ISBN(softcover): 978-0-87849-213-8 ISBN(eBook): 978-3-03813-480-0

Table of Contents

Preface and Committees

Chapter 1: Advanced Measurement, Test and Information Technology

Experimental Investigation of Static Characteristics on Eddy Current Sensor for External Cylindrical Grinding Measurement System
Y. Cao, H.G. Sun, Y. Zang and X.J. Li 3

Nondestructive Determination of Citric Acid Using Successive Projections Algorithm and Spectroscopic Techniques
F. Liu and Y. He 9

Exploring the Structure of the Crisis Management Team
J.X. Shi and Y. Cui 15

How the Swine Lineage Influenza A (H1N1) Virus Spread?
Y.S. Qian, Z.Z. Ren, F. Lin and Q. Zeng 21

Product Form Design Based on Neural Network and Genetic Algorithm
C. Yang, Q. Wu and J.F. Wu 26

Numerical Simulation of Hydro-Forming Cylindrical Cup with a Hemispherical Bottom
W.H. Kuang 32

Rapid Establishment of 3D Intricate Design Platform Based on Modular Technology by UG
W.H. Kuang and F.P. Li 36

Virtual Product Development and Reliability Design of Camera Cover
W.H. Kuang and L.S. Chen 40

Finite Element Analysis of Cold Expanding of Hollow Thin-Wall Tube
W.H. Kuang 44

Query-Focused Multi-Documents Summarization Using Genetic Algorithm
J. Tang and J.C. Li 48

Particle Swarm Optimization Using Various Inertia Factor Variants
J. Tang 54

Quantum Computing-Based Ant Colony Optimization Algorithm and Performance Analysis
X.M. You, S. Liu and X.W. Miao 60

Evaluation and Measurement Method for Texture Depth of Exposed-Aggregate Cement Concrete Pavement Surface Based on Digital Imaging Technique
C. Ning 66

Drawing and Analyzing Project Governance Social Networks
R.G. Ding, F. Liu, T. Sun and H. Sun 71

Local Maximum Absorption Method for Structure Fitting in CryoEM
G.H. Shan, J. Liu and X.B. Chi 77

A Review of Synthetic Aperture Radar Seeker Related Technology Research
W.G. Wang, Y.N. Zhao and X.L. Qiao 83

Measurement of Composition Variation of Municipal Solid Waste Incineration (MSWI) Fly Ash during Thermal Treatment
H.Y. Zhang, Y.C. Zhao and J.Y. Qi 90

A CSCW-Enabling Integrated Access Control Model and its Application
Z.Y. Zhang, T. Huang, Q.T. Wu and J.X. Pu 96

A GA Based Measurement Method for Discontinuous Curve Fitting
H.J. Chen, H.E. Chueh and D.Y. Huang 106

Calibration Method Using Concentric Circles Planar Template and its Application
G.Y. Zhu, J.Q. Zou, P. Guo and H.C. Zheng 111

Holes Machining Process Optimization with Genetic Algorithm
G.Y. Zhu and L.F. Chen 117

The Study of Risk Caused by Personnel Change of Organs and Institutions
L.Z. Liu, Y. Tao, Y. Wang and M.Q. Li 123

Research of Word Sense Disambiguation Based on Soft Pattern
K.L. Jia 130

Research on Image Restoration Algorithm Base on ACO-BP Neural Network
H.Y. Xue and W.L. Ma 136

An Urban Traffic Network Analysis Method Based on EPs
G.L. Chen, L.F. An and X.G. Jin 142

Improved Methods on Association Rules Mining Algorithms
Y.S. He and J.F. Xiao 148

An Approach to the Characteristic Spectrum Analysis for Train Wheelset Fault Diagnosis
J. Zhang, C.L. Huang and S.W. Zhou 153

Fast and Non-Destructiveness Discrimination of Varieties of Fragrant Mushroom Using Near Infrared Spectroscopy
P.C. Nie, W. Zhang, Y. Yang, D. Wu and Y. He 159

Formulate Neighborhood for Multi-Relational Data by Cell Accumulating
P. Ling, Q. Yang and X.Y. You 165

The Research of Ontology Mapping Based on PSO Algorithm
L.P. Zheng, G.Y. Li, H. Jiang and J.Q. Li 172

Study on Material Stacking Image Based on Machine Vision
C.C. Li, T.H. Zhang, H.G. Liu, J. Yu and S.F. Wang 178

Moving Horizon Model Inversion for Nonlinear ILC
G. Xu, M. Volckaert, J. Swevers and H. Zhou 184

Vibration Analysis for the Gate Rotor of the Single Screw Compressor Based on Wavelet Finite Element 190

ANP Evaluation on the Comprehensive Benefit of Land Consolidation Project in the Arid Areas of Northwest China - Illustrated by the Case of Gaoyan Mountain Land Consolidation Project in Yuzhong County of Lanzhou
C.F. Liu and P.J. Shi 195

The Test Information Integration Framework Based on ATML and Web Services
D.Y. Huang, H.E. Chueh, C.C. Lin and C.Y. Chou 201

Mutual Information Model of Adaptive Waveform Design
B. Wang, J.K. Wang and X. Song 207

The Study of Agent-Based Distributed Computing
J. Huang, L. Guo, L. Wang and Z. Qui 213

Design and Research of Camera Calibration System in Binocular Stereo Vision
J.T. Xiong, X.J. Zou, H.X. Zou, Y.L. Chen and Q. Sun 219

Using NMR to Forecast the Aptness for Freezing of Pork
X.L. Yu, X.B. Li, L. Zhao, H.J. Ma and G.H. Zhou 225

Novel Verifier-Based Three-Party Protocol for Key Exchange and Authentication
J.H. Yang and T.J. Cao 231

Dynamic Load-Balance Strategy Based on Software Aging in Web Server Cluster System
H.R. Li, J. Guo, W.Y. Li, B. Zhang and Y.S. Wang 237

A Model Inspection Method for Products with Free-Form Surfaces
Y.Y. Wang, F. Liu, L. Li and C.H. Peng 246

Method of Testing and Data Processing of Random Load Spectrum of Wheel Loader Transmission
J.X. Wang, J.Y. Hu, Y.H. Yang, W.J. Hao and M.Y. Yao 252

Chapter 2: Components, Packaging and Manufacturing Technology

Research on the Complex Adaptive Model of Learning Organizational Change
Y. Peng, J.L. Hou and J. Wang 261

A Study on the Cluster Innovation Based on Weighted Knowledge Network
Y. Peng, Z. Yang, J.R. Xu and F.C. Ming 268

Application and Prospects of Packaging Technology of MEMS
X.Z. Feng, L.J. Chen and J.W. Cheng 274

Study on Safety Monitoring Method in Production
R.H. Lv and W.Y. Wang 280

Problems in the Development of Chinese Modern Logistics Industry and Countermeasures for Settlement
Q.H. Zhang 284

The Countermeasures of E-Business Development for Chinese Travel Companies
Q.H. Zhang 288

Research on Logistics Informationization of Enterprises
Q.H. Zhang 292

Address Analyzer Based on the Maximum Matching Algorithms
S.M. Zhou, R. Chen and B. Tang 296

Research on Domain Ontology-Based Intelligent Information Retrieval System
S.D. Zhang and Y. Chen 300

Billing System for Integrated Services Customer Premises Network
S.D. Zhang, B.B. Gao and Y. Chen 305

Evaluation Method to Determine Radial Error of Spindle Units on Simulation Turntable
Z.Y. Qu and J.W. Han 311

Generation and Characteristics of a Class of Four-Dimensional Multiwavelet Packets with Six-Scale Dilation Factor
Q.J. Chen and Z.T. Wei 317

Constructional Approaches on Vector-Valued Wavelets with Multi-Scale Dilation Factor
Q.J. Chen and J.T. Zhao 323

Influence of Number of Gene Loci on Prediction of Animal Phenotype Value Using Back-Propagation Artificial Neural Network
X.B. Li, X.L. Yu and X.J. Zhang 329

Influence of Gene Effect on Predicting Animal Phenotype Using Back-Propagation Artificial Neural Networks
X.B. Li, X.L. Yu, Y.R. Guo, Z.F. Xiang, K. Zhao and F. Ren 335

The Distributed Workflow Engine Model Design of the Space Test and Launch
X.P. Du, J.J. Song, X. Li, D.X. Zeng and Y.S. Zhao 341

Evaluation of the E-Money Risk Based on ANP
P. Sun and H. Wang 347

The Nice Characters of Biorthogonal Four-Element Wavelet Packets with Two-Scale
Y. Li and J.S. Feng 351

Comparison of Calibrations Modeling for Determination of Protein of Mushroom Base on Middle Infrared Spectroscopy
P.C. Nie, Y. Yang and Y. He 357

Multi-Level Association Rules Mining Algorithm Based on Semantic Relativity
L. Zhang and Z.C. Wang 363

Research on Stress and Strain in Isometric Polygonal Profile Connection Based on FEM
B.Z. Lü and K. Liu 369

Research on Mobile Interconnect Protocol of Hierarchical Distributed Ad Hoc Network
L.G. Yang 374

Research on Information Distribution Optimization of Multi-Federation Interconnected Tactical Communication Simulation Training
J.S. Zhang and Z.Y. Fang 381

MMORPGs: The Perspective from Psychology
Q. Ge 388

Study on Factors Affecting Urbanization in China with the Method of ANP
P. Sun and C.H. Wang 394

Optimal Operation Sequence of Hole-Making with Multiple Tools in Manufacturing: A PSO Evolutionary Based Approach
Y.C. Hsieh, Y.C. Lee, P.S. You and T.C. Chen 398

Distributed Multi-Source Spatial Data Fusion Model Construction and Performance Evaluation
Y.S. He, J. Zhang and J. He 404

Improved Apriori Algorithm Based on Compressing Transactional Matrix Multiplication
Y.S. He and P. Du 409

Analysis of SINR for Unitary and Non-Unitary Precoded MIMO Systems
X. Lu, X. Xu and J.H. Wang 414

Study of the Input Variables for BP NN Based Supplier Evaluation Model
J. Chen, W.R. Jiang and A.B. Wang 420

A Collaborative Framework for Information Security Management System Using Intelligent Multi-Agent
P. Wang and L.N. Xing 428

Dynamic Distributed Information Security System Based on Multi-Agent
P. Wang 433

Improved Attack-Resistant Collaborative Filtering Algorithm
L.J. Zhou, M.S. Xu and H.J. Geng 439

Research on Algorithm in Association Rule in an Early Warning System of College Students
L.J. Zhou, S. Li and Z. Zhang 445

Analysis of Intrusion Detection System
Y.S. Gu, H.Y. Feng and J.P. Wang 451

The Research of Exact Orthogonal Nonseparable Four-Variate Wavelet Pack Bases with Finite Support
X.F. Wang 455

Development of On-Line Performance Monitoring and Fault Diagnosis System for Diesel Generator System
Y.P. Cai, A.H. Li, Y.P. He and T. Wang 461

Design and Manufacture of Energy-Recycling Pads for Low-Power Chips
W.Q. Zhang, L. Su, J. Wang, B.B. Liu and J.P. Hu 467

Manufacturing and Testing of Adiabatic Array Multiplier for Micro Power Digital Systems
J.P. Hu, X.Y. Yu and B.B. Liu 473

A Self-Adaptive Model of Two-Level for Dynamic Peer-to-Peer Networks
F.X. Huang and Z.J. Li 479

Face Detection Using PSO Algorithm
Z.J. Li, X.D. Duan, X.D. Liu and C.R. Wang 485

Bioremediation of Aquiculture Wastewater by Microalgae *Isochrysis zhanjiangensis* and Production of the Biomass Material
J. Zheng, J.M. Hao, B. Wang and C. Shui 491

Optimization and Analysis Emulation System of the Controlled Mechanism Based on Windows
Y. Li, J.T. Yang, G.F. Li and J.Y. Kong 496

Bio-Inspired Engineering: A Promising Technology for the Conservation of Historic Stone Buildings and Sculptures
Q. Liu, B.J. Zhang and H. Zhu 502

Knowledge Management Model Definition Language and its Application
D.J. Shi, K.J. Liao and L. Wang 506

A Novel Hybrid Optimization Algorithm Based on Multi-Agent and Particle Swarm
D.J. Shi, W.J. Jiang and X.L. Ding 512

Simulation of VOC Diffusion of Plastic Packaging in the Vehicle Cabin
F. Jiang, Z.M. Xiao and Z.W. Liang 518

Integration of Knowledge and PDM for Collaborative Design in Networked Circumstance
J.M. Hou and D.X. Yang 522

Research on the Analytical Method of the Contributing Factors of Settlement Generation
J.H. Song, Y. Yu and Y. Zhu 528

A Research and Application of Parametric Modeling Technology for Truck Frame Base on ANSYS
S. Chai, Y.G. Wang, P.C. Wang, L.J. Li and X.Y. Gang 534

Multi-Stage Production Planning Modeling of Iron and Steel Enterprise Based on Genetic Algorithm
G.Z. Jiang, J.Y. Kong, G.F. Li and L.X. Xie 540

RETRACTED: Simulating Write-Ahead Logging and Virtual Machines Using HEW
Z.G. Zhou 546

RETRACTED: The Relationship between the Internet and Replication with PIONY
Z.G. Zhou 552

Mesh Partitioning Optimization in Parallel Substructure Method Using Improved HYT Approach
Y.L. Shang 558

Characteristic Analysis of Textile Materials Based on Pre-Judgment Mechanism
Z. Liu and K.J. Li 562

Feature Model of Fabrics Irregular Defect
Z. Liu 566

Assessment of Flight Simulator Fidelity for Pitch Task
J. Gao, S.T. Zheng and H.R. Li 569

RBF Neural Network Arithmetic and Applications in Surface Interpolation Reconstruction
X.M. Wu, G.X. Li, D.B. Shan and G.B. Yu 575

Error Analysis and Precision Evaluation of Reconstructed Surfaces in Reverse Engineering
X.M. Wu, G.B. Yu, G.X. Li and D.B. Shan 581

A Servlet Grouping Framework with Non-Intrusive Implementation
M. Xu and N. Li 587

Discuss on China's Green Building Materials Development
L. Ming 593

Application of Wavelet Transform in the Prediction of Chemical Composition of Sunflower Seeds by Near Infrared Reflectance Spectroscopy
R.Z. Han, S.X. Cheng and Y. He 599

Fault Diagnosis Expert System of Automobile Engine Based on Neural Networks
L.L. Jiang, Y. Ni, L.H. Tang and Y. He 605

Public Satisfaction of Highway Landscape Quality: A Case Study from China
H.J. Li and X.N. Zhang 611

Machine Vision Window Division on Self-Adaptation
X.C. Wang 617

Local Extreme Extraction of Fabric Gray Feature Wave
X.C. Wang 621

Intelligent Control and Management Integrated System of Coke Oven
G.F. Li, J.Y. Kong, G.Z. Jiang and L.X. Xie 625

Optimization of Production Procedure in Iron and Steel Enterprise for Green Manufacturing
G.F. Li, J.Y. Kong, G.Z. Jiang, H. Zhang, G. Zhao and L.X. Xie 631

Study on CBR-Based Automobile Engine Intelligent Fault Diagnosis Technique
P.F. Sun and Y. Ni 637

Motion Drive Algorithm for Flight Simulator Based on the Stewart Platform Kinematics
Y. Yang, S.T. Zheng and J.W. Han 642

Intercrossed Microstructures of Hydroxyapatite Sheets of Tibia Bone
B. Chen, Q. Yuan and J. Luo 648

Helicoidal-Rounded-Hole Microstructure of Mature Shankbone
B. Chen, J. Luo and Q. Yuan 652

Research on Accounting System of Economical Assessment for Developing Green Materials in Packaging Enterprises
E.Z. Li, J.M. Liao and C.L. Liu 656

Factors that Influence Performance of the Industrial Diversification: An Empirical Study Based on Chinese Listed Companies
Z.G. Qin 660

Classification of Automobile Lubricant by Near-Infrared Spectroscopy Combined with Machine Classification
Y. Zhao, X. Xu and Y. He 667

A RIA System for Education Plan Information Platform Based on CDIO
X.L. Liu and Y. Qin 673

Map Matching Using De-Noise Interpolation Kohonen Self-Organizing Maps
Z.W. Du, Y.J. Yang, Y.X. Sun and C.J. Zhang 680

Application of Chaos Particle Swarm Optimized Neural Networks for Evaluating the Credit Risk
Z.B. Xiong 687

Test Research on Infrasound Wave of Granite Damage Course under Dynamic Uniaxial Compression
S. Chai, L.J. Li, Z.Q. Ju, Y. Zou and Y.Z. Zhang 692

Crack Propagation Simulation for Epoxy Asphalt Concrete Pavement
S. Luo, Z.D. Qian and C. Chen 698

6-DOF Motion System of Amphibious Vehicle Driving Simulator Motion Parameter Design Research
S.T. Zheng, Z.M. Ye, J. Jin and J.W. Han 704

A Two-Stage Hybrid Heuristic for Vehicle Routing Problem with Fuzzy Demands
C.S. Liu and F.H. Huang 710

Quality Reliability Evaluation of the Miner Lamp Power Supply with Principal Component Analysis and Support Vector Machine
D. Ma, Z.Q. Chen, J.D. Huang and H.J. Lv 716

Physical Implementation and Manufacture of Adiabatic Flip-Flops for Micro Power Systems
H. Li, Y. Zhang and J.P. Hu 724

Vibration Analysis for the Gate Rotor of the Single Screw Compressor Based on Wavelet Finite Element
B. Zhao 730

A Novel Logistics Supplier Selection Model Based on BP
J.Q. Li 735

Novel Protocol Model Design of Wireless Sensor Real-Time Control Network
M. Ye 741

User Model of Personalized Search Engine for Product Design Based on Machine Learning
Y.S. Kang and H.N. Wang 747

An Extensible Model and Architecture Design for United Cloud Computing
B.X. Gui and H.W. Zhang 754

Approachs of Improving Incentives for IT Enterprises
B.X. Gui and L. Ruan 759

Influence of Recycled Aggregate on Physical and Mechanical Properties of High Performance Recycled Aggregate Concrete
Y.D. Xu and J.Y. Sun 764

Study on Solidification Technology and Safety Assessment for Sewage Sludge
J.Y. Sun, Y.D. Xu, J. Geng and S.M. Ye 768

Color and Texture Classification of Green Tea Using Least Squares Support Vector Machine (LSSVM)
X.J. Yu, K.S. Liu, Y. He and D. Wu 774

Fast Mesh Segmentation for CAD Models
Z.Y. Shu, G.Z. Wang and L.Z. Fan 780

Next Day Load Forecasting Using Local Temperature Sensitive Information
H.D. Lu and K.S. Liu 786

Realization of Multi-User's Connection Technique in Virtual Scene Base on LAN
W.Q. Yu 792

Numerical Simulation on the Laser Bending of Thin Wall Tubes
N.H. Hao and Y.L. Gai 798

Prediction of the Flow Stress of 00Cr17Ni14Mo2 Steel during Hot Deformation
N.H. Hao and S.W. Pan 802

A Feasible Method for a Class of Mathematical Problems in Manufacturing System
Q.G. Feng, H.P. Mao and H.W. Jiao 806

Mode Decision Strategy for I-Frames in H.264/AVC Based on Low-Pass Filter
H.C. Qin 810

Study on Mid-Infrared Transmittance Spectroscopy for Fast Measurement of Crude Fat Content in Fish Feeds Based on BPNN and LS-SVM
F.L. Zhu and Y. He 816

The Application of Data Mining Technology in Mechanical Fault Diagnosis
Y.F. Lin and X.P. Hu 821

Sliding Mode Control of Magnetic Bearing System Based on Variable Rate Reaching Law
J.F. Mao, A.H. Wu, G.Q. Wu and X.D. Zhang 827

Research on Multimedia Communication Based on IPv6
Y.S. Gu, B.J. Zhang and Y.C. Li 831
Near-Threshold Flip-Flops Using Clocked Adiabatic Logic in Nanometer CMOS Processes
H.Y. Ni and J.P. Hu 837