## **Table of Contents**

## **Preface and Conference Organization**

## **Chapter 1: Sensors, Technologies of Measurement, Monitoring and Detection**

<b>Two-Camera Phase Measuring Profilometry System</b> G.H. He, Y.Z. Huang and X.Y. Wang	3
<b>Detection Device Construction and Analysis of Urinary Sediment</b> K.X. Li, J.H. Feng, H. He and H.J. Bai	9
Research on the Multi-Parameter Modeling of Submarine Sediment Prediction Z.H. Luo, Q.J. Xiao and J.L. Wu	13
Urinary Sediment Detection Device Design and Test H.J. Bai, J.H. Feng, K.X. Li and H. He	17
The Research and Exploration of Impurity Removal by Laser Sensor in Tobacco Production	21
Z.K. Li, H.Y. Li, Y.S. Zou, M.Y. Wu and G.Y. Liu  Overview of Micro-Force Sensing Methods C.Z. Ma, J.S. Du, Y.Y. Liu and Y.K. Chu	21 25
An Overhead Conductor Weighing Sensor Based on Fiber Bragg Grating S.B. Liang, H.L. Yang, X.P. Miao, M. Cao and M. Chang	32
Design of Lower Computer System in Wireless Sensor Network for Monitoring of SF6 Moisture Content	32
H. Yang Study of the Transducer Fault Diagnosis Module for Fire Alarm System	39
M.L. Liu and B.Y. Liu  A New Approach for Solving Cluster Head Uneven Distribution in Wireless Sensor Network	45
L. Gao and Z.M. Li  Detection Technology of Electronic Tongue in the Liquior Quality	51
Y. Yao, Y.C. Yao, Q. Han and H. Song  Research and Application of Optical Fiber Sensing Technology on High Voltage	55
Transmission Line Monitoring H.L. Yang, S.B. Liang, X.P. Miao, M. Cao and M. Chang	59
Node Information Collection Routing Algorithm Using Mobile Agent in WSN Initialization Stage J.J. Chen, C.F. Xing, Z.F. Cheng and X.B. Wang	64
A Review of the Research in Measurement Error Models Y.Y. Jiang and Q. Liu	68
Application of Computer Vision Technology in Agricultural Field F. Zhang and L.S. Fu	72
Video-Based Traffic Flow Parameters Monitoring and Integrated Traffic Information System	
S.K. Zheng, M. Li, Q. Zhu, X.M. Liu, H.D. Shen, X.W. Zhang, Z. Zhang and X.N. Fan Fault Diagnosis of Induction Motors Based on RBF Neural Network	77
S. Ding, X.H. Chang and Q.H. Wu A Grating Generator for 3D Scanner Using CPLD	85
X.Z. He, J.L. Ma and W. Wang  The Real-Time Monitoring Technology Research of Deep Foundation Pit Displacement	89
Z.W. Tong, R.F. Deng and L.W. Cheng  Adaptive Energy Efficient Cross-Layer TDMA-Based MAC Protocol in Wireless Mesh	93
Sensor Networks J. Fan, J.B. Xie, F. Li and G. Li	98
Design of Light Intensity Detection System Based on STM32 Y.H. Zhou	104

Structural States Monitoring with Fiberoptic Sensing Array and Probabilistic Neural Network	
P. Li	108
An Ant-Colony Routing Algorithm for Wireless Sensor Network G.C. Cui, S.S. Wang and J.J. Fang	112
<b>Design on Safety Monitoring System of Oilcan during Transportation</b> T. Wang, M. Chen, Z. Zhang and Y. Xu	118
A Simple and Effective Method for Traffic Flow Density Detection W. Wang, Y.G. Ma and X.C. Wang	122
Design of Maize Production and Management Monitoring and Control System Based on Wireless Sensing Data S.J. Li and Y.P. Zhu	126
The Application of Technology of Virtual Instruments in Testing System for Hydraulic P.C. Li and H. Guan	133
Hot Water Billing System Based on Smart IC Card Y.M. Qin, Q. Li, X. Zhu, D.S. Jiang, R.F. Peng and C. Wang	137
The Research and Application of Power Grid Transmission Interface Dynamic Capacity-Increase Technology	1.41
X.F. Guo, X.B. Huang, D.M. Wan, Z.M. Guo and L. Liu  Sorting 4DCT Images Using Locally Linear Embedding	141
Z.H. Luo and Z.F. Xi	150
Film Defects of Lithium Battery Recognition Based on Brightness and One-against-All Support Vector Machine	155
G. Chen, X.F. Zhu, Q.Q. Xu, A.C. Xu and H. Yang  Anti-Jamming Performance Simulation of PN-LFM Combined Ranging System	133
Z.F. Ding	159
Chapter 2: Signal and Data Processing, Intelligent Information Processing Technology	
A Switch On/Off Relaying Scheme in TDMB Cooperative System J. Ren	167
	167 171
J. Ren  Weld Pool Weld Width Prediction Based on Artificial Neural Network  X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model	171
J. Ren  Weld Pool Weld Width Prediction Based on Artificial Neural Network  X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model  Y.Y. Wu and S.B. Zhang	
J. Ren  Weld Pool Weld Width Prediction Based on Artificial Neural Network  X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model	171
J. Ren  Weld Pool Weld Width Prediction Based on Artificial Neural Network  X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model  Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation  J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review  J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang	171 175
J. Ren  Weld Pool Weld Width Prediction Based on Artificial Neural Network  X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model  Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation  J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review  J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang  A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares  X.R. Zhang, J.P. Li and C.S. Cai	171 175 182
Weld Pool Weld Width Prediction Based on Artificial Neural Network X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang  A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares X.R. Zhang, J.P. Li and C.S. Cai  User Plane for VOLTE Z.Y. Xiao	171 175 182 187
Weld Pool Weld Width Prediction Based on Artificial Neural Network X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang  A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares X.R. Zhang, J.P. Li and C.S. Cai  User Plane for VOLTE Z.Y. Xiao  State Evaluation of Diesel Engine Using Genetic Algorithm for the Feature Selection and Optimize	171 175 182 187 193 198
Weld Pool Weld Width Prediction Based on Artificial Neural Network X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang  A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares X.R. Zhang, J.P. Li and C.S. Cai  User Plane for VOLTE Z.Y. Xiao  State Evaluation of Diesel Engine Using Genetic Algorithm for the Feature Selection and Optimize M.L. Liu and B.Y. Liu  The Research on Multi-Criteria Fusion Strategy of Non-Effectively Grounded System Single-Phase-to-Ground Fault Based on the Fuzzy Theory	171 175 182 187 193 198 203
Weld Pool Weld Width Prediction Based on Artificial Neural Network X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang  A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares X.R. Zhang, J.P. Li and C.S. Cai  User Plane for VOLTE Z.Y. Xiao  State Evaluation of Diesel Engine Using Genetic Algorithm for the Feature Selection and Optimize M.L. Liu and B.Y. Liu  The Research on Multi-Criteria Fusion Strategy of Non-Effectively Grounded System Single-Phase-to-Ground Fault Based on the Fuzzy Theory R.X. Wang, Z.Y. Liu and X.M. Wang  Research Summary of Dispatching System Based on Multi-Agent Technology	171 175 182 187 193 198 203
Weld Pool Weld Width Prediction Based on Artificial Neural Network X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model Y.Y. Wu and S.B. Zhang Parameter Selection of SVR Based on Improved K-Fold Cross Validation J.E. Wang and J.Z. Qiao Change-Points Detections for Interrupted Time Series Analysis: A Literature Review J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares X.R. Zhang, J.P. Li and C.S. Cai User Plane for VOLTE Z.Y. Xiao State Evaluation of Diesel Engine Using Genetic Algorithm for the Feature Selection and Optimize M.L. Liu and B.Y. Liu The Research on Multi-Criteria Fusion Strategy of Non-Effectively Grounded System Single-Phase-to-Ground Fault Based on the Fuzzy Theory R.X. Wang, Z.Y. Liu and X.M. Wang Research Summary of Dispatching System Based on Multi-Agent Technology K.J. Yu, Z.L. Yang and Y. Yang The Application of Multiple Classifier System for Environmental Audio Classification	171 175 182 187 193 198 203 209 217
