S.L. Lu, S.B. Zhang and F.R. Kong 679

Dynamic Modeling of a New Version of Cylindrical Planetary Gear Used for a Robotic Arm
L. Pascale and P.C. Patric..... 683

Modular Design Based on Design Rules
R.J. Wang and W.J. Luan..... 687

Study on the Automatic Spraying System of Dust Suppressant and Speed Adaptive Algorithms
S.W. Wu..... 691

Dynamic Motion and Modal Analysis Simulation for the Balance Mass of the Crankshaft of a Two-Cylinder Reciprocating Air Compressor
Y.C. Huang and D.Y. Lin 696

Research and Design of Shortwave and Ultra-Short Wave SDR Engineering in Urban Emergency System
M. Zhang..... 700

Chapter 9: Modern Circuits and Embedded Systems

Design of the Embedded Control System of Laser Engraving Machine
X.T. Wang, Z.J. Yang, Y. Lv, Z. Wang and P. Xiao 709

Research of IOT in the Application of Wisdom Agricultural
W.Z. Min and Q.M. Chao 714

Research of RAM on the All-Electronic Computer Interlocking System
T. He and J.X. Ren 719

The Research on Embedded Database System of Wireless Network
J.G. Tang 727

The Effect of Dielectric Charging on Capacitive MEMS Switch
Q.W. Huang, X.G. Li, Y.H. Wang and Y.B. Jia 732

Drive Characteristic Analysis and Test System Design for Water Hydraulic Artificial Muscle
Z.M. Zhang, Y.J. Gong and J.Y. Hou 737

A Type of Equipment TV Goniometer Angle Deviation Signal Simulation Research
Z.L. Wang, Y.B. Zhu and Z.B. Zhang 743

Design of a New Dual-Core Intelligent PLC for Ethernet Communication
G.F. Wang and B.R. Wang 748

Design and Implementation of an Automatic Hydrological Telemetry System
J.H. Zhao, J. Ning, S.Y. Mao and W.F. Xu..... 752

IC Design of the Band-Gap Reference and the Triangular Waveform Generator of Class D Audio Amplifier	
S.M. Zhang.....	757
Improvement and Design of Single Coil Vibrating-Wire Sensor Signal Acquisition System Based on STM32	
S.Y. Mao, J.H. Zhao and F.F. Zhou.....	764
Study on Energy-Saving Electronic Water Treatment Facility with Automatically Adjustable Operating Voltage	
J.L. Song, F.F. Shi, M. Zhang, Q. Zou, S. Chen, Z.M. Yuan and X.Y. Zhao.....	770

Chapter 10: Industrial Engineering

Application of Three-Dimensional Fine Geological Modeling in Complex Fault-Block Reservoir with Low Permeability	
J.T. Yu, J.L. Zhang and S.Y. Chen.....	779
Maintenance and Repair Management and Optimization of Aircraft Base on Working Hour Standard	
B. Chen.....	783
Decentralised Sanitation and Energy Reuse in the Built Environment	
G.W. Zhao.....	787
The Empirical Research on Industry Informatization	
L. Yang.....	791
Incomplete E-V Distribution for Shannon Entropy	
Y.N. Wang, H.L. Li and B. Yang.....	795
Manufacturing Defects and Safety Technology of Automobile Product	
Y. Yin, Y.Q. Feng, X.R. Zhang and Q. Zhang.....	800
Study on Seepage Control Measures of Plain Reservoirs Based on Soil Salinization after Dam	
X.J. Wang, H.T. Mao, H.X. He and D.G. Shao.....	805
Research on SSCR Technology to Reduce NO_x Emissions for Diesel Engines	
K. Zhang, L.Y. Fan and D.W. Qu.....	811

Chapter 11: Robotics

A New Technique to Improve Estimation of Position for Serial Robots	
Y.L. Wang, Z.Z. Wei, M.W. Shao and G.J. Zhang.....	817
An Automatic Golf Ball Recycling Robot Design	
S.B. Zhang, S.L. Lu, H.B. Zhang, Y.X. Liao and F.R. Kong.....	822
Multi-Robot System for Mapping of the Unknown Environment	
M. Vondráček, M. Dekan, F. Duchoň and S. Števo.....	827
Optimal Method on the Compensation for Inverse Kinematics of Robot	
L. Du and X.L. Dai.....	834
Research on Ping-Pong Balls Collecting Robot Based on Embedded Vision Processing System	
S. Cheng.....	838
Multi-Sensor Technique-Based Integrated Navigation and Flight Control on Aerial Robot	
X.M. Zheng.....	842

Chapter 12: Optimization and Control Algorithms

An Approach to Command and Control Group Decision-Making Based on Intuitionistic Fuzzy Set	
Y.J. Niu, Y. Wang, D.G. Zhang and Z.X. Wang	851
Analytic Optimization of Implemented Discrete Time for Kalman Filter during Stationary North-Finding	
H.P. Yu, W.Q. Wu and J.L. Cao	857
Dynamic Deployment of Wireless Sensor Networks by an Improved Artificial Bee Colony Algorithm	
P.Y. He and M.Y. Jiang	862
Application of Supervisory Predictive Control Based on T-S Model in pH Neutralization Process	
S.Z. Li, X.J. Liu and G. Yuan	867
Research on Classification Effectiveness of the Novel Mamdani Fuzzy Classifier	
H.Y. Zuo, Z.Q. Luo and C. Wu	871
Delay-Dependent H_∞ Filtering for Neural Networks with Time Delay	
Y.J. Li and Y.N. Liang	875
A Novel Infrared Landmark Indoor Positioning Method Based on Improved IMM-UKF	
Y. Zhang, H.S. Chen and Y. Luo	880
A Two-Stage Optimization Algorithm of Logistics Transportation Network	
S.D. Wei, W. Hui and H.H. Zhao	886
Algorithms of Admission Control and Batch Scheduling of On-Demand Broadcast with Deadlines	
C.L. Chen, J.S. Lv and Y. Jiang	892
An Improved PD Type Iterative Learning Control Algorithm Based on Wavelet Filter	
Y.X. Zhang and T.X. Zhang	898
Weighted K-Means Clustering Analysis Based on Improved Genetic Algorithm	
T.J. Zhang, Y. Cao and X.W. Mu	904
Finite-Time Formation Control for Autonomous Underwater Vehicles with Limited Speed and Communication Range	
J. Yuan, F.L. Zhang and Z.H. Zhou	909
Neural Network Ensemble Based on Clonal Selection Algorithm for Sneak Circuit Analysis	
B.J. Liu, W.Z. Lu and H.Y. Ji	913
Research of Routing Protocol for Wireless Meter Reading System	
X. Wang, T. Zhou, P. Xiao and Z. Wang	918
Research on Automatic Identification of Substation Circuit Breaker Based on Shape Priors	
T. Wang, C. Yao, J. Liu, L.Z. Chao, G.H. Shao, H.G. Qun and Y.J. Ming	923
Research on Particle Swarm Optimization Least Square Support Vector Machine for Short-Term Wind Speed Prediction	
S. Zhang, H.R. Wang, J. Huang and H. Liu	927
Retrieval and Matching of Case Based on Gray-Relational Theory	
Y.L. Hu and Y. Song	931
Segment Matching Gesture Recognition Algorithm and its Application in Smartphone	
Y. Zhang, S.H. Li and Y. Luo	936
Study on Chaotic Time Series Prediction Algorithm for Kent Mapping Based on Particle Swarm Optimization	
H.L. Bian	941