

Computers and Information Processing Technologies I

Selected, peer reviewed papers from the International Conference on Computers and Information Processing Technologies (ICCIPT 2014), April 23-24, 2014, Shanghai, China

Bearbeitet von
Prasad Yarlagadda, Yun-Hae Kim

1. Auflage 2014. Taschenbuch. 1272 S. Paperback
ISBN 978 3 03835 139 9

[Weitere Fachgebiete > EDV, Informatik > Computerkommunikation, Computervernetzung](#)

schnell und portofrei erhältlich bei

The logo for beck-shop.de features the text 'beck-shop.de' in a bold, red, sans-serif font. Above the 'i' in 'shop' are three red dots of varying sizes. Below the main text, the words 'DIE FACHBUCHHANDLUNG' are written in a smaller, red, all-caps, sans-serif font.

beck-shop.de
DIE FACHBUCHHANDLUNG

Die Online-Fachbuchhandlung beck-shop.de ist spezialisiert auf Fachbücher, insbesondere Recht, Steuern und Wirtschaft. Im Sortiment finden Sie alle Medien (Bücher, Zeitschriften, CDs, eBooks, etc.) aller Verlage. Ergänzt wird das Programm durch Services wie Neuerscheinungsdienst oder Zusammenstellungen von Büchern zu Sonderpreisen. Der Shop führt mehr als 8 Millionen Produkte.

Table of Contents

Preface and Conference Organization

Chapter 1: Advanced Computing Technology and Mathematical Modeling

A Dirichlet-Neumann Alternating Algorithm Using Elliptical Arc Artificial Boundary for Exterior Problems with a Concave Angle Y.J. Chen and Q.K. Du	3
A Large-Scale and Flexible BMS Design C.J. Zhang, L.C. Zhang and Y.S. Shi	7
A Quantitative Evaluation Method Based on Hierarchical Architecture Model of Cloud Service Availability Z.Z. Shao, Y. Cao and B.H. Cheng	11
Research on MapReduce Task Dynamic Balancing Strategy Based on File Label R. Huang, A.P. Xiong and Y. Zou	17
Researches on Data Privacy in Cloud Computing Based on Game Theory Y.H. Yu and L. Wu	22
The MPI and OpenMP Implementation of Parallel Algorithm for Generating Mandelbrot Set X.W. Duan, W.C. Shen and J. Guo	26
Adaptive Congestion Control via Dynamic Output Feedback C.W. Han, D.H. Sun, L. Liu and S. Bi	30
An Advanced ECC Dynamic Password-Based Remote Authentication Scheme for Cloud Computing L.C. Cao and W. Han	34
An Audio Hiding Algorithm Based on Spline Interpolation and Wavelet Transform J.Y. Li, Y.Q. Yang and B. Yang	39
Evaluation Method for Anti-Interference Performance of Measuring Based on Entropy Loss G.J. Li, B.L. Zhang and X.Y. Wang	44
RE-Based Weighted Distributed Equipment Layout W.M. Han, T.T. Zhang, J. Lv and J.S. Jiang	49
Algorithms of Mining Maximum Frequent Itemsets Based on Compression Matrix S.H. Shu and Z.Z. Lin	57
A Secret Sharing Scheme on Access Structure H.W. Qin, X.H. Zhu and Y.W. Dai	63
A Tag-Based Signature Scheme with Shorter Signature Length X.H. Lu and J. Fang	69
An Identity-Based Conditional Proxy Re-Encryption in Cloud Computing Environments X.Y. Meng, Z. Chen, X.Y. Meng and B. Sun	74
Fine-Grained Access Control with Efficient Revocation in Cloud Storage T. Zhong, Y.P. Sun and Q. Liu	79
Integrity and Fidelity Evaluation of Digital Evidence in Live Forensics L.H. Wang and Q.L. Xu	90
MANET-Based Stable Clustering Algorithm and its Performance Analysis G.Z. Hou, J.B. Wang and J. Wu	100
Reinforcement Learning for Cloud Computing Digital Library L. Xu	105
Research on Audit Model of Users' Operation Normalization Based on Graph Theory in Power System L. Zheng, D. Zhang and B.H. Cheng	109
Research on Design and Construction Method of Bent Functions G.X. Meng, Y.G. Shen and T. Jiang	114

A Novelty Model for Reliability Assessment of Complex System Z.R. Yin, D. Su and J.S. Li	118
A Multi-Attribute Decision-Making Method Based on SPAOWA Operator W.J. Wang and Y. Yan	124
The Forecasting Research of Beijing Tourism Demand Based on the BP Neural Network Y. Yu and S.M. Wang	128
A Class of Singular Volterra-Fredholm Type Difference Inequality in Engineering W.S. Wang and C.M. Huang	132
A Class of Volterra-Fredholm Difference Inequality with Weakly Singularity in Engineering W.S. Wang and Z.Y. Hou	139
Application Research of the Polynomial Fitting Model in Transformation of Plane Rectangular Coordinate Q. Wang, C. Li, J.J. Cui, L.W. Jiang, M. Wang and D.K. Lu	143
Identification and Optimization of Soil Water Movement Model Based on GA under Drip-Irrigation Y.Y. Liu, H.Y. Sun and Z.G. Zhang	148
Regression Analysis of Lower Extremity Injury Influencing Factors under Frontal Crash L.Z. Wang, S.C. Xu, X.H. Lai and J.H. Zhang	152
Setting of Academic Warning Based on Multivariate Copula Functions J.R. Dai, M.Y. Li, W.W. Li, Z. Lu and Z.G. Zhang	156
The Application of Iteration Learning Control in Silkworm Incubation Chamber System Y.J. Zhang	164

Chapter 2: Detection and Optimization Algorithms, Artificial Intelligence and Intelligent Systems

Fault Diagnoses Using Inverse Fuzzy Model H.J. Zheng and Q. Fu	171
A Community Detection Method Based on Multi-Objective Optimization Method L. Wang, Y.Q. Liang, Q.J. Tian, J. Yang, C. Song and Z. Wu	177
A High Precision Indoor Positioning System Based on VLC and Smart Handheld Z.X. Ren, H.M. Zhang, L. Wei and Y. Guan	183
A Hybrid IGA-SA Algorithm for Optimization Problems in Fault Diagnosis X.Q. Li, M. Lin and S. Liu	187
Efficient Particle Swarm Optimization Algorithm Based on Affinity Propagation L.P. Su, Z. Wang, Z.G. Huang and H. Li	191
Estimation of Initial Field in the Bohai Sea with the Adjoint Method: A Comparative Study on Optimization Algorithms C.H. Wang, Y.L. Shen and X.Q. Lv	196
Fault Diagnosis of Transformer Based on RBF Neural Network J.L. Yu and Z. Zhang	201
Features Extraction for Lhasa Tibetan Speech Recognition G.Y. Li, H.Z. Yu, Y.H. Li and N. Ma	205
FECG Extraction Algorithm Based on BSS Using Temporal Structure and DWT R. Li and B.F. Chen	209
Fuzzy Clustering Segmentation Algorithm Research for Biomedical Image Based on Artificial Life L. Wang, B. Liu and M.Y. Yang	213
Hourly Solar Radiation Forecast Based on k-NN Nonparametric Regression Model M.Q. Yang and X.Y. Wang	217
Influence Diffusion Model Based on Semantic Orientation and its Application in Opinion Leader Identification L.L. Dong, F.R. Zhao, X. Zhang and Y.J. Zhu	223
Multi-Thread Memory Particle Swarm Optimization for Dynamic Optimization Problems L. Chen, J.M. Liu and J.M. Ouyang	232

Recognizing Event in Short Text Based on Decision Tree J.Y. Lu, W.L. Zuo and L. Zhu	237
Reliability Analysis Based on Markov Process for Repairable Systems X.Q. Li, R.L. Li and Y.J. Xie	241
Reverse Search Particle Swarm Optimization to Deal with Dynamic Optimization Problems L. Chen, W.J. Wang and L. Yao	245
Short-Term Prediction of Ship Motion Based on EMD-SVM S.B. Liu, P.A. Shi and L. Wu	252
Strategic Learning in Multiple Equilibria for Double Bargaining Mechanism by PSO X.B. Zhu	258
The MacWilliams Identity of Linear Codes over $M_{n \times s}(F_p + uF_p + vF_p + uvF_p)$ with Respect to RT Metric Y. Liu and M.J. Shi	262
The Micro-Blog Information Personalized Recommendation Algorithm Based on Trust Relationship L.L. Dong, W. Qiao and X. Zhang	267
Tibetan Information Retrieval Technology Integrated with Morphological and Syntactic Cues F.C. Wan, N. Ma and X.Z. He	273
The Optimization Algorithm Based on Vector Space Model to Determine the Influence of Microblogging Text Y.C. Dong, Y. Liu, J.Y. Luo and J. Zhang	278
Design of a Two-Wheel Self-Balanced Vehicle System M.D. Zhou, Z.D. Lin and Z. Lin	282
Moving Target Detection and Tracking Control Simulation Platform H.C. Zhou and Z.P. Jiang	287
New Research for Traffic State Identification Y.X. Liu, P. Zhu, H. Wang and X.X. Yuan	291
Water Traffic Safety Evaluation Based on the Grey Correlation Grade Analysis Y.X. Teng, H.G. Zhao, J. Yang and J.L. Sheng	295
Large Naval Ship Evaluation Method Attended by Multiple Experts Y.H. Hou, J.N. Zhang and C.B. Zhen	299
Intelligent Vehicle Local Planning Based on Optimized Path Generation and Selection J.H. Wang, Y. Jiang, H.F. Guo, J.W. Gong, X.Q. Liu and D.L. Xu	303
Fuzzy Comprehensive Evaluation Method of Experimental Teaching Quality Based on AHP S. Li, H. Rao and L.J. Dai	308
Comprehensive Evaluation Study of Multiple Comfort for High-Speed Train H.Y. Wang, X.M. Wang and J.W. Dang	312
A Mutual Fund Investment Method Using Fruit Fly Optimization Algorithm and Neural Network T.H. Huang and Y.H. Leu	318
An Improved Path Tracking Algorithm for Intelligent Vehicle in Automatic Parking Conditions D.L. Xu, J.W. Gong, Y. Jiang, N. Li, Y.J. Sun and J.H. Wang	326
A Smart Recognition Method for Otological Drill Milling through a Bone Tissue Wall X.S. Li, Y.M. Xie, Z.Q. Gao and G.D. Feng	331
Answer Extraction Model Based on Named Entity Recognition Y.H. Lu and M.H. Liang	339
Class Association Rule Mining Based on Incremental Construction of Lattice Y. Zhai, X. Yu and A.S. Deng	345
Causal Model Reconstruction of Complex Energy System Using Probabilistic Network Approach L.P. Li	351

Chapter 3: Communications and Network

A Network Selection Algorithm Based on Traffic Flow Y. Tao and Y.L. Jiang	359
---	-----

A Regulative Arithmetic on the Contingency Communication in the Damaged Military Communication Network J.X. Liu	364
A Short-Delay Multipath Mitigation Algorithm Based on Variable Step-Size LMS Adaptive Filtering Y.T. Hui, B.B. Li, Z. Tong, X.W. Zhong and H. Liu	368
Joint Resources Assignment Scheme Based on Graph Coloring Theory and Harmony Search Theory for Cognitive Radio Networks Y.X. Sun, Y.Z. Li and F.L. Liu	376
Locality-Route Pre-Configuration Mechanism for Latency Optimization in NoCs X.T. Tang, G.F. Zeng, F. Wang, Z.C. Xing and C.C. Feng	381
Multi-Level Complex Network Control System Based on Cloud Services Platform B.Y. Li, L.F. Sun and R. Tian	389
Petri Net-Based Modeling and Verification of Automatic Train Speed Control System R. Hua, Y. Fu, J.Z. Yu and C. Liu	395
The Study of Network Information System Security Strategy Based on Trusted Cloud Computing Y.F. Cao and J.M. Pan	400
A Modeling Approach Based on Weighted LDA for Quality of Experience Measurement in Mobile Network Scenarios W. Kuang and L. Han	404
A Microblogging Opinion Leader Recognition Algorithm Based on MapReduce L.L. Dong, Y.J. Zhu and X. Zhang	410
Access Control Management of Cloud Storage System Based on NSSC in Mobile Network M.F. Sun, S.S. Wang, Z.Y. Fang, Y. Wang, S.B. Lu and C.H. Zhu	416
An Algorithm Based on Optimal Routing Function in Mobile Ad Hoc Networks W.F. Sun and J.Z. Li	424
An IEEE 802.11n Based Multi-Channel MAC Protocol for Underground Metal Mine Wireless Network F. Jin, X. Liu, X. Lv and D. Zhang	428
An Improved Method for Maintenance Scheme of an Inter-Zone Route J. Wu, G.X. Meng, Z.G. Chen and D.S. Cao	433
Design and Implementation of ZigBee Gateway for Ethernet S.Y. Yan	438
Mobile Wireless Network Management System H.Y. Mu, X.G. Yuan, Y.N. Wu and Y. Zhang	443
Research of Mining High Power 802.11n Access Point X. Lv, D. Zhang, F. Jin, X. Liu and X. Han	447
The Modeling Method and Analysis of Online Top-Up System Based on Open Petri Net X.M. Li and X.W. Fang	453
The Research of Auto After-Sales Service Personalized Recommendation Based on LBS D.L. Chen, L. Chen and Y.J. Gui	457
A Pattern Matching Algorithm for Double-Type Characters H.Y. Zhou	461
Study on Design of Non-Uniform Energy Distribution Wireless Network D. Bao, Y. Xu and H.M. Zheng	465
Manipulation of Quantum Communication Channel via Two-Level Atom Interacting with Caving Fields X.H. Cai and J.J. Nie	469
Tourism Information Service Reliability under Unconventional Events T. Hu and W.C. Jiang	473

Chapter 4: Software Engineering

A Formal Method of Obligation Policy for Agent Interaction T. Zhang, H. Xie and S.B. Huang	481
A Modeling Method of Equipment Systems Based on UPDM W.B. Jing, Y.M. Gao and X.B. Zhang	490

A Real-Time Log Analyzer Based on MongoDB Q. Lv and W. Xie	497
Design and Implementation of Mobile Client for Passenger Dynamic Travel Information Enquiry in Urban Rail Transit Network Q. Luo, G.D. Ye, J.Z. Yang and Y.K. Mo	502
Design of Coal Equipment Life Cycle Reliability Management System X.M. Ma and B. Xu	507
Design of Three Dimensional Simulation Training System for Marine Hydraulic Crane X.P. Jia, J. Fu and Y.Y. Yu	511
Evaluation Model for the E-Learning 2.0 System B. Wu and C.Y. Zhang	515
Research on the Programming of Transplanting the Entire DSP Program from on-Chip FLASH to RAM D.S. Shan, Y. Wang, X.B. Qiu, C.L. Fan, C. Li, P.Q. Zhang and D.L. Chu	519
The Design and Application of Scientific Research Project Management System X.M. Gong and W.T. Zhu	523
Using Time Reachability Tree Logic to Specifying and Verifying Temporal Behavior of Workflow-Net C.C. Chen and Y.M. Huang	528
A Practical Method for Software Encryption K. Yan	535
Directed Fuzzing Based on Dynamic Taint Analysis for Binary Software B. Wu, B. Zhang, S.M. Wen, M.J. Li, Q. Zhang and C.J. Tang	539
Scheme Design of Mobile Phone Campus GIS System Basing on the Windows Phone Platform L.N. Guo, X.H. Wang and Z. Cui	546
Software Vulnerabilities Detection Based on Random Programming B. Wu, M.J. Li, B. Zhang, C. Feng, Q. Zhang and C.J. Tang	553
Research on Tibetan Localization Based on Android H.Z. Yu, B.J. La, R. Dou and S. Dan	559
The Selection and Study of HA Cluster Software Design D.S. Mu and H.M. Wang	567

Chapter 5: Database Systems and Data Security

Efficiently Subtree Matching between XML and Probabilistic XML Documents H.T. Ma, C.Y. Yu, C.M. Xu and M. Fang	575
Evaluation of B+-Tree and CSB+-Tree in Main Memory Database F.D. Sun and L. Wang	580
Oracle Database Security and Protection C.X. Ma, W. Zhang, Z.G. Zhang and Y.M. Wang	586
Research and Implementation of Relational Database Encryption Technology Based on Main Memory Database Y.K. Xu, Z.J. Wan, J.L. Zhang and J.J. Wu	591
Research on the Spatial Query Technology of Geospatial Database L.G. Sun, J.F. Liu and Q.H. Xu	600
Study on Fair Definitions and Application Modes of Big Data T.Z. Li, S.H. Wang and J. Ma	606

Chapter 5: Database Systems and Data Security

Combination of Data Masking and Data Encryption for Cloud Database P. Kuacharoen	617
Protecting Encrypted Data against Inference Attacks in Outsourced Databases X.L. Zhang and Y. Tang	621
System Security Monitoring Based on Complex Event Processing and Neural Network Y.F. Guo, S. Si and D.W. Jin	626

The Research of Interactions in Date Processing and Data Mining M. Zhang, W.Z. Huang and Q. Ji	638
Incomplete Data Recovery Using Linear Regression H. Lin	642
Linear Random Model and its Application to Data Recovery H. Lin	646
Outlier Analysis in Large Sample and High Dimensional Data Based on Feature Weighting Z.R. Yang and Z. Zeng	650
A Method of Reconstructing Data Sample with Monte Carlo Method and GM (1,1) Model Theory Z.H. Gao, X.L. Cao, Q. Chen, Y. Yang, C.Y. Tang, S.L. Liang and S.W. Wang	658

Chapter 6: Computer Vision and Image Processing

A Mathematical Morphological Processing of Spectrograms for the Tone of Chinese Vowels Recognition S. Xu, X. Zhao, C.H. Duan, X.L. Cao, H.Y. Li, S.L. Liang and S.W. Wang	665
A Novel Disparity Estimation Method Based on Multi-Block and Adaptive Window Q. Gao, Y.P. Lu and H.Y. Yang	672
A View-Dependent and Physical Feature-Preservation Streamline Simplification Method for 3D Vector Field Visualization L.X. Kong, X.A. Tang, H. Li and L.B. Jiang	676
An Improved Moving Particle Semi-Implicit Method for Free Surface Flows Q.R. Wu and X.L. Yao	682
Application of Digital Image Processing Techniques in the Vessel Flexure System C.Y. Xue	688
Applied Study of Size Measurement Based on Image W.W. Zhang and L.L. Yuan	693
Automatic Eyeglasses Removal of Frontal Facial Images for Face Recognition H. Ying, G.D. Su and J.S. Chen	697
Bilateral Filtering Algorithm Research Based on Improved Weight Values Q. Zhao, X.H. Wang and D. Zhou	705
B-Spline Surface Approximation to Scanned Data Using Least Square Approximation Z.Z. Lin and S.H. Shu	711
Challenging the Recognition of Facial Expression via Deep Learning D.K. Hu, Y.H. Liu, L. Zhang and G.D. Duan	717
DRCH: A Method for 3D Convex Hull X.X. Huang, J.T. Zhou, C. Ling and W.J. Zhang	721
Enhanced MIL Visual Tracking via Distribution Fields Descriptor K. Sun and N.N. Sun	725
Extracting Geometric Edges from 3D Point Clouds Based on Normal Vector Change J. Li, H. Lin, D.Q. Zhang and X.L. Xue	729
Hand Detection with Dominant Pose Recognition Using EOH and SVM C.M. Oh, S.J. Lee and C.W. Lee	735
Improved Face Recognition Using 2D-LDA with Weighted Covariance Scatter S.J. Lee, C.M. Oh and C.W. Lee	741
Inspection of Polymer Polaroid's Visual Defects with Stripe Light Illumination Y.L. Deng, X.X. Zeng, Y.F. Geng and X.J. Li	747
Laser Active Image-Denoising Based on Principal Component Analysis with Local Pixel Grouping W.L. Li, X.Q. Yin, B. Wang, M.J. Zhang and K. Tan	753
Pedestrian Detection Optimization Algorithm Based on Low-Altitude UAV Y.D. Guo, Z.G. Xie and H.B. Ma	757
Research on QR Code Black Line and White Line Defect Detection Algorithm J. Zhao, H.W. Wang, S. Liu, N. Zhang and J. Jia	764
Study on Application of CAD Used in Visual Advertising Design J. Liu	768

The Research of Ortho-Rectification to QuickBird Image with more Mountains Based on ERDAS10.0	
C. Li, Q. Wang, M. Wang and J.J. Cui	772
Tomato Disease Image Retrieval Based on Composite Features	
Q. Zhang, F. Yu, X. Liu and J.F. Zhang	777
Upper-Body Pose Recognition Using Cylinder Pattern Model	
J.W. Park, S.J. Lee and C.W. Lee	781
Study of Slice Cell Counting System	
S. Yuan, G.Y. Zhang, J.H. Wu and L.Y. Guo	788
Food Submergence Calculation and Analysis Using Digital Elevation Model and Geographical Information System	
X.Q. Zhang and K.H. Wu	792
A Video Characteristics Watermarking Algorithm Based on Bees Evolutional Computation	
C.Z. Yang and X.S. Zheng	796
Rock Image Pore Identification Based on Fuzzy C-Means Clustering and Neural Networks	
Q.J. Qin, X.J. Qiang, Y. Liu and J. Yang	803
An RFID-Assisted Digital Souvenir Generation System	
D.B. Duan, W. Hou and J. Ma	807
Research on Issues of across Border Area in Network Games	
H.B. Wang and X.H. Niu	811
An Electronic Image Stabilization Algorithm Based on Gray Projection and Circle Projection Matching	
H. Wang, P. Sun and X.W. Han	817
Dynamic Biomedical Image Segmentation Based on Wavelet Transform	
Z.P. Li, M.Y. Yang and L. Wang	821
Fullbore Image Construction of Imaging Logging Based on the Improved Texture Inpainting Method	
X. Zhang, J.H. Wang and X.L. Xiao	825
Taxi Bidirectional Search System Based on Smart Phone	
R. Xie, K. Yan and J. Zhou	829

Chapter 7: Signal and Media Information Processing

Disparity Estimation of 3-D Mesh for Stereo Video Coding	
J.L. Zheng, T.F. Qin, D.X. Wei, Q.H. Huang and L. Deng	835
Simulation of Dynamic Light Scattering Signal Based on AR Model	
Y.M. Zhang, X.G. Qi and Q.H. Li	840
The EMD Analysis AE Signals of Rock Failure under Uniaxial Compression	
T.J. Zhang, S.H. Yu, J.H. Ren and W. Cui	845
An Improved Unambiguous Tracking Technique for CBOC Signals	
H. Liu, B.B. Li, Z. Tong, Y.T. Hui and X.W. Zhong	853
Research and Realization the Method of Pronunciation Conversion for Speech Synthesis of the Lhasa Dialect of Tibetan	
Z.Q. Wu, H.Z. Yu and S.H. Wan	858
Context-Assisted Fast Face Detection	
D.B. Duan and J. Ma	863
Transmission of Image Information in the Network Multimedia Teaching	
X.Y. Liu, L.T. Xiong and J. Shen	867
A Dual-DSP Sonobuoy Signal Processing System	
J. Zheng and T.D. Gao	873

Chapter 8: Modern Electronics, Photonics Science and Engineering

A 3 GHz Semi-Digital Delay Locked Loop with High Resolution	
Y. Ding, X. Duan and J. Liu	881
A Distributed DC Power Devise Based on DSP	
Z.X. Zhou, H.X. Nie and X.J. Lu	885