Weld Pool Weld Width Prediction Based on Artificial Neural Network X.G. Liu and L.T. Liu  Research on Cerebellar Contributions to Speech Acquisition and Production Based on DIVA Model Y.Y. Wu and S.B. Zhang  Parameter Selection of SVR Based on Improved K-Fold Cross Validation J.E. Wang and J.Z. Qiao  Change-Points Detections for Interrupted Time Series Analysis: A Literature Review J.B. Chen, J.B. Zheng, L. Yang and Y.M. Wang A Novel LLR-BP Algorithm for LDPC Codes Based on Taylor Series and Least Squares X.R. Zhang, J.P. Li and C.S. Cai  User Plane for VOLTE Z.Y. Xiao  State Evaluation of Diesel Engine Using Genetic Algorithm for the Feature Selection and Optimize M.L. Liu and B.Y. Liu  The Research on Multi-Criteria Fusion Strategy of Non-Effectively Grounded System Single-Phase-to-Ground Fault Based on the Fuzzy Theory R.X. Wang, Z.Y. Liu and X.M. Wang  Research Summary of Dispatching System Based on Multi-Agent Technology K.J. Yu, Z.L. Yang and Y. Yang	171 175 182 187 193 198 203

Blind Recognition Algorithm of TT&C Signals of Satellite Based on Fast-ICA Algorithm L. Wang and J.D. Zhang	237
RETRACTED: Analysis of Markov Models	
C.G. Shi Clustering Algorithm for Multiple Data Streams Based on Data Cloud Node	243
S. Li and L.S. Shao	247
The Blurring and Restoring Process of the Moving Object Images H.H. Sun, H.X. Wang, M. Li and J.S. Song	251
An Adaptive Growing Self-Organizing Tree Map for Brain MR Image Segmentation J.D. Zhang, W.H. Jiang, J. Du and R.C. Wang	255
A Novel Adaptive Integrated Navigation Filtering Method Based on ARMA/GARCH Model X. Zhao, H.L. Qin and L. Cong	259
<b>2D-3D Medical Image Registration Based on Ant Colony Algorithm</b> W. Wei, W. Lin, L. Liu and Z.Q. Hu	267
<b>Design of Vehicle Monitoring Software Based on Video</b> W. Wei, H.J. Su, Z.Q. Hu, Y.J. Zhou, J. Yin and D.H. Liu	274
<b>Signal Processing Based on Mathematical Morphology</b> H. Wang and Q. Li	280
Image Watermarking Technology Based on Lifting Wavelet and Fuzzy Cluster Y. Qi and X.Q. Wang	284
A New SPIHT Image Coder Based on Fast Lifting Wavelet Transform W. Song and W.B. Fan	288
A Smoothing Method for Solving the NCP Based on a New Smoothing Approximate Function	
W. Meng, Z.Y. Tian and X.L. Qu  An Equipment Fault Sound Location System Design	294
D. Xie, M. Wang, J.Q. Zhu and F. Wang	298
Simulation of the Mechanism of Insect Bionic Compound Eye Super-Resolution Restoration Technology of Copper Strip Surface Defect Images	
X.D. Sun, X.N. Fan, M.Q. Ling, H.H. Zhuang, Z. Zhang, M. Li and X.W. Zhang	302
Dimensionality Reduction Based on Feature Points of Underwater Image Mosaic Algorithm H.H. Zhuang, G.G. Liu, X.W. Zhang, Z. Zhang, M. Li and X.N. Fan	308
A New Preprocessing Algorithm of Hand Vein Image C.X. Liu	312
An Improved Variable Precision Rough Sets Weighting Model for Healthy Housing L. Tan, X.Y. Wang, C.C. Yu and G.L. Xie	316
Fast Fuzzy Search for Mixed Data Using Locality Sensitive Hashing K.M. Lee and K.M. Lee	321
Evaluation Methods for Medical Endoscope's Characteristics B.Y. Hong, F. Li, X. Sun and H.W. Ren	326
Motion Target Detection of Birds Based on Adaptive Background Update Mechanism X.W. Zhang, M.Q. Ling, Z.Y. Zhou, Z. Zhang, M. Li and X.N. Fan	333
