

Table of Contents

Preface and Committees

Chapter 1: Intelligent Mechatronics, Robotics, Biomimetics, Automation

Urban Heat Island Monitoring and Analysis Using Landsat ETM+/TM Imageries X.P. Wen and X.F. Yang	3
Disaster Management and Response Strategy in Urban Public Safety of the U.S.A M.S. Ye, Q.X. Jin and Y.T. Wang	7
Research on Statistical Process Control of Packaging & Printing Quality Management Y.Z. Xiao and Y.N. Huang	13
Post Classification Comparison Change Detection of GuangZhou Metropolis, China X.F. Yang and X.P. Wen	19
Integrating a HMM-Based Driver Fatigue Recognition Model into Smart Vehicle Space for Ubiquitous Computing Q. Wu and W.W. Yu	23
Research on Evaluation of Auto Parts Suppliers by VIKOR Method Based on Intuitionistic Language Multi-Criteria S. Lu and J. Tang	31
Research on Selection of Service Outsourcing Suppliers Based on Intuitionistic Language Fuzzy Entropy S. Lu	36
Research on Evaluation of Emergency Logistic Plans Based on the Similarity of Intuitionistic Language S. Lu	42
Heating Steady Thermal Stresses in an Al1100/Ti-6Al-4V/SiC 2D-FGM Plane Four-Side Clamped Plate Y.J. Xu, L.L. Wang and L.W. Dong	48
Analyse Volleyball Echelon Construction of Shandong Province M.H. Liu and S.P. Yuan	52
Biquadratic TC-Bézier Curves with Shape Parameter X.M. Liu, X.P. Yang and Y.L. Wu	57
Three Dimensional Highway Real-Time Visual System Design and Application H.F. Li, X.J. Xu and X.S. Fu	63
QoS-Aware Web Services Composition: A Cooperate Optimization Approach H.F. Li	69
Effect of Wave and Ocean Current to Motion of Low-Velocity UUV X.X. Du, B.W. Song and G. Pan	75
Study on the Flow Behavior in Thin Cavity during Water-Assisted Injection Molding T.Q. Kuang and K. Han	80
Research and Application of Honeynet Key Technique D.L. Zhang and W.C. Jiao	84
The Drawing Analysis of the Three-Dimensional Shape Domain Z. Tang and Y. Zhang	88
Stochastic Model and Simulation Research for Random-Storage S-Type Manual Order Picking J. Guo, L. Zhou and J. Zhu	92
Research on Stochastic Model and Simulation for Sorted-Storage S-Type Manual Order Picking J. Zhu, J. Guo and L. Zhou	98
A Real-Time Transport System for High-Resolution Measure Image F. Zhang, G.Q. Ren and Q.Z. Wu	104

Sensor Fusion Based on Strong Tracking Filter for Augmented Reality Registration X.Y. Li and D.Y. Chen	108
Modeling Web Service Behavior Based on Workflow Nets and Consume-Produce-Read Nets G.R. Cao, Q.P. Tan and H. Wu	114
Budget Estimate Management Information System for Blast Furnace Coal Powder Injection Project Y.M. Wang, F. Han and J.T. Li	119
An Ant Colony System Based Method for Edge Extraction S.W. Gao, W. Cao, C. Zhang and D.L. Wang	123
Research and Implementation on Personalized Search Engine Q.W. Zeng and J. Jiang	129
Magnetron Sputtering of NiCr/NiSi Thin-Film Thermocouple Sensor for Temperature Measurement when Machining Chemical Explosive Material Q.Y. Zeng, T. Hong, L. Chen and Y.X. Cui	134
Effects on Locomotive Diesel Engine Performance by Selecting Solenoid Valve Parameters M.H. Li and F. Jiang	140
Robust Time-Frequency Watermarking Based on Improved S Transformation M.H. Deng, Q.S. Zeng and Y.J. Li	146
The Automotive Electronic Throttle Control Based on the Non-Linear Torque Observer H.T. Zhang, J.D. He and J.P. Liu	152
Automatic Synthesis of Dynamic Systems Based on Hungarian Algorithm and Genetic Programming G.C. Yang, S.B. Li, Y. Zhong and W.J. Pan	160
Quality Control and Signaling Strategy in Supply Chain L.L. Zhu and J.X. You	164
Reliability Assessment of Control Systems S. Distefano	174
Ductile Fracture due to Adiabatic Shear during the Serrated Chip Formation in High Speed Cutting: a Microscopic Investigation C.Z. Duan, L.C. Zhang, H.H. Li and M.J. Wang	181
Application and Research of Rotate-Lookup-Summation in Robot Motion H.B. Shi and W.J. Dong	186
Optimal Size of China's Fiscal Expenditure and Policy Evaluation: 1978-2006 Q.L. Wu	192
Prediction of Forces in Micro-Cutting and the Study Based on Simulation H. Xiao, W.G. Wu and W.T. Mei	197
Research on Compressive Resistance of Honeycomb Paperboard with Different Number of Paper-Core L.S. Gao and Y.J. Lv	202
Digital Mining Control Management System in an Open Pit Based on GIS/GPS/GPRS S.G. Jing, F.B. Li and X. Ma	207
Rolling Process of Ribs with Triangular Cross Section on Surface of Copper Tube Y. Guo, L.W. Huang, D.Y. Li and Z.P. Wan	212
A Novel Time Synchronization Algorithm Based on the Synchronizer on Wireless Sensor Network with Clustering Architecture J.F. Tian and H.X. Wen	217
The Application of an Improved Ant Colony Algorithm in Mobile Robot Path Planning X.G. Zhu, Q.Y. Han and Z.Q. Wang	222
Research on Diffusion Behavior of ERP under the Influence of Government H.W. Cao and C.G. Xue	226
Image Encryption Algorithm Based on Self-Adaptive and Chaos Theory H.Y. Zhang	231
High Frequency Ultrasonic Elliptical Vibration Turning Study for Weak Rigidity Precision Workpiece W. Li and D.Y. Zhang	236
Effects Analysis of Mobile Phone's Signal to Space-Borne Radiometer Y.Z. Huang, S.W. Zhang, Y. Zhang and J.Y. He	241

Interpolation Algorithm on Numerical Control Technology Z.Y. Zhao, M.J. Liu, Y.S. Xiao and B. Liu	247
Research on CNC Key Technology for High Speed Milling Z.Y. Zhao, D.Y. Liang, Y.S. Xiao and B. Liu	252
The Effect of Aging Heat Treatment on the Mechanical Properties of Cu-Al-Fe-(x) Alloys G.F. Mi, J.Z. Zhang and H.Y. Wang	257
Research on Wire-Driven Parallel Manipulators X.Y. Wang and Y. Cao	263
Modeling and Modifying the Foraging Strategy in Swarm Robots D. Xu, B.L. Liu and R.B. Zhang	269
Thermal Stress Analysis of a Multi-Layered Structure S.C. Her and C.H. Lin	275
Strain Analysis of an Embedded Optical Fiber Sensor S.C. Her and C.Y. Tsai	279
Analysis of Flowing Characteristics of Abrasive Flow Machining in Slit Z.G. Dong, X.D. Zhang and Y.Z. Li	283
Description Pattern of Design Knowledge Databases J. Du and Y. Cao	287
Development Strategy and Situation of Process in Advanced Manufacturing X.Z. Feng, Y.H. Li, J.F. Wang and D. Wang	291
The Robust Reliability Optimization of Steering Mechanism for Trucks Based on Non-Probabilistic Interval Model X.F. Cheng and X. Zhang	296
Study on the Ant Colony Optimization X.W. Luo	300
Research on the Improved Apriori Based on Rough Set Method X.W. Luo	306
Influence of Ammonia on the Fabrication of Aligned Carbon Nanotubes Using Thermal CVD G. Li and W.M. Cheng	312
A Novel Design of BOD Biosensor Based on Immobilized Microbial Biosensor J. Li, Y.Q. Li and G.W. Zhang	316
A Novel Hyperchaotic System and its Circuit Implementation P. Zhou and R. Ding	321
Research on AODV Routing Protocol Optimization in Wireless Sensor Network F. Tian, L.L. Fan, X.P. Sun, A.M. Yao and H.Y. Liu	325
Design of Airfield Lighting Monitor and Control System Based on Hybrid Network C.Y. Wang and X.F. Yao	331
Product's Optimum Design Based on the Combination of Reverse Engineering and Finite Element Analysis S.Y. Li, S.Y. Cheng and C.H. Qiu	335
A New Computer Simulation of Neck Injury Biomechanics N. Li and J.X. Liu	339
Error Emendation of Sensors Array Autonomous Localization Algorithm X. Wang, J.X. Wang and X. Wu	345
The Influence of Wind and Emendation in Passive Acoustic Localization X. Wang, B.Y. Cao and X. Wu	351
A New Sensor-Based Temperature Measuring System with High Accuracy for Wide Temperature Range Applications Y. Zhang, S.W. Zhang, Y.Z. Huang and J.Y. He	355
Improved Particle Swarm Optimization Algorithm for Mixed Integer Nonlinear Programming Problems H.R. Li and Y.L. Gao	359
Phase Transformation, Microstructure and Hardness of Electrodeposited Fe-Based Amorphous Coatings Y.Y. Fan, Y.H. Jiang and R. Zhou	365
Structure Analysis and Simulation of Chemical Sensor for Food Safety Detection F. Zhao, P. Wang, Y.J. Gong, L. Zhang and C.L. Meng	369

Optimization Design of MEMS Thermal Actuator for Food Industry Y.J. Gong, F. Zhao, H.Y. Xiang and L. Zhang	373
High Accuracy Simulation for the Weakly Coupled System of Two Second Order Ordinary Differential Equations X. Cai	377
Non-Equidistant Numerical Methods for Ordinary Differential Equation with Periodical Boundary Value X. Cai	383
Research and Application of Extension CBR Fault Diagnosis Method for Process Production Y. Xu, Q.X. Zhu and Y.Q. Wang	389
Modeling and Analysis of Continuously Electronics Infrared Heating Oven J.C. Song, S.G. Li and C.Z. Wang	395
Displacement Analysis of the 3SPS-3CCS Mechanism Based on Hyper-Chaotic Newton-Downhill Method Y.X. Luo, X.Y. Che and B. Zeng	401
The Research of Lorenz Chaos Mapping Method to Mechanism Synthesis Y.X. Luo and Q.Y. Liu	407
The Research of Sinai Chaos Mapping Method to Mechanism Synthesis Y.X. Luo, Q.Y. Liu and B. Zeng	411
The Research of Chebyshev Chaos Mapping Method to Mechanism Synthesis Y.X. Luo, Q.Y. Liu and X.Y. Che	416
Synthesis of Planar Stephenson III Six-Link Mechanism for Function Generation Based on Hyper-Chaos Newton Downhill Method Y.X. Luo, Q.Y. Liu and X.Y. Che	421
NDA Based Hierarchical Classification Scheme for Identifying the Contributors to a Multivariate Control Chart H.Y. Huang and J.C. Chien	427
Fuzzy PID Control for Intelligent Smartcar System with CCD Camera S.C. Qu, Y. Tian and C. Chen	433
Synchronization of Hyper-Chaotic Lorenz System and its Application in Secure Communication S.C. Qu, D. Liu and L. Wang	437
A Research on the Construction Material Export and Energy Consumptions Using the Gravity Model Y. Song, L. Wei and C.L. Liu	441
A Maneuvering Target Tracking Algorithm Based on Gaussian Filter for Multiple Passive Sensors J.L. Yang, H.B. Ji and J.M. Liu	447
Technical Efficiency Evaluation of Grid Corporations Based on the DEA Model F. Kong and W. Wang	453
Maintenance Simulation and Maintainability Design Based on Virtual Reality D. Zhou, M.H. Wang, Z.Q. Guo and C. Lv	457
A Study on the X-Ray Image Quality Evaluation Method Based on Weighted Local Entropy Q.Z. Wu, J. Zhou and B. Liu	462
Integrated Input Training Neural Network PCA and RBF for Chemical Process Modelling	469
The Price of Anarchy of Non-Uniform Altruism Traffic Assignment X.J. Yu	475
A Hybrid Approach for Information Systems Security Risk Assessment under Uncertain Environment N. Feng, J. Xie and Y.X. Wu	481
An Improved Locally Linear Embedding Method for Feature Extraction W. Zhang and W.J. Zhou	487
Micro-Simulation System on Passengers of the PDL Station Design C.X. Gao, B.T. Dong, Q. Li and A.L. Wang	493
Realization of Interactive Communication among Multi-Sensors Based on CAN Bus S.H. Yan and G. Li	497

Comparative Study on Moving Object Detection Method of Video Surveillance System in China High-Speed Railway Transport Hub Z.Y. Xie, B.T. Dong, Y. Chen and Q. Li	503
Dynamic Disturbance Simulation of Modal Control and Control Model of Torsional Vibration of the Rolling Mill W. Zhao and D. Huang	509
Danger Theory Based Risk Evaluation Model for Smurf Attacks F.X. Sun	515
Design of a New Chipboard-Splitter Y.J. Lv and Q. Chen	522
Optimization Method for Globally Solving a Kind of Multiplicative Problems with Coefficients H.W. Jiao, J.B. Yin and Y.R. Guo	526
A Deterministic Method for a Class of Fractional Programming Problems with Coefficients J.B. Yin and K. Li	531
VOC Emission from a Multi-Layer Work Surface (Panel) of a Workstation System F. Wang, C. Ye, J.Y. Wang, Y.T. Wang and S.T. Gao	537
Research on the Operating Performance Evaluation of Listed Companies Supplying Water and Gas Based on Factor Analysis J.F. Chen and X.L. Zhou	543
The Experimental Study of Thermodynamic Performance on R407C Air-Conditioner Hot Water Combined Unit H.S. Hu, F. Wang, J.Z. Yu and W. Hao	549
A RFID Privacy Protocol Based on PUF Y.M. Xie	554
An Authentication Scheme Based on PUF Y.M. Xie	561
Microstructure and Toughness Mechanism of Tooth B. Chen, J. Luo, Q. Yuan and J.H. Fan	567
Mechanism of High Modulus and Strength of Unio Douglasiae Shell B. Chen, J. Luo, Q. Yuan and J.H. Fan	571
Properties Analysis of Bolted Composite T-Joint Z.Q. Wang, S. Zhou, J.S. Zhou and X.Y. Sun	575
Dynamics Analysis of Aircraft Landing on the Pitching Deck Z.Q. Wang, X.Y. Sun, S. Zhou and H.S. Lei	579

Chapter 2: Materials, Mechatronics and Automation

Influence of Strain Rate on Mechanical Properties of Shape Memory Alloy Z.Q. Wang, H.S. Lei, B. Zhou, Y.L. Wang and C. Zhang	585
A Research on the Trinity Mechanism of Atomization Based on Centrifugation Oscillation and Impact Breakage F. Luo and K. Qiu	589
Design of Cotton-Picking Laptop Machine without Winding F. Luo and K. Qiu	593
DEA-Based Measurement of Information System Performance H.W. Wang, Y. Liu, M. Zhou and S.Y. He	597
A New Solution Method for Large-Scale System Optimization Operation Z.G. Wang	603
Uni-Objective Negotiating Model and Tactics of Multi-Agent Supply Chain System C.H. Yang	608
Supplier Selection of Multi-Agent Logistic System C.H. Yang	614
Research and Design of Intelligent Lighting Control System Based on Industrial Wireless Technology J. Wang and W.R. Chen	620
Optimal Control of Large Flood of Ankang Reservoir M.Q. Chang	625

Automatic Location of the Talairach Cortical Landmarks from T2-Weighted MR Images Y.L. Fu, G.C. Zhang, Q.Y. Chang, S.G. Wang and X.W. Han	629
Influence Axial Vibration on Lateral Bending Deformation of Twist Drill in Machining Small Hole L.J. Ma, X.B. Wang, Q.G. Feng and G.J. Liu	635
Unlinkable Affiliation-Hiding Authenticated Key Exchange Y. Ding, B. Li and Z.T. Jiang	640
Fuzzy Sliding Mode Control for 6-DOF Parallel Robot Based on Support Vector Machines D.Q. Zhu, T. Mei and M.Z. Luo	645
Design of Transmission Endurance Tester with Electric Energy Recycle Technology X.Q. Li, D.Y. Song and B. Liu	652
Theoretical and Experimental Investigation into the Surface Roughness of Small-Hole EDM C.H. Li, Z.L. Han, L.G. Li and G.Y. Liu	656
Getting Rid of the Wires: Curved Layer Fused Deposition Modeling in Conductive Polymer Additive Manufacturing O. Diegel, S. Singamneni, B. Huang and I. Gibson	662
An Adaptive Architecture of Service Component for Persuasive Computing F. Li, Y.B. Wang and Y.N. Huang	668
Study on the Key Position of the Trailer House Vacuum Insulation Materials in Cold Regions H.D. Han, A.K. Kan and J.L. Geng	674
Heat and Mass Transfer of Cabbage in Vacuum Cooling and Experimental Research A.K. Kan, H.D. Han and Q.P. Duan	680
Application of Fault Phenomenon Vector Distance Discriminance in Mechanical System Fault Diagnosis Y.J. Xu	686
GMM with Modified Weight Applied into Audio Segment Classification L. Zhang, Y. Zhao and X.Z. Xiang	692
Study on Bonding Characteristic of Mixed-Type Chloride Ion in Sulphoaluminate Cement J. Zhao, G.C. Cai and D.Y. Gao	698
The Research of Real-Time Image Acquisition and Sobel Edge Detection with FPGA Y. Xu, P. Li, J.J. Yuan and M. Xiang	703
A Sensor Data Management Scheme for Wireless Sensor Networks Y. Zhang, Y. Liu and Z.T. Jia	709
Ranging Technology for Accurate Localization in Short-Range Wireless Networks – A Comparative Study Y. Zhang, S.T. Liu and Y. Liu	713
Determination of Pear Leaf Nitrogen Content Based on Multi-Spectral Imaging Technology and Multivariate Calibration H.Q. Yang and G. Lv	718
Selection of Preprocessing Parameters for PCA of Soil Classification Affected by Particle Sizes Based on Vis/NIR Spectroscopy H.Q. Yang, B.Y. Kuang and A.M. Mouazen	725
Globally Exponentially Stability of Discrete-Time Recurrent Neural Networks with Unsaturating Linear Activation Functions Z.B. Lin, Q.R. Tan and J. Li	731
Applcation of Computer Technology for Automatic Weeding System Z.R. Jiang and Z.X. Li	737
Effects of Atrium on the Electrical Activity of Sino-Atrial Node H. Zhang, J. Wang, R.J. Wu and L. Yang	742
Concept of Active Measurement Q.S. Cao, D. Liu, J.H. Zhou and J.M. Zhou	748
Primary Research on Multirate Nature of Mechatronic System J.H. Zhou, F.X. Sun, Y.H. He and G.L. Xiong	754
Modeling and Designing Fuzzy Membership Function Based Neural Network Controller for Hexrotor Micro Aircraft Vehicle	760
Dynamic Anti-Saturation Integral Controller Used in Time-Varying Delay System G.Y. Pu and G.W. Kang	766

Simplified Calculation for Thermal Deformation of Scroll Wrap Height in a Small-Parameter Scroll Compressor J.G. Qiang	770
Assessment of Degrees of Cumulative Fatigue Crack Initiation Damage at Guyed Mast Earplate Joint W.L. Wang, W.L. Qu and J. He	776
Motion Planning for a Redundant Manipulator Using Genetic Algorithm S. Parasuraman, C.M. Hou and V. Ganapathy	782
AI Techniques to Estimate Muscle Force and Joint Torque for Upper Extremity S. Parasuraman, A.W. Oyong and V. Lestari Jauw	788
Fuzzy Logic Based Sensors Data Fusion for Mobile Robot Navigation S. Parasuraman and B. Shirinzadeh	794
A Model for Ultrasonic Testing Conical Transducer and Optimal Design C. Lu and W. Xu	800
Improved Estimate-to-Track Association Method for Track Continuity C. Ouyang, H.B. Ji and J.G. Zhang	806
A Fast Design Space Exploration Method for Reconfigurable Architecture Based on Loop Optimization D. Zhang, R.C. Zhao, L. Han, W.F. Liang, J. Qu and X.N. Liu	812
Design of Touch Screen Driver Based on Linux D.Y. Zhang	818
Optimal State Fusion of Linear Systems with Two Channel Observations P. Cui, H.G. Zhao and M. Zhang	823
Discussion on GPS-RTK Using in Undersea Topographic Survey Y.F. Zhu, X.L. Ding, Z.W. Li and S.J. Zhou	829
Dynamic OD Estimation under Automated Vehicle Identification Environment D.S. Chen, J. Sun and K.P. Li	835
Measurement of the Incident Sound Power in Ducts and Effect Factors Analysis H.J. Zhao and Z.X. Deng	841
Pricing Scheme Based Nash Q-Learning Flow Control for Multi-User Network X. Li and H.B. Yu	847
Modeling and Simulation of Lean Supply Chain with the Consideration of Delivery Consolidation Z. Miao and K.L. Xu	853
Continuous Join Query Processing over Structured Overlay Networks Y. Liu, K.J. Zhao, Y.H. Qiu and Q. Liu	859
Base on Honeywell Business FLEX® PKS™ Planning and Scheduling Optimization Engineering Study Z.H. Huang, S.L. Kan, L.W. Yan and J. Li	862
Research of WBS-Based Project Quantitative Portfolio Decision-Making Model X. Ba, J.S. Li, J.L. Wang and Y.N. Wu	866
Absorption Simulation of Micro-Structural Material on BK7 T.L. Guo, G.J. Feng and T.T. Guo	873
A Kind of NLP Algorithm with NCP Function A.P. Jiang and F.W. Huang	877
QP-Free Method for Nonlinear Programming Problems A.P. Jiang and F.W. Huang	882
Recognition of Mineral Water with an Electronic Tongue Based on PCA and PNN H. Men, Y.M. Guo, R.X. Wen and B. Zhu	888
An Optimizing Method of Competitive Neural Network H. Men, H.Y. Liu, L. Wang and Y.P. Pan	894
Free-Form Surface Five-Axis Machining Tool Path and Tool Posture Simultaneous Multi-Objective Optimization Theory Research S.K. Cao, L. Song, K.F. Song, J. Lv and X.S. Chen	900
Development of Embedded Linux CNC System Based on ARM9 S.K. Cao, C.L. Wang, H. Zhang, J. Lv and C.Z. Wu	906
A Bit-Decomposition Adaptive Watermarking Algorithm Based on the Multi-Polar Mask L. Zhang, Q. Liu, Q.M. Fu and X.Y. Wang	912

Vendor's Conduct and Contract Mechanism in IT Outsourcing Based on Information Inferiority S.H. Zhang and W.J. Huang	918
A Neural Network Ensemble-Based Approach to Sensor Fault Detection A.S. Shui, W.M. Chen, L.C. Liu and Y.H. Shui	923
Predictive Control of the VAV System Based on Recurrent Wavelet Neural Network J.J. Li, B. Wang, X.Y. Guo and L.L. Sun	928
Effect of Additions on Properties of the Mullite-Based Investment Materials G.L. Yu, N. Li, Y.S. Li and Y.N. Wang	934
Analysis of Vacuum-Degree Limit of Plane Circular High-Vacuum Gas-Bearing L.J. Li, M. Zhang, Y. Zhu and J.C. Hu	940
Estimation of Curing Profile's Parameters for Flip Chip Packaging Using DSC and TGA Z. Kornain, A. Jalar, R. Rasid, C.S. Foong and T.L. Wong	950
A Component Model Supporting Dynamic Evolution of Internetware Y. Yue and G.P. Zeng	956
Sliding Mode Predictive Control Method for Attitude Control of Networked Launch Vehicle Y. Chen, G. Li, C.Y. Dong and Q. Wang	962
Spectrum Analysis Methods to the Two-Level Three-Phase Inverter G.Q. Chen and J.L. Kang	968
An Energy Efficient Geocast Routing Protocol Based on a Defer-Time Control Function for Vehicular Ad-Hoc Network B.Y. Lin, C.H. Chen and C.C. Lo	972
Dynamic and Control Modeling and Simulation of High Speed Precision Positioning XY Table Z.P. Ma, X.Y. Zhao, F.J. Wang and D.W. Zhang	978
Water Level Control System of Boiler Drum Based on GPC E.F. Dou and H.X. Li	984
Object-Oriented Petri Net Modeling and Analysis of China Railway Container Freight Yard Logistic System L. Wang, X.N. Zhu and Z.Y. Xie	990
Study of Elastic-Viscoplastic Analysis and Water Damage Mechanism for the Asphalt Pavement J.L. Wang	996
Utilizing the QFD to Make the Most Potential Marketing Strategy through Applying the Innovative Wireless Technology in a Hypercompetitive Era M.Y. Hsieh, C.Y. Kung, C.S. Lai and C.T. Chen	1000
How to Evaluate the Economic Value Added of Innovative Interface Technologies in a Booming Cyber Commerce Environment M.Y. Hsieh, C.H. Huang and W.M. Wu	1006
Some Motion Models of Artificial Animals and Momentarily Continuously Switching of the Models G.W. Yang and W. Liu	1012
New Matter Element System AND/OR Net Models and Relevant Extension Reasoning of Product Conceptual Design G.W. Yang and W. Liu	1018
The Method of Round Image Matching Based on Log-Polar Transform* Z.J. Zhang and J. Chen	1024
An Extended D&M Model to Assess Health Websites Success C.H. Tsai and W.P. Wu	1030
Grid Resources' Fuzzy Clustering Based on Mobile Agent D. Guo, Q. Li, M. Zhang, B.X. Guo and L. Hu	1038
Fracture Mechanics Analysis of Interfacial Crack in Anisotropic Bi-Materials J.Y. Jhan, C.S. Chen, C.H. Tu and C.C. Ke	1044
Permanent Magnet Synchronous Motor Sensorless Vector Control Y. Xie, T.D. Liu and H. Yang	1050
The Perceptions and Usage Intention of a Telecare System: An Empirical Study in Taiwan H.L. Hsieh, C.H. Tsai and B.K. Chuang	1056

Air Suspension Optimal Control Based on the Genetic Algorithm Z.X. Li, J.W. Guo, M.H. Gao and H. Jiang	1066
Vehicle Interior Noise Measurement and Analysis Z.X. Li, G.P. Wang, S.X. Wang and H. Jiang	1072
Exponential Stability Estimate of Fully Nonlinear Aceive Equation by Boundary Control D.C. Lu and R.Y. Zhu	1078
Preparation and Characterization of Modified Bamboo-Charcoal by Ferric Sulfate Dipping and Microware Radiation F.W. Li, S.L. Yue, S.J. Ma, J. Yang, N.F. Wu, H.W. Jia and M.L. Fu	1084
The Cylinder Errors Calculation of Three Edges Isometric Polygonal Based on Particle Swarm Optimization Algorithm Z.K. Wang, X.Q. Chen and Y.L. Zheng	1088
A Novel Image Fusion Method Using Beamlet Transform and Graph Cuts G.M. Zhang and Z.M. Cui	1092
Application of Improved BPNN to Damage Detection of Composite Materials X.M. Dong	1097
Scheduling a Pipelined Operator Graph of Bounded Treewidth S.G. Li and X. Xin	1102
Collision-Free Path Planning for Mobile Cranes Based on Ant Colony Algorithm X. Wang, Y.Y. Zhang, D. Wu and S.D. Gao	1108
RBF NN-Based Block PD-Type Backstepping Control of Induction Motor H.Y. Li and Y.A. Hu	1116
Study on Performance Evaluation of Enterprise W. Sun	1122
The Association Rules Updating Algorithm Based on Reverse Search Y. Chen, W.X. Xu and X.M. Liu	1126
An Effective Modeling and Control Strategy for Supply Chain Design and Planning H. Dong, W.L. Zhao and Y.P. Li	1132
Research on the Framework of 4PL Based on GIS/3G/GPS P.G. Lin, H. Ma and Z.Z. Zhou	1136
Damage Detection and Assessment System of Roads for Decision Support for Disaster Q.M. Qin, H.J. Ma and J. Li	1144
Key Computer Technology of Precision Fruits in Suzhou City L.G. Fang, J.X. Li, C.D. Gu and H.L. Li	1150
A General Traveler Agent Behaviour Model for Traffic Flow Simulation L. Huang and J.P. Wu	1156
A Design of Remote Control System for Robot Based on Internet J.W. Zhao, T.C. Zhang, G.Q. Chen and Y.Q. Li	1160
Study on Wood Drying Based on Neural Network and Expert System H.E. Ren, L. Chen and J.F. Guo	1164
Research on the End-Plate Thickness of Extended End-Plate Connection in Plastic Hinge Theory X.L. Cao, T. Zhang and C.L. Ma	1170
An Approach for Security Assessment of Transmission Grid Concerning the Influence of Indices Balance A.J. Mao and J. He	1175
A Global Calibration Method of Multi-Vision Sensors in the Measurement of Engine Cylinder Joint Surface Holes Y.Q. Shi, C.K. Sun, B.G. Wang, P. Wang and H.X. Duan	1182
Design of Water Dissolved Oxygen Test System J.X. Wang, X. Wang and X. Wu	1189
The Evaluation Model of Product Satisfaction Based on Cloud Model Y.L. Fei, X. Hou and E.T. Hua	1193
Design and Application of Geomagnetic Dynamic Simulator J.X. Yang	1200
Hierarchical Colored Petri Nets Based Modeling and Analyzing for Web Service Composition L.Z. Zhu and L.X. Sun	1206

The Analytic Measure of Human Head SAR Computed by 3-D Impedance M.Z. Yue, Z.Y. Lu, Q.Q. Wei and M.M. He	1212
Knowledge Application Model for Manufacturing Process H.F. Lai and K.Y. Wu	1218
Daily Maximum Electric Load Forecasting with RBF Optimized by AFSA in K-Means Clustering Algorithm W. Shen and Y.S. Sun	1225
The Initial Construction of a Information Systems Model Response to the Environment Change H.B. Shang, Y. Li, N.C. Yu, Y. Jiang, X.H. Xi, Y.D. Geng and L. Quan	1231
The Study on the Relationship between Hypercompetition and Organizational Innovation: The Role of Organizational Learning H.B. Shang, G.S. Tian, C.P. Song, Y.K. Cao, L.R. Chen, X.H. Chen and Y. Li	1236
Modeling the Elasticity of Oriented Electrospun Nano-Fibrous Scaffold B. Yuan, Q.F. Liu, C. Lin and X.F. Chen	1241
A HSEG Model for Bending Size-Dependency of Polymer Nanofiber B. Yuan, Q.F. Liu, C. Lin and X.F. Chen	1245
Study the Residential Land Demand by Ridge Regression and Multiple Linear Regression H. Sun, Y.Y. Chen and Z.Q. Fan	1250
PPPs Performance Evaluation Based on RBF Neural Network H. Sun, M. Zhou and Z.Q. Fan	1256
The Application of Binocular Visual Theory in the Depth Measurement on Castings Defect J.N. Han and M.Q. Wang	1262
DOM-Based Multi-Factor Web Information Extraction Study S. Zhang, X.S. Chen and J. Tan	1267
Research and Development for Cable Industry-Oriented Manufacturing Process Information System Based on Rough Set Theory L. Bin	1273
Plastic Deformation and Surface Recrystallization of Cu-4 Mass%Zn Alloy under Instantaneous Extrusion and High Speed Friction J.H. Yin, J. Zheng, C.Z. Jia and M.H. Ye	1280
Multi-Objective Parameters Optimization Design of Single-Pipe Ring-Type Mixing Water Oil-Gathering Pipe Network Y.X. Fu	1285
Neural Ensemble Coding during Working Memory Task in Rat Prefrontal Cortex W.W. Bai and X. Tian	1291
Feeding Submillimeter Microparts Using an Asymmetric Fabricated Surface with Symmetric Vibrations: Effects of Feeder Surface Materials on Feeding A. Mitani and S. Hirai	1297
The Structure Method of Assembly Product in Variant Design P.J. Wang, Z.Q. Sheng, Y.X. Liu and E.C. Yu	1303
A Dynamic Model of Knowledge Alliance Based on Knowledge Complementarity and Knowledge Share G. Li	1309
Modeling of a Direct-Drive Table for Automatic Wire Bonder F.J. Wang, X.Y. Zhao, Z.P. Ma and D.W. Zhang	1315
The Design and Implementation of Leveler Process Database System Y. Hu, X.H. Hao, Q.X. Huang, H. Peng and Q.S. Wang	1319

Industrial Automation and Manufacturing Process

Fatigue Life Calculation of the in-Service Dented Pipeline W. Ying, P. Zhang and W. Liu	1327
Optimized Design of Permanent Magnetic Stage Based on Simplex Method Y. Zhang, D.H. Tang and H.Z. Sun	1333
A Novel P2P Business Traffic Prediction Algorithm M. Wu, R.C. Wang, J. Li and Z.J. Han	1339

Natural Vegetable Gum Drilling and Completion Fluids System for Industrial Control and Application	
F.X. Li, G.C. Jiang, Z.K. Wang and M.R. Cui	1345
Realization and Simulation of Motion Trajectory of a 2-DOF Planar Parallel Manipulator	
X.R. Zhu, H.P. Shen and W. Zhu	1351
RETRACTED: Based on PRO/E Sheet Metal Product Design Simulation	
H.B. Wang	1357
A Human-Attention Driven Video Capture Method for Wearable Visual Computing	
L. Han, F.Z. Xue, Z.S. Li and D.Y. Chen	1361
Prediction of the Plastic Fracture Mechanical Properties on Metallurgical Composite Bimetallic Tube with Axial Crack	
L.Y. Zheng, C.Q. Li, L.H. Wang and Y.F. Song	1367
The Numerical Simulation on the Temperature Field of Laser Cladding	
L.Y. Zheng, W.Z. Xie and Y.L. Li	1372
An Algorithm of Complete Coverage Path Planning for Autonomous Underwater Vehicles	
M.Z. Yan and D.Q. Zhu	1377
A Web Data Mining Algorithm Based on Weighted Association Rules	
X. Lv, Y.J. Li and X. Lu	1386
Virus Evolution Based Gene Expression Programming for Classification Rules Mining	
W.H. Wang, Y.Y. Du and Q. Li	1392
Study on Forecasting of Gold Price Based on Varying-Coefficient Regression Model	
Q. Zhang, J.H. Ma and Y. Wang	1398
Effects of Chlorine on Aluminum Refining: A Review and an <i>Ab Initio</i> Molecular Dynamics Study	
Y. Liu, B.D. Sun, J. Wang and Y.B. Dai	1404
A New Method of Wireless Health Monitoring for SMA Composite Structure Based on Micro-Capacitance Measurement	
J. Yuan, Y.T. Chen, Z.X. Qiu, X.T. Yao and J.Y. Wu	1410
The Memory of Fuzzy Neural Network Based on Lattice Point Distribution	
J.L. Li	1416
Robust Trajectory Tracking Control of Autonomous Quad-Rotor UAV Based on Double Loop Frame	
Z.C. Hou, X. Gong, Y. Bai, Y.T. Tian and Q. Sun	1421
An Improved KPCA Method of Fault Detection Based on Wavelet Denoising	
X.Q. Zhao and Z.M. Li	1427
A Real-Time Traffic Information Model Using GPS-Based Probe Car Data	
W.J. Chen, C.H. Chen, B.Y. Lin and C.C. Lo	1433
Design, Model on MATLAB and Realization by C Language about Repetitive Control	
H. Huang and J.F. He	1438
The Study of Urban Low Carbon Buildings Design	
H.X. Liu and X.D. Li	1444
Control for Nonlinear Chemical System	
S.J. Wu, D.Z. Wang and S. Okubo	1450
Design of MFCS with Time-Delay for Chemical Processing System	
S.J. Wu, D.Z. Wang and S. Okubo	1456
Design of the Model Following Control System for Robot Control System	
D.Z. Wang, S.J. Wu, W.S. Cheng and M.L. Zhang	1462
A Design of the MFCS with Time-Delay	
D.Z. Wang, S.J. Wu and F.J. He	1467
Influence of Temperature and the BZ Substrate on Aggregation-Disaggregation Self-Oscillation of a Polymer Chain	
Y. Hara and R.A. Jahan	1472
Intelligent Techniques for Fed-Batch Bioprocess Control	
M. Caramihai and I. Severin	1478
A Continuous and Reversible LOD Algorithm for Highway Terrain	
X.S. Fu, S.Q. Mo and H.F. Li	1482
Research on Moving Vehicle Detection and Tracking Algorithm Based on Video Image	
X.S. Fu and J. Zhu	1488

A Comprehensive Agent-Based Safety Solution Meeting the Controllable Work System J.L. Zhou	1493
Simulation on Combustion Process of 16V240ZJ Diesel Engine J. Wang, F. Wang and M.H. Li	1499
Neural Networks L_2-Gain Controller Design for Nonlinear System D. Liu, N.H. Wang and G.Y. Li	1505
Simulation and Analysis of a Motorcycle Engine Production Cell X.D. Zhang, D.F. Zhao, X.D. Xie and T. Yu	1511
Fabrication and Characteristic of Small-Area Flat Lamp Utilizing Carbon Nanotube Film Cathode C. Wu and J. Luo	1516
Optimization Design and Fabrication of Annular Field Emitter for Field Emission Display Panel C. Wu and X.F. Jin	1520
Study of Low-Carbon Life and Low-Carbon Construction Materials B.Z. Sheng and X.J. Chen	1524
A P2P Protocol Identification Algorithm Based on PSO-SVM L. Mao, X.S. Chen and Z.G. Wu	1528
Investigation of Low Temperature Properties for Ultraviolet Radiation Aged Bitumen and Mixture J. Han, S.P. Wu, D.F. Zhang and X. Liu	1535
Investigation of Creep Mechanics Properties of Layered Nano-Montmorillonite Modified Asphalt Mixtures T.G. Liu, S.P. Wu and J. Han	1541
Investigations on Motion Precision of High-Resolution Stereolithography System R.H. Qiu and G.S. Xu	1546
Design and Performance of an Asphalt Pavement Snow Melting System M.Y. Chen, S.P. Wu, J.Z. Zhang and P. Pan	1550
Measurements and Potential Applications of Force-Control Method for Stick-Slip-Driven Nanohandling Robots C. Edeler	1556
An Improved Algorithm of Virtual Potential Field in Directional Sensor Networks J.J. Huang, Y. Shi, L.J. Sun, R.C. Wang and H.P. Huang	1562
Preparation of Warm Mix Asphalt Additive with Fly Ash S.P. Wu, Z.H. Zhu, Z.F. Liu and W. Zhang	1569
Fuzzy Comprehensive Evaluation on Small-and-Medium-Sized Motor Manufacturer's Core Competence Q. Wang, Y. Li, J.L. Cui, H.B. Shang, X.H. Xi, L.R. Chen, X.J. Tian and L. Cui	1575
The Study of Identification Method for the Welding Defect Source of Low-Alloy High-Strength Steel Based on AE Technology Y.T. Dou, X.L. Xu, W. Wang and S.Q. Pang	1580
Research on Secure Information Transmission Based on Internet of Things Numerical Control System Y. Wang and N.H. Wang	1586
Evolvable Production Systems: Environment for New Business Models A. Maffei and M. Onori	1592
Warehousing Management Based on Multi-Agent Y. Zhang and Y.L. Zhang	1598
A Novel Method of Diameter Measurement by Laser Scanning Based on Flat-Crystal Y. Wang, Y.J. Ren, C.J. Liu and S.H. Ye	1604
Beltrami Denoising Algorithm for Ink-Jet Printing Material Image Z.L. Feng, X.M. Liu, Y.M. Ye and J.Y. Chen	1610
The Finite Element Analysis of FOPS for the Loader X. Zhang, M. Zang and X.Z. Liu	1616
Channel Estimation for OFDM System with Regularized Total Least-Squares Solution T.L. Fan and L.Q. Fu	1621
A Two-Stage of Relevance Feedback for Content-Based Image Retrieval X.F. Wang and X.S. Chen	1627

Employing Rapid Prototyping to Assist Free Fibular Flap Reconstructive Surgery of Mandibular Defects	
W.Z. Wu, X.J. Qin, D.W. Rosen, Y.D. Chen and W.S. Wang	1633
Study on Architecture and Implement Strategy of Green Remanufacturing Management	
D.W. Guo and Z.G. Jiang	1639
Self-Learning Control of PMA-Actuated Knee-Joint Rehabilitation Training Device Based on Fuzzy Neural Network	
X. Li, X. Hong and T. Guan	1645
Fault Forecast for Discrete Event Systems Using Probabilistic Automata	
Y.S. Huang and H.S. Jiang	1651
Optimal Control Algorithm of a Dynamic Continuous Systems	
J.S. Xing	1657
Channel Assignment Strategies for Mobile Networks Using Fuzzy Petri Nets	
Y.S. Weng and Y.S. Huang	1662
Modelling and Verification of Vending Machine Systems by Using Timed Petri Nets	
Y.S. Huang and T.C. Row	1668
Research on Trunk Modeling Based on 3D Laser Scanning	
L.L. Wu, Y. Chen, Z.K. Feng, X.H. Tang, Z. Xu and F. Yan	1674
A Novel Layout Approach to Production Line Using an Efficient Genetic Algorithm	
Z. Liu, J. Tan, G.P. An and J.H. Wang	1680
Experimental Identification Approach of Dynamic Parameters of Precise Horizontal Machining Centre Based on Component-System	
Z. Liu, Z.H. Chu, Q. Cheng, G.B. Liu and D.S. Xuan	1686
Situation Reasoning in an Integrating Adjustable Autonomy Framework	
L.L. Yin and R.B. Zhang	1691
Analysis on Health Risk of Volatile Organic Compounds of Smoked Bamboo Biomaterial by TD-GC-MS	
W.X. Peng, Q. Xue, F.J. Wu, X. Zhang and Z.F. Zhang	1697
Py-GC/MS Analysis on Biomedicine of Benzene/Ethanol Extractives from <i>Eucalyptus camaldulensis</i> Biomass	
W.X. Peng, H.C. Qi, Z.F. Zhang and L.S. Wang	1702
Study on Biomedical Prospects of Benzene-Alcohol Extractives of Bamboo Leaves	
Z.F. Zhang, X.Y. Zhou and Q.Z. Ma	1706
Study on Mechanics of Laminated Veneer Lumber for Wood Bridge Based on China Southern Plantation	
Z.F. Zhang, X.Y. Zhou, J.H. Li, F.J. Wu and W.X. Peng	1711
Study on Heat Release Behavior of Smoked Bamboo Biomass by TD-GC-MS	
X. Zhang, Q.Z. Ma, Z.F. