ISBN(softcover): 978-3-03785-103-6 ISBN(eBook): 978-3-03813-597-5

Table of Contents

Preface and Organizing Committees

Chapter 1: Automation and Information Technology

Data Mining Techniques to Enhance Customer Lifetime Value
C.C. Lin and D.H. Shih 3

A Robust Grayscale Watermarking Algorithm
F. Liu, J.Y. Bai and L.J. Sun 8

Aggregate Grading and Mechanical Property Study on Particulate-Reinforced Composite
J.X. Xie and Z.A. Lu 13

Size Distribution of Organic Modifier of Poly-Silicic-Ferric Coagulant
Y. Fu and Y.F. Zhang 17

A Study of Image Weak-Edge Detection Combination of BP Neural Networks
J.B. Yang, H. Ding and S.D. Zhang 21

Study and Apply the Visualization Intelligent Feedback Analysis System of Tunnel Construction
S.L. Tang, A.N. Jiang and H. Zhao 26

Study on Promotion Strategy of Information Product Based on Evaluation of Urban Development Efficiency
J.H. Ma and X.J. Dong 31

Measuring and Processing Complex Internet Topology
Y. Xu and Z. Wang 35

On Fuzzy Logic in Hydroturbine Temperature Fault Diagnosis in HESS
Y. Xu and Z. Wang 39

Finite Element Analysis of Slider in High-Speed Horizontal NC Center
M. Cong, T. Han, Q. Zhao, T.J. Lan and X.Y. Ju 43

Frequency Hopping Sequences with Given Minimum Gap Based on M-Sequence
Y. Xu and H. Yan 47

Emotion Fusion Recognition for Intelligent Surveillance with PSO-CSVM
R.H. Wang and B. Fang 51

An Empirical Study on Extended Producer Responsibility in Auto-Manufacturing Industry
Y. Wu, X.H. Hu and J. Nie 57

Enterprise Synergy Innovate Mechanism Based on Dynamic Core Competence
X.G. Wang, H.B. Guo and X.X. Zhao 61

Design of the Adaptive Filter Based Mind Evolutionary Computation
Q.S. Liu and J. Tong 65

ZigBee Node Locating Technology Based on Genetic Algorithm
T.Z. Wu, H.J. Zhou, B. Li and Q. Xiao 70

Research on Semantic Web Services Composite Model Based on the OWL-S
T.Z. Wu, J.F. Xiang and M.Y. Wang 75

Study on Heat Integrated Azeotropic Distillation
L.Y. Sun, R.J. Wang, C. Zhai and Q.S. Li 80

Thermodynamic Analysis of a New Coke Dry Quenching Technology
L.Y. Sun, J.T. Wu, J.C. Xu and Q.S. Li 84

Measurement for Team Innovation - Comparison for Multi-Sources Appraisal
W.J. Chen and K. Shi 88

Numerical Simulation and Optimization on Casting Hoisting Sheave
G.F. Mi, L.L. Chen, H.Y. Nan and H.Y. Wang 92

Optimal Design Based on Method of Linearly Independent Vectors for Weight-Balancing Blocks in Ultra-High-Speed Pressing Machine
J.Y. Bai, Z.H. Yu, S. Tong and D. Zheng 97

The Impact of Brand Experience on Relational Benefit: The Role of Brand Familiarity, Brand Image and Brand Personality
Y.H. Xu, M.L. Zhang and S.L. Tang 103

Hydrodynamic and Mass Transfer Performance of Bilayer Fixed Valve Tray
L.Y. Sun, R.J. Wang, C. Zhai and Q.S. Li 107

Analysis on Welding Performance of the WH80 Steel Used in the Hydraulic Support
L.M. Cao, G.X. Su, Q.L. Zeng and X.Y. Xiao 111

The Research on Fuzzy Neural Networks in the Multi-Sensor Information Fusion of Intelligent Robots
L.J. Hu, H. Song, Y. Luo, X.H. Zeng and B.Q. Wang 115

Performance Improvement of Handover Process Using Monitor Equipment in Vehicle Mobile Device
Z. Liu, Z.Y. Fang and X. Zhao 120

The Effects of Customer Participation on Service Quality, Customer Value and Customer Satisfaction
S.X. Ren, M.L. Zhang and S.L. Tang 124

Ion Chromatographic Determination of Cations and Anions in Tap Water
D.W. Liu, Z.W. Chen, L. Xu, Z.J. Zhang, B.Y. Ju and W.C. Cheng 128

On the Sustainable Development of Competitive Sports in "Post Olympic" Period of Olympic Hosting Countries - Based on System Regulation Theory
C.L. Han and C.L. Wei 132

Discussion on Strategy to Achieve Mass Customized Logistics
Y.H. Qin and G.X. Wei 138

An Exploration of the Relationships among Specific Human Capital, Information Structure and Innovation Pattern
A.H. Wu and W.L. Ge 142

The Research of Re-Winder Bottom Roller Feed-Forward Control Tactic
J.W. Chen and X.P. Sun 146