<b>A Novel Approach for Color Tongue Image Extraction Based on Random Walk Algorithm</b> M.F. Zhu and J.Q. Du	338
Image Restoration with Lucy-Richardson Algorithm F.X. Zhao	343
Design and Structural Analysis of the Solid-State Recorder for Missile Flying Parameters Recording	2.47
L. Feng and T.H. Ma  Graphical Modeling of a Component-Based Software Architecture for Distributed Real-	347
Time Systems X.Y. Liu and X.D. Fu	352
Solving Multi-Center Dynamic Optimization Problems Using Modified Differential Evolution	
X.B. Liu and J.P. Yin	356
An Improved Artificial Fish-School Algorithm Based on Group Behaviors and Self-Adaptive Mutation Y. Tao and W. Han	360

Flux Observation Used in Permanent Magnet Synchronous Motor Sensorless Control System	265
Y.Q. Li, Z. Zhang, W. Wang, X.G. Wang, H.B. Zheng and S.P. Qu Fusion of SAR Image Using Stationary Contourlet Transform	365
K. Fu, D.X. Zhang, Q. Yan and J.J. Zhang	373
The Fault Diagnosis Algorithm of PLS-LSSVM Process Based on Base Vector Space N. Lv, L.L. Jiang and G.L. Li	378
Algorithm to Eliminate the Influence on Multi-Frame Average from Date-and-Time Words OSD in Video Surveillance by Matlab T. Liu and D.Q. Tao	385
Estimation of Salt-Pepper Noise in Images with Correlation Inspection T.Y. Li, P.G. Yuan, D.Y. Yang and X.Y. Hu	391
The Security Evaluation Index Architecture and Evaluation Model with RFID System H.F. Luo, R.Q. Liu and Y.K. Wang	399
Research on Big Data Management for High-Speed Railway Equipment Y.Q. Shao, R.K. Liu, F.T. Wang and M.D. Chen	405
<b>Exploiting Saliency Filters and Domain Knowledge for Saliency Estimation</b> J.Q. Zeng, W. Chen, G.Z. Zhang and K. Guo	410
A Fast Implementation of DPM-Based Facial Landmark Localization K.M. Cao, Y.L. Li, J.S. Chen, C. Yang, M. Wang, H. Shao and G.D. Su	416
A Background Subtraction Method for Defect Detection of Printed Image J.H. Ding, Y. Lu, W. Huang and M. Qin	421
Vibration Analysis of Different Micro-Beams with Laser Ablation L.C. Xiong, Q.S. Zhou and P. Chen	428
A Retrieval Method of Ancient Chinese Character Images X.D. Tian, X.S. Jia, F. Yang, X.F. Li and X.F. Miao	432
The Algorithm of Quadratic Junction Neural Network M. Gu	438
A New Fusion Method of Multispectral and Panchromatic Image Based on NSCT and HIS Transform J.K. Yang, L. Guo and N. Yang	443
Simulation of a Nonlinear System C.G. Shi and B.Z. Zhao	448
Inverse Constrained Maximum Variance Mapping for Face Recognition Q.R. Zhang, J.N. Gu and M.F. Zhang	452
A Community Detection Algorithm Based on Node Degree Difference and Node Similarity J.J. Cheng, P.F. Wang, Q.B. Zhang, Z.Q. Zhang, M.W. Leng, H. Xu and X.Y. Chen	458
The MPS Reconstruction of Porous Media Using Multiple-Grid Templates Y. Du and T. Zhang	462
Knowledge Reduction of Set-Valued Decision Information Systems Based on Tolerance Relation	
H. Wang and R. Gao Knowledge Based ε-Support Vector Regression Method	466
Y.Z. Shi, M. Xu, P.L. Liu and P. Li  Research of the System Based on BP Network for the Prediction of Grape Disease	472
F. Bao, J. Wang and Z.H. Ren	476
Chapter 3: Technologies of Control and Automation for Industry	
Force-Position Adjustment Design of Tractor Hitch System Based on DSP CCS H. Xu, Z.X. Lu, Y.D. Song and H.L. Pang	483
PLC Counter Applications Technique J. Zhao and H. Zhang	487
Space Vector Modulation with Simple Sector Judgement and Optimized Switching Loss W.F. Zhang and R.C. Wang	491
The Vehicle's Lane-Changing Rules of On-Ramp System G.F. Wang and M. Wu	495

The Software Design of Remote Monitoring System of High-Speed Rice Transplanter	
Operating Parameters Z.G. Xiong, J. He and S.L. Luo	501
Research and Development of CVIS Testing System at Road Intersection Based on ZigBee H. Zhang	505