A Flyback 25W Switching Power Supply for Electric Vehicle Z.L. Shao	889
A Low Standby Power Consumption Control Circuit for Switching Power Supply Z.L. Shao	893
A Novel Dead-Time Control Method for Double End Converter S.L. Liu and L.L. Qi	897
Analysis of Scattering Characteristics for 1D Electromagnetic Wave by Sudden Creation of a Plasma Slab Based on FDTD H.L. Xu, Y. Ren and L.X. Yang	901
Current Zero Crossing Detection Circuit for Synchronous Rectification Model Buck Converter Z.L. Shao	906
Design of Knowledge Reasoning Based Infrared Imagery Fault Detection System for Substation Equipments Q. Yuan and Y.C. Qi	910
Dispersion Characteristic of the Symmetric Slab Waveguide with Chiral Negative Refractive Medium X.X. Xu, Z.Y. Xiao, Q.W. Ma, X.L. Ma, D.J. Liu and Z.H. Wang	915
Dispersion Curves and Fields for a Chiral Negative Refraction Parallel-Plate Waveguide under PMC Boundary Q.W. Ma, Z.Y. Xiao, X.X. Xu, X.L. Ma, D.J. Liu and Z.H. Wang	920
Key Technology of LCA on Small Wind Power Generation System Q.Y. Mo, S.S. Li, F. Deng, L.B. Tang and K.Y. Zhang	925
Modeling and Simulation of Motor Discrete Variable Frequency Soft Starting Based on the Variable Reactance X.Y. Song, J. Chen, S.J. Deng, Y.X. Yuan and Q. Wang	930
Modeling Hydraulic Power System with Surge Tank F.N. Kong	934
Optimization Design of Photovoltaic System MPPT Controller P. Liu and W.Y. Diao	940
Passivity-Based Controller of Tri-State Boost Converter Q. Tang, J.H. Wang and J.W. Hu	944
Research on 5V Internal Power Supply Circuit of Switching Power Supply Z.L. Shao	950
Research on Design of Virtual Maintenance Training System for Electronic Equipment Y.H. Wang, J.Z. Mao and X. Zhang	955
Research on the PCHD Control Strategy for Three-Phase Voltage Source PWM Rectifier under Unbalanced Supply Voltage Condition F.J. Zhao, J.H. Wang and B.L. Zhang	959
Stabilization of a Class of Chaotic Systems via Single-State Adaptive Feedback Controller D.G. Yang and G.Y. Qiu	965
Studies on the Ontology-Based Composable Modeling Technology of Radar Countermeasure Test Simulation Z. Li, H.X. Zou and Y.M. Gao	969
The Design of Freeform Surface Fresnel Lens Used for LED Uniform Illumination Y.D. Dai, E.S. Qu, L.Y. Ren, X.C. Du and H.J. Ju	976
The Intelligent Desk Lamp Designed for Special Populations J.X. Guo and L. Long	980
The Study on Intelligent Insecticidal Lamp with LED X.D. Zhang and L.F. Xing	985
The Theory and Experimental Study on the Long-External Cavity Semiconductor Lasers C.J. Qi and T.G. Zhao	990
Theoretical Studies of Novel High Power Millimeter Generator Based on Vacuum Electron Devices H. Zhang, W.G. Zhang, Y.Z. Shao and J.G. Wang	994
Study on Passivity-Based Control of TNPC PV Grid-Connected Inverter B.L. Zhang, J.H. Wang and F.J. Zhao	1000

Chapter 9: Controller and Sensor Technology

A Trusted QoS Architecture for Wireless Multimedia Sensor Networks Q. Ye, M. Wu and Y.F. Wang	1009
Design of Circuit for Alcohol Measurements Using Three-Electrode Biosensor X.P. Hu, Q.Y. Gong and H. Yuan	1014
Human Activity Recognition Using Smart-Phone Sensors D.F. Guo, B. Liu, X.T. Jin and H.J. Liu	1019
Research on Static Game Theory Based Secure Routing Algorithm in WSN L. Yao, F.X. Gao and L. Cong	1030
Smart Community Security System Based on Sensor Web Y. Liu, J.H. Mao and X.F. Liu	1037
An Improved ANN Controller on the Efficiency Optimization of Offshore Petroleum Platform B. Liu, N. Gao, F. Liu, L. Fan and Y.Y. Sui	1042
Design of Wall-Mounted Boiler Remote Monitoring and Control System Based on the Ayla IOT Cloud Platform Y.G. Gong, A.D. Zhou and Y.N. Xiao	1047
A New Cuk Converter with High Step-Down Ratio and its Control J.W. Hu, J.H. Wang and Q. Tang	1053
A Phase Anti-Ambiguity Method for USBL System C.E. Zheng and D.J. Sun	1059
Application Research of PBL Method in PLC Control Technology S. Zhang, J.G. Gao, X.Q. Zhang and H. Wang	1064
Real-Time Trajectory Control of Robots Omnidirectional Mobile Obstacle Avoidance X.H. Chen and J. Zhou	1068

Chapter 10: Mechanical Design and Engineering

FEM Analysis of Sheet Incremental Forming Process J. Liu	1079
Multidisciplinary Design Optimization for Small Vertical Wind Turbine Design Q.Y. Mo, F. Deng, S.S. Li and K.Y. Zhang	1083
Torque Converter Turboshaft Fracture Failure Analysis and Improvement L. Zhang, X.B. Chen, H.B. Shan, X.L. Wu and Y.M. Zhao	1087
Casting Process Solutions Optimization of LFC Forklift Box G.S. Zhang and F. Zhang	1091
The Research of Robot Teleoperation Technology Based on Virtual Fixture S.K. Xu, X. Gao, T. Zhang, H.X. Sun and Q.X. Jia	1097

Chapter 11: E-Commerce, E-Government, IOT and Management

SWOT Analysis and Research on the Informatization Application Model of the Agricultural Industry Cluster J. Wu	1105
A Study on Simulative System of Mobile Payment N. Jiang, X.D. Liu, Z.J. Li, B. Li and C.F. Ning	1110
Application of Information Technology in the County Government Y. Su	1115
Construction of XBRL Semantic Metamodel and Knowledge Base Based on Ontology W.L. Wang, M. Huang and Y. Wang	1119
E-Commerce Risk Analysis with Fuzzy Analytic Hierarchy Process T. Xu	1129
Fuzzy Evaluating Model and Method of C2C Sellers Credit Based on Larsen Criterion X.K. Liang and L.M. Tao	1133

Research on the Elements of E-Government Performance Evaluation Y. Zhang and L.H. Xiong	1140
Systematic Design of Individualized Customization of Home Textiles Based on Web H.P. Gong, Y.S. Bai and Y. Li	1144
Tax Administration Problem in the E-Business Environment S.X. Xiao	1149
Tax Revenue Loss under Electronic Commerce in China S.X. Xiao	1153
An Improved User Interest Model for Microblog Personalized Recommendation W.L. Ye, B.Z. Wang, K. Chen and K.J. Guo	1157
Analysis of User Influence Using User Behavior and Random Walk M. Wang, G. Zhou and J.Y. Chen	1163
The Design and Realization of Management System Based on Java for College Graduation Practice Y.X. Wei and Z.Y. Hou	1168
A Robust and Efficient Password Authentication Scheme Using Smart Cards W.J. Li, P. Zhu, H. Zhang and Z.P. Jin	1172
An Iot-Based Remote Health Monitoring and Management System X.J. Meng, H.Q. Cui and R. Hua	1176
The Internet of Things Technology Application and the Intelligent Library L. Xu	1180
The Research on the Development of Smart Library M. Sun	1184
Financial Market Risk Overflow Modeling and Inspection Based on Support Vector Machine H.H. Zhu	1189
The Planning System Based on the Postponement Manufacturing Theory Y. Shi	1195
Tibetan-Chinese Named Entity Extraction Based on Comparable Corpus Y. Sun and Q. Zhao	1202