Image Mosaics Algorithm Based on PSO and SIFT
H.W. Gao, D. Li and F.G. Chen 150

A Method for Approximate Reasoning about Knowledge
J. Li 154

Effect of Clay Content on the Adsorption Loss of Surfactant in ASP Floods Systems
W.L. Song, J. Pan and Y.H. Gao 158

Research on Selecting Real Estate Project Based on PCA and RBF Neural Network
H. Zhao and L.M. Chen 162

The Approximation Properties of a Rational Cubic Spline
M. Tian and H.L. Geng 166

Constrained Control of a Rational Interpolant
M. Tian and H.L. Geng 170

Analysis on the Overall Characteristics and Laws of Economic Development
Y. Huang 174

An Analysis of the Development of Logistics in Guangxi Beibu Gulf Economic Zone
Q. Lan 178

An Integrated Solution of Emergency Management Information System
J.Y. Wang, W.L. Peng and Q.J. Jiao 182

Autocontrol of Water Condenser Based on PID Controller
X.H. Yang, T.R. Liu and A.Q. Sun 186

Double Compression Algorithm with Linear Interpolation of Dynamic Threshold
S.X. Tang and K.M. Tang 190

Data Transmission Based on Guaranteeing QoS in Broadband Access Networks
Y. Zhang and W.Y. Yu 194

Coverage-Preserving Multi-Path Routing Algorithm for Wireless Sensor Networks
Q.Y. Wu, X.H. Liu and N. Jing 199

Cutting Temperature in Internal Minimum Quantity Lubrication Drilling of Superalloys
F.X. Kong and D.Y. Zhang 203

Experimental and Study of an Direct-Injection, Single Fuel CNG Engine
H. Guo, Z.D. Zhang, C.B. Yin and Y.D. Sun 207

Design Practical FBG Sensor Applied to Bridge Health Monitoring
Z.X. Wu, Z.Y. Zhang, B. Fu and X.P. Wei 212

Study on Suddenly Extrusion Mechanism and Forecasting of Deep Mine Fully Mechanized Mine Head Face
Y.J. Zhang 216

Chapter 2: Computer Application, Communication and Control

An Overview of Optical Music Recognition in China
G.F. Chen and W.J. Zhang 223

Research on the Rate Control Scheme of Networked Control Systems
J. Kang 228

A Real Option Model Suitable for Real Estate Project Investment Decision
X.L. Ke, F.Q. Diao and K.J. Zhu 234

Energy Consumption and Economic Analysis to Residential Building Meeting the Criterion of 65% Energy Saving in Zhangjiakou
H.L. Ma and J.H. Niu 239

Vertex-Distinguishing Total Coloring of Ladder Graphs (N=0(mod 8))
Z.W. Wang 243

An Improved Realization of the Digital Multiplexer Based on Electric Power Carrier Communication
B. Liu, H.Y. Liu, F. Wang and M.J. Lu 247

The Research of the Odorous Pollutants Dispersion Forecasting and Simulating Model
Y.G. Wang, J.L. Bao, H. Zhang and K.H. Zou 251

Empirical Research on Top Management Incentive Mechanism and Performance of Companies
S.B. Yan, T. Lv, C.Q. Song and W.Q. Zhu 255

Integration of Modern Information Technologies and Mathematics Teaching
H.L. Geng and M. Tian 259

Research on the Customer Equity Measurement of Banking Industry under the Condition of Mutative Demand Market Scale
J.B. Shao, K.K. Chen and G. Tang 263

On Hybrid Impulsive and Switching Stochastic Systems
X.C. Pu and F.H. Zeng 268

Study of Reversible Information Hiding Scheme Based on CARDBAL2 and Color Field Structure
S. Ren and T. Zhang 275

EM Acceleration Algorithm Using the Vector-ε Apply in Multi-User Detection
J.L. Xian and J.W. Li 280

Multi-User Detection Analysis via Aitken-δ^2 EM Acceleration Algorithm
J.L. Xian and J.W. Li 284

Design and Simulation Analysis of Attachments for Fire Robot
X. Wang 289

Detection and Correction of Linear Phase Error for Fourier Transform Spectrometer Using Phase Correction Method
C.L. Wang, Y.S. Li, X.B. Liu, B.L. Hu and C.F. Liu 293

Design of the Continuous Casting Machine for Battery Grid
C.Y. Gao and W.Q. Li 297

A Self-Adaptive Filtering Algorithm Based on Consistency QoS in CVE Systems
X.M. Hu, H.X. Cai and T. Yu 301

An Improved Genetic Algorithm-Based Web Service Composition
L. Hao 307

Abnormal Action Recognition in Power Production
Z.H. Wei, X.S. Li, J. Lin and L. Zhang 311

Coal Bed Methane Resources: Hazard and Exploitation
W. Yang, B.Q. Lin, Y.A. Qu, W.Q. Zhao, Y.M. Jiang and J.L. Wang 315

Cognitive Radio Routing and Optimal Spectrum Assignment Algorithm
Z.J. Liu, F.X. Qin and Q.B. Chen 319

Experimental Study on Influence of High-Borosilicate Glass Transmittance on Solar Cooling Tube Thermal Performances
F. Chen and H.Z. Zhao 324

An Improved PSO-GA Employing Crossover Operation for Parameter Optimization of Storm Intensity Formula
S.J. Xue and Y.D. Lu 328

Study on Harmonic Analysis and Error Correction in Synchro to Digital Conversion
Y. Liu and Z.G. Ye 334

Dynamic Pricing Model of Power Options in a Fractional Market
H. Zhang and W.Y. Meng 338

Mining of Global Maximum Frequent Itemsets Based on FP-Tree
B. He 342

Gender Differences in E-Mail Communication
L.P. Fan 346

Particle-Filter Tracking of Motion Vector to Locate Objects and Pattern Matching over Particles Based on Mpeg2
L.B. Li, Y. Ma and Y.Y. Liang 350

Study on Remote Distributed Fault Diagnosis System in Modern Agricultural Machinery
P.F. Sun and Y. He 356

A Brief Study on Successful Reform of English Teaching in China Based on Web
X.Z. Tian 360

Studies on the Expanded Sequence Matrix and its Application in Flowshop Layout
S.H. Fan, C.Y. Xia, J. Wang and A. Catherine 364

GASD Based Relayout Method in Mass Customization Manufacturing Quality Assurance
S.H. Fan, J.H. Li, A. Catherine and M.M. Pan 368

Multi-Objective Optimization Algorithm Based on Gene Expression Programming and Virus Evolution
W.H. Wang, Y.Y. Du and Q. Li 372

Research on Exact Minkowski Sum Algorithm of Convex Polyhedron Based on Direct Mapping
Q.J. Geng, X.J. Guo and Y. Zhang 377

GM(1,1) Model of Moving Average Operation to the Original Sequence and its Application
B. Zeng and W.J. Zeng 381

A System Design and Implementation of Home Monitoring Based on ZigBee Technology
Y. Luo, L. Li, Y. Zhang and P. Xiong 385

The Numerical Simulation of the Aquifer Thermal Energy Storage Technology
J.K. Cui and X.L. Nan 390

Suggestion of Introducing the Human Reliability into Dam Risk Analysis
D.D. Li and L. Li 395

Studies and Application of Heavy Equipment Fault Diagnosis System
Y. Gan, S. Liu and W.B. Zhu 399

Research on Moving Human Positioning in Complex Background Video
X. Zhang, X.T. Wang, B. Wang and Y.H. Gao 403

Application of Unascertained Measure-Entropy Evaluation Model for Program Selection of Shaft Construction under Complex Conditions
W.Q. Li, M.J. Chen and W.Q. Meng 407

The Integration of Wireless Location Technology and GIS in the Logistics Information System and its Application
F. Feng, S.Y. Hou and Q. Xu 411

A Novel Algorithm Based on the Degree Tree for Graph Isomorphism
L. Hao 417

Incremental Mining Algorithm of Sequential Patterns Based on Frequent Sequence Tree
J.X. Liu, S.T. Yan and J.D. Ren 422

Finite-Time H∞ Control of one Family of Fuzzy Discrete-Time System with Norm-Bounded Disturbance
C.X. Liu and Y.Q. Zhang 428

Heart Sound Recognition - A Prospective Candidate for Biometric Identification
X.F. Cheng, Y.W. Tao and Z.J. Huang 433

A Novel Approach of Face Detection Based on Skin Color Segmentation and SVM
J. Zhang and Y. Li 437

A Weighted Scale-Free Network with Triad Formation
S.L. Li, D. Wang and L. Zhang 442

Chapter 3: Architectonics,Materials Engineering and Network Technology

On Adaptive Synchronization in Complex Networks
S.L. Li, D. Wang and L. Zhang 449

Speech Signal Denoise Based on LMS Algorithm in Simulink
Y.P. He 453

Research on Polymer Latex Modify Comprehensive Properties of Cement Mortar
W. Li 457

The Algorithm for Constructing Software Cost Estimation Model Based on Rough Set
L.J. Huang, F.B. Wang and Y.W. Wei 461

Synchronization of Generalized Henon System via a Scalar Controller
L.S. Gong 465

Study on the Formation and Evolvement Mechanism of the Knowledge Service Network in the Agile Supply Chain
D.P. Wang, Y. Zhou and Y.Z. Wang 469

Intelligent Health Diagnosis Method for Aircraft Based on Multi-Source Information Fusion
J.G. Cui, W. Zhao, H.M. Zhang, R. Lv and P. Shi 475

Efficient Associative Memory Based on a Nonlinear Function Constitution and Dynamic Synapses
M. Xia, Y.C. Zhang and X.L. Ye 479

Research and Implementation of Conglutinated Macrophage Image Segmentation Based on Improved Watershed Algorithm
P. Wang, R. Chen, W. Luo and R.H. Xia 483

Distributed Information Fusion Structure Based on Data Fusion Tree
Y.H. Xue and J. Li 488

Applications of the Soave-Redlich-Kwong Equations of State Using Matlab
L.Y. Sun, C. Zhai and H. Zhang 492

Control of Catalytic Divided Wall Column
L.Y. Sun, C.X. Qi, J. Li and Q.S. Li 496

Reducing Energy Consumption in Propylene-Propane Separation with Heat Coupled Distillation
L.Y. Sun, J. Li, X.N. Liu and Q.S. Li 500

Research and Practice of Integrated Microgrid System Control
Y.B. Che, J. Chen and B. Zhao 504

Research on Bi-Directional Grid-Connected Inverter Based on PI Regulator and Compensation Control
Y.B. Che and J.D. Ren 508

MPPT Control and Simulation of PV Power Systems
Y.B. Che and B. Liu 512

A Rails-Framework-Based Information System Study of Auto Leasehold Management
F.L. Wang, Y.Y. Zhang and X. Yang 516

Opportunistic Spectrum Sharing Strategy for Heterogeneous MIMO System 522

Aircraft Health Diagnosis Method Based on ARMA Model and Probabilistic Neural Network
J.G. Cui, B.H. Song, S.L. Dong, H.G. Liu and Q. Zhao 527

An Accurate Localization Method for Video Sensor Network Nodes
J.X. Gao and Y. Tian 531

Research on Working Vacations Strategy of WLAN MAC Layer
H.Y. Chen, W.B. Shi and M.F. Yang 536

Biped Robot Control System Based on Adaptive Gain Energy Control with Angle Invariant
D.J. Liu, Y.T. Tian and H. Jiang 540

Personalized Web Information Recommendation Based on Data Mining
B. He 546

Analysis of TIG Arc Spatial Radiation Based on Scanning Method
F.Q. Liu, Z.Y. Li and X.Y. Gu 550

Measurement of Thermal Conductivity of Apple at Different Moisture Contents
M. Zhang, J.H. Chen, Z.H. Che, H.Z. Zhao and J.H. Lu 556

Study the Model of Hierarchy Education Resource Classified Register and Discovery in Grid
M.Y. Li, Y. Ma, Y.Y. Liang and W.S. Duan 560

Preventive Security Mechanism Based on AODV
C.C. Tuan, K.Y. Chen and Y.C. Wu 565

The Overall Shift Device of the Derrick and the Finite Element Calculation
W.C. Zhang, X.B. Du, B.B. Ma, P. Yu, B.H. Pei and J. Chen 569

Research and Implementation of the MES System in the Cold-Rolled Plant Based on ERP
K.B. Zhang and X.J. Ren 573

Laboratory Investigate of the Effect of Fine Aggregates on Asphalt Mixture Materials
Y. Ye and Y.Z. Cai 577

The Optimization and Application of the Neural Network Together with Intelligence Methods
S.H. Xu and H. Pan 581

Simulation and Optimization to the Information Security Management Measure Based on the Parallel Control
P. Wang 585

Multifunction Synchro-to-Digital Conversion on Software Design
Y. Liu and Z.G. Ye 589

Speed Management on Icy and Snowy Pavement of Urban Road
L.X. Wu and G.Z. Cheng 593

Structural and Optical Properties of ZnO Nanorods Thin Films by Solution-Growth Method
C.C. Ting and S.P. Chang 597

Robustness Analysis of QIM Watermarking against Additional Noise
G.R. Zeng, J.M. Liu and A.W. Jiang 601

A De-Noising Method of Acceleration Signal for Vehicle Based on Kalman Filter and Average Filter
C. Zhang and C.Y. Xu 605

An Anomaly Intrusion Detection Based on Hidden Markov Model System Call Sequenc
D.L. Wang and Z.G. Wang 609

Tamper Detection and Self-Recovery Watermarking Scheme Based on DWT-SVD
Y.P. Hu, J. Zhang, H. Yin, Y.C. Liu and Y.H. Liang 614

A Multi-Swarm Cooperative Perturbed Particle Swarm Optimization
X.J. Yang, Y.L. Zhao, Y.C. Chen and X.C. Zhao 619

Research on Movement and Deformation of Rock Strata between Coal Seams in Pillar Upward Mining of Left-Over Coal with Numerical Simulation Method
G.R. Feng, J. Zheng, H.F. Liu and C.M. Zhong 623

Research on the Construction of Financial Accounting Information Systems
J. Chen and F.Y. Xia 628

Price Game Based Spectrum Sharing in Cognitive Radio Networks
Y.B. Li, R. Yang and F. Ye 632

A Moving Objects Detection Method Base on Improved GMM
Y.B. Li, H.J. Jia and A. Li 637

Implementation of Grid Resources and Services Based on WSRF
L. Zhong, G. Zuo and H.Z. Song 642

Comparative Study on SaaS Data Layer Solution
Y.J. Liu, H.Y. Wen and J. Zha 646

Fuzzy Self-Adaptive PID and Realization in Electric Heating Furnace System
S. Wang 651

The Analysis for the Environmental Impact of Natural Gas Leakage and Diffusion into the Atmosphere
Q.M. Hou, W.L. Jiao and P.H. Zou 656

A Green Vegetation Extraction Based-RGB Space in Natural Sunlight
Z.B. Zhang, C.X. Liu and X.D. Xu 660

Laser Beam Measurement Based on Image Enhancement Algorithm
Y.H. Li, W. Ding and S. Ding 666

Chapter 4: Intelligent System and Materials Engineering

Wind Erosion Prevention and Repair of Composite Material Components of Civil Aircraft
H.Q. Yu, Y.G. Gong and A.P. Liu 673

Analysis of Types and Selection of Ecological-Type Revetment in Town's River Channel Construction
Y.H. Wang and H.X. Wang 678

Movement Modeling and Testing of a Novel Trans-Scale Precision Positioning Stage Based on the Stick-Slip Effect
B.W. Zhong, L.G. Chen, Z.H. Wang and L.N. Sun 684

A Service-Oriented Application Architecture for EHR System
S.Y. Wen and Y. Li 688

Microscopic Mechanism Analysis and Experimental Study of Void Beneath Slab
H.Y. He 692

A Novel Optimization Scheme Based on QoS in Wireless Networks
Y.T. Ling, B.S. Yi and J.B. Wu 697

Effect of Static Magnetic Field on 2024 Aluminum Alloy Solidification Behavior
C.G. Cheng, L. Yu, W.C. Wan, Z.T. Liu and Y. Jin 701

Cloud Computing Security Issues and Mechanisms
S.G. Yang 706

Study on Design and Development of Mechanical Engineering Network Courses
Q.F. Lin 710

Research on Moisture Damage Research in Hunan Province Expressway Pavement
X.Y. Ouyang 714

Investigation on Knowledge Work Process and its Characteristics Based on Human-Information System (H-IS) Interaction
Y. Liao, S.P. Yi and F.Q. Li 720

Border and Coastal Surveillance Sound Target Classification Based on Optimum Wavelet Packet Decomposition
Y. Wang and Z. Li 725

Research on Enterprise Application Integration Based on Service Oriented and Workflow
G.J. Yang and Y. Zheng 729

Utility-Based Optimal Multi-Flow Rate Allocation for Concurrent Multipath Transport among Cooperative Terminals
Z. Hu, J. Miao and C.R. Wang 734

Development Strategy for Requirement of ICTs in Engineering Learning of Comprehensive Regional Higher Education Institutes of PRC
Y.H. Chen 739

A Brief Analysis on the Construction of Banking Office Automation System
Z. Li, Y.F. Zhao and M. Li 743

Study of Rock-Soil Aggregate's Shear Strength in Da-Liu Expressway
B. Huang and X.Y. Zeng 747

Velocity Temperature Characteristics of Time Domain Reflectometry Cable Length Measurement System
J.H. Song and L. Chen 753

Skeletonization of Deformed CAPTCHAs Based on Pixel Depth
J.S. Cui, L. Liu, G. Du and Q.Q. Guan 757

The Feasibility Study on Structural Insulated Panels in Rural Settlements of LuGu Lake
L.L. Wang and Z. Yang 762

Principles of Sustainable Construction Project Management Based on Lean Construction
Z.Y. Zhong and Y.G. Chen 766

Ontology Design in Visual Stock Information System
H.Z. Song, K.A.L. Khamis and X.Z. Song 771

A Semantical Approach for Automatically Transforming Software Requirement Specification into Formal Presentation
S. Chen and M.K. Chen 776

Design on Reputation Mechanism for the Medical Consumables Suppliers Based on Fuzzy Clustering
L. Shi and X. Ma 780

Comparative Studies of CdZnS Thin Films at Low Zinc Content Prepared by Vacuum Evaporation and CBD
C.J. Tian, R.Z. Tang, S.B. Hu, W. Li, L.H. Feng, J.Q. Zhang and L.L. Wu 784

The Influence of Thickness on the Properties of Sb_2Te_3 Thin Films and its Application in CdS/CdTe Thin Film Solar Cells
S.B. Hu, R.Z. Tang, C.J. Tian, W. Li, L.H. Feng, J.Q. Zhang and L.L. Wu 789

The Study of the Aerodynamic Force of Wind Turbine Blade by Using FLUENT and MATLAB
H. Huang, S.J. Wu, Z.Q. Li and J.F. Fei 794

The Applications of the Flood Forecast System Based on OGSA-DAI
Y.Q. Shi and Y.J. He 798

Modeling and Analysis of Real-Time Software Based on Resource Timed Communicating Sequential Process
Y. Zhu 802

An Improved Algorithm of Keyframe Extraction for Video Summarization
Z. Qu and T.F. Gao 807

Characteristics and Treatment Technologies of Stainless Steel Slag
G.J. Ma, Y. Fang and H. Tang 812

Robust Spread Spectrum Steganography Based on the Nonuniform DCT Characteristic
W.C. Chen, J. Ao and C.B. Ma 816

Risk Analysis for the Construction Phases of Long-Span CFST Arch Bridge Based on Finite Element Analysis
Y.F. Zhang and G.F. Sun 823

Multi-information Integrated Method for Text Extraction from Videos
A.W. Jiang and G.R. Zeng 827

The Construction and Application of Chaotic Polynomial Family
C.L. Sun 831

Research on the Impeller Tip Screenout Fault Feature Extraction of the Submersible Pump Units Based on Wavelet Analysis
G.F. Liu, F.Y. Tao and X.G. Li 835

Risk Assessment Model to Natural Disaster in County Unit Based on Information Diffusion Technology
L. Hao, X.Y. Zhang and Z.L. Shu 839