The Research of Glass Furnace Commutation Control System which is Based on Fuzzy Neural Network X. Han and J. Chen	510
Research on Reasonable Bus Priority Method Based on Arterial Coordination Control H. Wang and L.Y. Wei	514
Temperature Control System Modeling and Simulation of Finishing Mill S.X. Chen, Y. Li and J. Zou	519
The Automatic Detection System Development of Aluminum Production Line Quality G.Y. Li and L. Hou	525
Research on MFBP Algorithm of Nerve Net Self-Adapting Controller X.J. Fu and H.K. Wu	529
Study on the Application of Data Measurement and Control Integrated Technique L. Jiang, Z.L. Sun and Z.B. Zhang	535
Design Implementation of Remote Monitoring and Data Acquisition for Solar Water Heating Control System	520
L.L. Zeng  Auto-Disturbances Rejection Controller Design of Maglev Wind Tunnel System	539
Y. Li  Development of a Temperature Control System Based on DSP for a Real-Time PCR	543
Instrument H. He, J.H. Feng and K.X. Li	549
A Universal Adaptive Neural Control Scheme for Nonlinear Uncertain System H.Q. Ren, Y.C. Liang and X.H. Shi	553
Chaotification of Three Different Behaviors in Mira 2 Map Z.Y. Yang and T. Jiang	558
Research of a LED Intelligent Light System for Plant G. Liu, L.G. Tian, M. Li, B.B. Guan, H. Wu, G.L. Chen and X.L. Cheng	562
The Intelligent-Control Strategies for the Rotational Inverted Pendulum X.L. Su	566
Chapter 4: Industrial Electronics and Communication	
Analyzing of the Near-Field Shielding Effectiveness of the Cylindrical Cavity with Apertures	
J.Q. Fan, J.H. Hao, Z.X. Song and X.F. Liu	573
Package Chip Defect Reduction on Integrated Circuit  K. Seri and S. Angsumalin	578
Transient Simulation of Lightning Wave on Transmission Line J. Ye, K. Zheng, H.L. Sun and Y. Chen	585
Design and Thermal Analysis of SiGe HBT with Segmented Emitter Fingers and Non- Uniform Emitter Finger Spacing L. Chen, C.Z. Hu and C.L. Jiang	592
Chapter 4: Industrial Electronics and Communication	
High Birefringent Terahertz Photonic Crystal Fiber Based on Material-Filled Structure	
J.H. Li, F. Huang, Y. Yang, B.F. Zhang and H. Zhou	599
<b>Design and Implementation of USB Transceiver with Verilog</b> L.K. Zheng, Y.L. Chen and Z.Y. Li	604
A High-Accuracy and Robust Low Drop-Out Regulator for Outdoor Decorative Lighting LED Driver L.W. Pan, L. Zhou, T. Sun, Y. Wei, Y.Y. Gao and P. Chen	609

A Realization Method for Multi-Carrier MPPSK Modulations	615
P. Zhang and L.N. Wu  Design of FIR Digital Filter Based on CSD Code	615
G.H. Li, W.Y. Lang, X. Bai and H. Hu	619
Design and Realization of the Small Power Two-Way DC Power Supply Based on UCC2800 Y.X. Wang, L.J. Qiu, H.Z. Cai, L.F. Li, W. Yang, Y. Liu and L. Bai	623
A Novel High Frequency Isolated Feedback Generator with SOI Process X. Xu, M.M. Sun and J. Jiang	627
The Design and Simulation of Cycled Amplifying Circuit N. An, C.L. Gong and W.M. Su	632
The Multiport Analysis of Microstrip Circuits Using Gaussian Green's Function Method H.W. Sun	636
Design and Implementation of Long Distance Visible Light Communication System Based on Embedded ARM Platform	640
M.M. Zhou, M.L. Zhang and Y.G. Zhang	643
Wireless Network Video Collection and Transmission Based on ARM S.L. Qiao	647
Design of a Digital Audio Player Based on μc/Os and μc/GUI	
S.Y. Li	650
Evolution of Fault Self-Repairing Circuit with High Reliability J.A. Lou, Y. Li and J.H. Yu	654
Development of a Soft Starter with Current-Limiting, Reactive Power Compensation and	034
Harmonic Filtering Y.F. Wang and Y.X. Yuan	658
The Design of Electric System Faulty Phase Selection Device Based on DSP H.X. Wang and S.H. Liu	662
The Application of PLT-22 in the Intelligent Local Controller F.Y. Li	668
Intelligent and Compositive Protector for Motor Based on AVR Single-Chip	008
Microcomputer	
Z.H. Wang, Z.L. Yu and X.F. Zheng	672
The Study on LED Accelerated Life Testes and Failure Mechanism Y.Z. Zhang, C.X. Li and W.B. Zhang	678
Research on Congestion Control Routing Algorithm Based on Soft Preemption in Intelligent Optical Networks T.T. Yang, X.X. Ma and L. Du	683
Design of WLAN Anti-Interference λ / 4 - Absorber's Parameters in 4G Era	003
H.C. Zhao, W.J. Hao, Y.Y. Yi, Y.F. Dong, F. Wu, M.M. Wang and D.W. Chen	687
Video-Conferencing-Device to Engineering J. Šedivý, R. Drtina and V. Rabe	692
1×4 Power Splitter Based on Cascaded Multimode Interference Photonic Crystal Waveguide	606
X.X. Shen, Y.Z. Ren and G.Y. Dong  Connective Petronomission Pessed on Network Coding with Fewering Metric for Wineless	696
Cooperative Retransmission Based on Network Coding with Fourier Matrix for Wireless Ad Hoc Networks D.M. Chen, X.H. Fan, Y.M. Wang and Y. Du	701
Chaotic Communication Based on Chaotic Pilot Signal for Synchronization Control G.H. Li	706
Interworking of LTE with CDMA EVDO Z.Y. Xiao	712
The Application of Network Communication Tools in Information Service of University	
Library D. Li	716
LDPC Codes with the Layered LLR-BP Algorithm for 3GPP	,10
M.M. Li, J.P. Li and C.S. Cai	720

Design of Switched Reluctance Motor Speed Control System Base on DSP X. Li, C.H. Zhang and Y.J. Fan	727
Design of Dynamic Vision System for Modular Reconfigurable Robots J.B. Tang, B. Chen and Y.B. Zha	735
A Comparative Study of Novel Permanent Magnet Arc Guideway Motors Based on Three- Dimensional Electromagnetic Field Analysis K. Wang, G. Zhang, Y.P. Wang, X.F. Zhou, X.S. Chen, Q. Liu and W. Feng	739
A DDS-Based Interoperation Framework of Large-Scale Simulation System R.K. An, C.F. Xing, L. Wu and L. Gong	746
Review of Odor Source Localization Robot Based on Bionic Olfaction L. Yang, J.B. Zheng, J.B. Chen and Y.M. Wang	750
Research on Fuzzy Evaluation Method of Reliability Analysis about Robot for Work of Drainpipe Deposit Cleaning F.P. Xu, Z.C. Zhao and Y. Zhou	755
Application of an Auto-Disturbance Rejection Controller in Planar Motor Speed Control System	
X.M. Liu and X.F. Li	761
Position Synchronization of the Biaxial System with a PID Neural Networks Control W.Y. He, C. Qiu and J. He	766
Path Planning for Nonholonomic Mobile Robot in Dynamic Environment L. Kang and L.C. Mao	771
Research on DC Motor Intelligent Control Algorithm L. Fang	775
<b>Study on Chaotic Operation and Control System of Ultrasonic Motor</b> X.Z. Quan, X.W. Liao, Y. Wu and L. Wang	782
<b>Intelligent Driver for Magneto-Rheological Damper Based on Digital Signal Controller</b> S.Y. Huang, Z.B. Chen and F.C. Tu	788
A Control Architecture for Mission Re-Planning and Plan Repair of AUV R.B. Zhang, H.B. Tong and C.T. Shi	794
Vehicle Power Grid Voltage's Influence on Anti-Disturbance Ability of Maglev Train J.H. Huang, A.M. Hao, X.L. Li and L.H. She	798
A Design of Electric Control and PLC System for NC Milling Machine Based on SINUMERIK 802D Solution Line D. Yang and S. Liu	803
Attitude Controller Design of Multiple Independently Targeted Reentry Vehicle Based on Internal Model Control	900
F. Zhao, F. Li and J.H. Zhao Research on Backlash Nonlinearity in Servo Precision Drive System	809
W. Zhou, L. Zhao, X.L. Li and L.H. Lin	815
Research of Garlic Umbilical (Root) Cutting Machine Based on Image Processing L.Q. Zhao, C.Q. Hu and Y.Y. Yin	820
Improve Dynamic Performance on High Speed by Application of Electromagnetic Valve Actuation	026
J.T. Xu	826
Chapter 6: Information Technology Applications	
Research on Relationship between Information Disclosure and Cost of Equity Capital for Small and Medium-Sized Enterprises Y.Y. Zhang	833
Automatic White Balance Based on Gray World Method and Retinex L.L. Xu and B.X. Jia	837
Study on Customer Personality Characteristics and Relationship Outcomes Using SEM	03/
Analysis X. Feng	841
Study of CDR Real-Time Query Based on Big Data Technologies Z.H. Gao, K. Chen and L.Y. Bi	845

Research on Mobile Business Value Network and Model Construction J. Sun and W.A. Ren	849
Research of Data Sparsity Based on Collaborative Filtering Algorithm L.M. Liu, P.X. Zhang, L. Lin and Z.W. Xu	856
Research for Cold-Start Problem in Network-Based Recommendation Algorithm L.M. Liu, C.Y. Zhang, Z.Q. Ma and Y.H. Xiao	861
Study on Discovery about Growing Potential Opportunity of Cybermediary Based on Fuzzy Hypergraph Q.G. Wang, S.W. Xia and H.L. Hui	868
Computer Simulation Study on Solubility of Three-Dimensional Polymer Multiple Chain System	
Q.L. Zhang, L.L. Cui, Q. Zheng and L. Liu  The Development of Student Information Management System Based on ASP.NET  Workflow Technology	874
R.Z. Wan and H. Xin	878
An Advanced LRU Cache Replacement Strategy for Content-Centric Network B. Tang, G.Y. Zhang, Z.J. Xing, Y.X. Wu and X.H. Wang	884
The Read-Write Operation on Floating Point Data Program Design between MCU and KingView	
C.C. Fang and X.J. Yang	891
Research on the Equivalence of Pulsed Interference Signal and CW Signal in DSSS Communication System Y. Wang and J. Dong	896
Multiple-Input Single-Output Wireless Power Transmission System for Coal Mine	
Application D. Zhao, E.J. Ding and H. Xue	900
<b>Research on the Choice of Quality Signal of B2C Enterprise under Asymmetric Information</b> S.X. Xie, Q.G. Wang and F.X. Huang	905
The Existing Problems and Countermeasures in the Development of Accounting	
Informatization in China J.D. Zhang, Y.H. Luan and S.F. Wang	910
PAHIS: A Platform for Agent-Based Hybrid Intelligent Systems C.S. Li and K. Li	915
<b>Mapping a Real-Time System Graphics Design Model to Windows CE</b> X.Y. Liu, Q.T. Ma and X.D. Fu	920
The NAC System in the Smart Grid Systems L. Zheng, Z.W. Wang and C.S. Zhao	924
Development of Graphic Low Voltage Line Loss Calculation and Load Optimized Strategy Software	
Z.Q. Wang, J. Zhang, G.F. Su, G.C. Li and F. Wang	929
Application and Research of Embedded Web Server on S3C4510B K. Hu and Y.L. Lei	935
The Loan Pricing Study of Supply Chain Finance Based on Cloud Muster Warehouse	
(CMW) Y.M. Pan, Y.L. Tong and G.X. Mi	940
An Algorithm to Update K-Dominant Skyline L.G. Dong and X.W. Cui	944
<b>IoT Information Evolution in Perspective of Objective Knowledge Evolution Theory</b> L. Hu, C.X. Ma, G.H. Song and F.M. Wu	949
<b>Analysis Software Application Status of Enterprise Human Resource Management</b> C.C. Wang	956
The Research on the Adaptive Network English Learning of Guizhou University Y.L. Song	960
Power Enterprise Performance Management Information System Development and Research G.Y. Li and L. Hou	964
Using Different Term Weighting Schemes of Centroid-Based Classifiers to Classify Drug	70 <del>4</del>
Monographs V. Lertnattee and C. Lueviphan	968

The Financial Management System Based on Android and SQLite X.L. Feng, Z.H. Suo, Y.T. Wei and M. Xu	974
Based on the Experimental Platform of Litchi Picking Vision Calibration J.Z. Zhang, J.F. Zhang and J.Z. Deng	978
A Non-Repudiation E-Mail Transmission Protocol and its Formal Analysis Z.M. Ren, L.Y. Xu, Q. Liu and A.D. Fan	984
Assisting People with Multiple Disabilities to Improve Computer Typing Efficiency through a Mouse Wheel and On-Screen Keyboard Software C.H. Shih, M.L. Chang, J.P. Huang and Y.C. Lin	989
Anaglyph 3D Display Based on a Computational Stereo System M. Wang, J.S. Chen, C. Yang, K.M. Cao and G.D. Su	993
Improved Congestion Control Algorithm in Wide Bandwidth and Long Delay Network Q. Liu, Z.K. Yang and G.H. Duan	997
Design of ECG Acquisition System Based on Matlab X. Wang, W.L. Niu and Y.S. Liu	1001
Design of Mobile Learning System Based on Cloud Computing Z. Nong	1005
The Relationship of Computer Graphics and Visual Intelligence - Research Studies J. Šedivý and C. Barta	1011
<b>Design and Implementation of Data Migration on Housing Fund Archives System</b> C.X. Qi, X.Y. Gao and L. Zhao	1015
Primary Investigation of Networking Industry's Development M.Y. Wang	1019
Improvements and Implementation of Integrated In-Vehicle Monitoring System W.J. Chen	1023
Congestion Control in Data Center Networks: A Survey and New Perspectives H.X. Wu, X.L. Yang and M. Zhang	1028
Design and Implementation of Compiler Subsystem for Object Oriented Publish/Subscribe Systems B. Dong	1036
Architecture for Vertex Transformation and Triangle Clipping in 3D Graphics B.Z. Liu, T. Sun, L. Zhou, J. Wang and Y.Z. Zhang	1040
Anomaly Detection Based on Chi-Square Statistic Technology in Computer Information System M. Gu	1046
A 18.4M Triangles/s 122.6 mW Tile Co-Processor for Embedded GPU Systems J. Wang, T. Sun, L. Zhou, Y.Z. Zhang and Y.Y. Gao	1050
<b>Evaluation Fitness of Footwear Using Hybrid Simulation</b> M.J. Li and W.D. Geng	1055
An Improved Anti-Collision Algorithm Based on Binary in RFID System X.F. Zheng and L. Zhang	1062
A Middle-Ranking Cadre of Universities Evaluation Management Information System Based on SOA Z.B. Li, G.L. Nie, Q. Zheng, H. Liu and C.H. Liao	1068
Study on Data Warehouse Based Equipment Support Data Management F. Xie, J.S. Sun, W.J. Liang and D.S. Dai	1072
Optimal Dispatching Methods for Unit Commitment Based on Hybrid Genetic-Simulated Annealing Algorithm X.J. Zheng	1076
Optimisation to ANN Inputs in Automated Property Valuation Model with Encog 3 and	
winGamma N. Vo, H. Shi and J. Szajman	1081
Architecture Model of FMS Based on Multi-Agent Technology H. Zhang, R.F. Guo, C. Geng and X.F. Bu	1087
Study of the Establishment of a Local Fitness Network System Platform B. Xiao and J.T. Wang	1093

The Technology of Software Reliability Virtual Test Based on Software Conventional Failure Data	
J. Ai, J.W. Shang and Y. Liu	1097
A Method of Numbered STL File Format for Recording Data	
L.L. Zeng	1102
Design and Implementation of a Cache System in Web Search Engines H.Y. Ma	1106
A Method of Pepper Plant Modeling and Animation Set-Up in Autodesk Maya F.Y. Chen, T.E. Chen, W. Wang and X.J. Ma	1110
Research on Security Algorithm for Crossing Heterogeneous Network Based on Unified Communication Technology	
Y.Y. Chen, D.L. Yang and M.Y. Zhai	1118
<b>Design and Realization of Music Player Based on Android System</b> R. Nie and C.C. Huang	1123
<b>Design on HEVC Streaming Media Player Based for Android</b> Y. Zhao, X.C. Zhang, Z. Yang and J.X. Chen	1127
<b>A Robust Audio Information Hiding Algorithm Based on DCT and DWT</b> J.Y. Li, Y.Q. Yang and R. Li	1131
The Application of Network-Aided Teaching in College Deaf Students Y. Wang, M. Han and X.H. Zhang	1136
Test of the Run-Time Infrastructure Software J.B. Tang, Q.G. Hu and Y.B. Zha	1140
Proxy-Based Security-Feedback Trust Model in MP2P Network X.M. Cao, H.T. Zhu, H.Y. Shen and G.H. Chen	1144
<b>WebRTC-Based Video Communication Application</b> M.Y. Yang, Z.G. Wen, C.X. Fan and Y. Ji	1152
Multi Queries Methods of the Chinese-English Bilingual Plagiarism Detection H.Y. Chen and P. Vines	1158
Study on Curriculum System Design of Enterprise E-Learning with Digital Learning Concept	
W.Y. Yang and L.M. Zhang	1163
The Payment Solutions for Campus Card Based on Improved SET Protocol C.H. Wu and A.B. Wang	1168