Research on Automatically Generating Method for Three-Dimension Virtual Model of Buoy Based on S-57 Chart Data
S.H. Yang, H.Q. Shen, X.H. Wang and W. Yu 843

XACML-Based Fine-Grained Security Policy for Distributed System
A.J. Zhang, J.X. Gao and C. Ji 848

Optimization on the Improvement Schemes of Production Logistics System Based on Flexsim Simulation
J.L. Peng 852

Introduction to Grasp Knowledge Using the Super Smart Pad
Q. Ge, F.B. Zheng and X.C. Peng 857

Integrated Management System for Basic Units Resource of Process-Oriented Manufacturing
K.D. Zhu and X.R. Zhang 862

Optimization of Extractive Condition of *Zanthoxylum Alatum* Seed Oil
L. Zhang, M. Chang, M. Su and S.Y. Niu 866

A New Approach for Trustworthy Software Development
Z. Li, H.Y. Cai, J.F. Tian and F. Zhang 870

A Deformation Method for Soft Objects Based on Surface Area-Preservation
H.Q. Chen, J. Cao and Y. Chen 874

Study on the Architecture of the Traffic Accident Management System
Y. Zhu 878

Application of Wireless Remote Monitoring System in Oilfield
L.L. Guo and S.B. Hu 882

Determination Method of Critical Path in Fuzzy Network Planning Based on Improved Lattice Close-Degree Theory
W.Q. Li, M.J. Chen, W.Q. Meng and L.H. Ma 886

VV Modulation System of Circulating Pump Based on Fuzzy Control
X.J. Wang, J.E. Ma and D.B. Zhu 890

Blind Single-Image Super-Resolution Reconstruction Based on Motion Blur
F.Q. Qin, Z. Li, L.H. Zhu, Y.D. You and L.L. Cao 895

Chapter 5: Information System, Industry and Materials

The Analysis on the Singularity of a 3-TPT Parallel Robot
J.Y. Guo, L. Zhao and J.S. Shi 903

Research and Application of Paper Machine Frequency Conversion Driving System Based on PLC
W.B. Liu and D.Y. Xu 907

Spurious Emission Interference to TD-SCDMA on POI
D. Gao, G.X. Zhu, Y.H. Chen and W.M. Wu 911

Website Characteristics and Online Consumers' Repurchase Behavior: An Empirical Study
H.P. Wang 917

Optimization Algorithms for Local Features
J. Cao, H.Q. Chen and M.Y. Mao 921

Key Issues for Personalized Learning Service Provision in Ubiquitous Learning Environments
L.Y. Li, Y.L. Zheng and F.L. Zheng 925

Drivers and Inhibitors of E-Commerce Adoption in Small and Medium Sized Enterprises
H. Wang and J.C. Hou 929

The Response of Defects Containing Water under Dynamic Loads
Z.M. Zhu 933

A Failure Criterion for Cracked Rock Mass under Seepage Pressure and Confining Pressure
B.Y. Li, Z.M. Zhu and Z.T. Zhou 937

Online Video Teaching System Research Based on P2P Technology
L. Xu, Q. Zhang and J. Zhang 941

Research of Chinese Segmentation Based on MMSeg and Double Array TRIE
L. Xu, Q. Zhang, D.D. Wang and J. Zhang 945

A New Type of ECG Signal Sample and Analysis System
X.C. Liu, X.L. Feng and P.P. Li 949

Efficient Motion Estimation Algorithms for Video Coding
M.T. Wu 953

Mobile Data Replication Algorithms Based on Agent
W.Y. Zeng and Y.L. Zhao 957

Application of Multifactor Ranking Method in Industrial Project Site Selection
A.F. Liu and S.R. Guo 961

Design of Wireless Automatic Meter Reading System
Y.Z. Sai and R.J. Ma 966

A Trace Inequality for Symmetric Nonnegative Definite Matrices
S.Q. Wang 970

k-NN Based MCS Selection in Distributed OFDM Wireless Networks
Q.M. Meng, X. Gu, F. Tian and B.Y. Zheng 974

The Real-Time Control of Space Robot by Computed Torque Control Law
B. Shao, E.T. Yuan and Z.H. Yu 978

Slicing Contour Generation of Z-Constant Contour Machining for Subdivision Surface
E.T. Yuan, B. Shao and Q.X. Fei 982

A Dual Mode Control Strategy of SMES for Multifunctional Applications
W.Y. Guo, L.Y. Xiao and S.T. Dai 987

Research on the Key Points of Best Practice of Software Architecture Design
Q. Huang 992

A New Echo Cancellation Algorithm without Double-Talk Detection Based on Correlation Function
L.J. Sun, S.Y. Zhang, W.S. Wang and X.N. Zhang 996

Simulation of the Control System of Step Motor Based on LabVIEW
T. Wu and K.G. Fu 1000

Design of Simulation Model of Yarns
X.J. Fan and Q. Yang 1004

The Research and Application of Short Message Name and Address System
C.G. Zhang, Y.L. Zhao, F.X. Jiang and C. Ji 1008

Design of Wireless Monitoring System of Semi-Lean Pumps
Y. Li and R.J. Ma 1012

Detecting Image Saliency Based on Spectrum Analysis
S. He, J.W. Han, M. Xu, G. Cheng, T.Y. Zhao and L. Guo 1016

SPN-Based Performance Evaluation for ON-OFF Voice Traffic System
Z.G. Hong, Y.B. Wang and M.Y. Shi 1020

Markov Process-Based Availability Analysis of Rendering Cluster Systems
Y.B. Wang, Z.G. Hong and M.Y. Shi 1024

Experiment Study on Thermodiode and Energy Storage Material
S.D. Li, R.Y. Zhang, L.D. Liu and H.Y. Zhong 1028

A Data Stream Outlier Detection Algorithm Based on Reverse K Nearest Neighbors
Z.P. Zhang and Y.X. Liang 1032

Strategy Research on Textile and Garment Export in Jiangsu Province
J.Y. Chen and R. Jiang 1036

Image Segmentation Based on Wavelet Transform
X.Q. Wang, X.B. Wang and X.L. Huang 1041

Investigation Research on Financing Situation of SMEs in Jiangsu Province
J.Y. Chen and S.P. Han 1045

The Design and Implementation of a Editor that Supports Syntax Highlighting of E-Lotos
X.Q. Guo, Y.L. Zhao, C. Ji, F.X. Jiang and L.L. Feng 1050

Location-Transparent Mobile Agent Communication
Q.C. Zhang 1054

Mobile Law Enforcement System for Industry and Commerce Bureau Based on Windows Mobile Platform
Z.G. Li, S.Y. Zhou and L.D. Wang 1059

X3D-Based Virtual Good Presentation on Mobile Device
Q.Y. Liu and F.F. Zhou 1063

A Kind of Remote Intellectualized System in Water Quality Analyzing
X.Q. Zhao and W. Cheng 1067

The Optimization on the Expected Utility Portfolio Selection Model without Short Sales
P. Zhang and H.L. Wang 1071

Extensive 6.0-18.0 GHz Frequency Low Noise Amplifiers Integrated to Form LC-Feedback Oscillators
H.C. Yang and M.C. Wang 1075

Effect of Hot Compression on Mechanical Properties of Gray Iron
X. Zhao and X.L. Yang 1080

A Novel Web Services Composition Compensation Method Based on Extended Petri-Net
X.Y. Mei, A.J. Jiang, S.X. Li, C.Q. Huang, X.L. Zheng and Y.Y. Fan 1084

Median Filter based Manifold Ranking Approach for Robust Image Annotation
X.H. Hu and H. Tu 1088

A Feasible Algorithm for Designing Biorthogonal Binary Finitely Supported Multiwavelet Functions
B.M. Yu 1092

A Novel Improved Edge Detection Method
Y.Y. Guo and Y.Y. Guo 1096

Harmony Search Algorithm and its Application to Product Module Identification
Q. Shan and Y. Chen 1100

An Improved Text Similarity Calculation Algorithm Based on VSM
L. Li, A.H. Zhu and T. Su 1105

An Algorithm of Synchronous Mining Frequent Neighboring Class Set with Constraint Class Set
C.S. Tu and G. Fang 1109

Chapter 6: Automation, Communication,Architectonics and Materials

Arithmetic Expression Evaluation in Membrane Computing with Priority
P. Guo and S.J. Liu 1115

Combines Speed Servocontrol Based on RBF
Y. Qin, D.A. Zhao and W. Ji 1120

Analysis of Regenerative Index of Depreciated Aluminum Products
Q. Yue and F. Gao 1125

Inventory Management of Medical Equipment Vendors under the Uncertain Demand
L. Shi and X. Ma 1129

The Effects of Different Defects on Vibration Properties of Single-Walled Carbon Nanotubes
L.J. Chen, Q. Zhao and Z.Q. Gong 1133

Research of Product Dependability Strengthen Design Method
W.W. Jiang and Z.B. Xie 1137

Research of Terminal Parameter Setting up Method in Product Dependability Design
W.W. Jiang and Z.B. Xie 1141

Research of Method of Transfering Research Content into Product Property Parameter
Z.B. Xie and W.W. Jiang 1145

Novel Recursive Construction Method for Resilient S-Boxes
S. Gao and W.P. Ma 1149

Research of Product Prototype Model
Z.B. Xie and Y.X. Zhou 1153

The Algorithm for Graphic Method of Rain-Flow Counting in Programming
Q. Deng and H.J. Yuan 1157

Design for the Real-Time Three-Dimensional Digital Platform of GIS-Based Mine Safety Monitoring
T.A. Liu, Q.X. Yuan, Y.L. Wang, J.C. Xu and Z. Cha 1162

Optimization on Uniform Design for Preparing Monodisperse P(St/BA/AA) Microsphere by Dispersion Polymerization
J.X. Lin 1167

Asphalt Surface Course Structure Combination Design under Temperature Gradient
H.X. Guan and Z.J. Luo 1171

Judgment of Resources-Environment-Economy Coordinative Efficiency in China on DEA Model
B. Jin 1177

Research and Application of Virtual Dressing System Based on AR
B. Xie, F. Ye and X.J. Li 1183

Disquisition on Development of Industrial Groups Based upon Entropy Theory
R.H. Kuang 1188

Sectoral Differences in the Effect of Industrial Agglomeration
J. Yang 1192

Application of Statistical Analysis Methods to Optimize Fracturing Measures of Polymer Flooding in Sub-Layers
E.L. Yang and J.F. Deng 1196

The Application of Analysis of Variance Method to Optimize Injection Parameters of Polymer Flooding in Sub-Layers
E.L. Yang and W.S. Geng 1200

Exploring the Application of Voice Interactive Technology in Distance Language Teaching
F.Y. Xia 1204

Research on Excessive Investment with DEA Analysis for Chinese Listed Companies
J. Long and Y.X. Li 1208

The Characteristics of Resident Travel in Beijing Xizhimen Transport Terminal
X.M. Li, J. Yin and Q. Che 1212

Analysis and Design of a Management System for the Seedling Production Based on ERP
M. Ding, S.L. Lu, L. Li and D.F. Huang 1218

Capacity Enhanced Transmission for the MIMO Relay Channel
R.Z. Yang, L. Zhang, P.B. Si, Z.K. Song and Y.H. Zhang 1225

Cluster Supply Chain Self-Organization Evolution Based on Cross-Chain Co-Opetition Game
Q. Wu 1230

Rapid Optical Flow Computation Based on Multigrid
J.B. Xie, T. Liu, H. Wang and P.Q. Li 1234

Analysis of Power Quality Treatment Solutions for Electrified Railway
X.Z. Xu and F.Q. Zhang 1238

A Holistic Schema Matcher
A. Gudala, L.Z. Li, D. Kar, A.M. Mahdy and M. Xiao 1242

Prediction of Soil Erosion Loss Mass in the Coal Mining Areas of Jilin Province Based on 3S Technology and BP Neural Network
J. Tang and Y. Ji 1246

Research on Powertrain Production Line Modeling and Design
Y.Q. Zheng, J. Li, Y.L. Zhao and D.J. Wang 1250

Size Estimation of Tomato Fruits Based on Spectroscopic Analysis
H.Q. Yang, B.Y. Kuang and A.M. Mouazen 1254

Prediction of Soil TN and TC at a Farm-Scale Using VIS-NIR Spectroscopy
H.Q. Yang, B.Y. Kuang and A.M. Mouazen 1258

The Application of Red Mud on Restoring Heavy Metal Contaminated Water and Soil
Y.F. Ma and X.D. Feng 1262

Study on Improved Genetic Algorithm for Min-Max Vehicle Routing Problem
C.Y. Ren 1266

Stability Criterion of Discrete Hopfield Neural Networks with Multiple Delays in Parallel Mode: Linear Matrix Inequality
X.F. Lai, X. Yin and H.Y. Zou 1270

The Existence of Analytic Invariant Curves for a Planar Map
L.X. Liu 1274

A Solution Method for Engineering Equilibrium Mathematics Modeling under Mild Conditions
G.C. Li 1279

The Study of New Trend for DSC Scene Effects Technology
W.M. Yeh 1284

Teaching System Construction and Optimization of Environmental Monitoring
Y.F. Ma, X.D. Feng and J. Lu 1288

Research on the Entity Relation Extraction of Field Based on Semi-Supervised
J.Y. Guo, J. Zhao, Z.T. Yu, L. Su, Y.T. Xian and W. Tian 1292

Investigation of Design for Campus Roaming System
L.J. Qin 1301

The Optimum Curve of Centrifugal Fans and its Application
Y. Gui and D.L. Pan 1305

Study on CAD System of Centrifugal Fan
Y. Gui, D.L. Pan and L.X. Zhang 1310

Ownership Structure and Corporate Governance - A Empirical Study of Chinese Listed Companies
D.J. Tan and S.L. Yu 1314

Measurement and Analysis of Surface Electromyogram and Handgrip Force
D.M. Hao, Y. Zhang, D.Y. Zhang, Z. Wan and Y. Yang 1318

Application of Difference Frequency Laser in Trace Gas Measurement System
Q.X. Yang, Y.P. Zhu, Z.Q. Li and Z.J. Liu 1323

Satellites or Spacecrafts' Tracking and Measurement Model
J.E. Ma and D.B. Zhu 1327

Robustness Problem Argumentation from Image Quantization Errors in Vision Location
L.J. Qin 1332

Application Research of CAN Bussing Technique in the Monitor of Orbit Traffic Stray Current
X.F. Liu, C.X. Xu and W. Shi 1336

Utilized QRCode and GPS to Construct a Customization Service and Fast Settlement Environment
C.B. Yao, S.Y. Wu, X.Z. Wang and Y.W. Chen 1341

BP Model Used for Calculating the High Efficient Sediment-Transport Water Volume in the Lower Yellow River
J. Yan, B. Liang, H. Cao and Y.H. Zhang 1345

Artificial Neural Network Used for Urban Rain-Flood Utilizing
J. Yan, J. Zhang and Y.H. Zhang 1350

The Suitable Water-Sand Combination Used for Controlling the Environmental Abnormal Variation in the Lower Yellow River
J. Yan, J. Zhang, X.B. Yang and Y.H. Zhang 1355

GSM(1) Model and its Application
B. Zeng and W.J. Zeng 1360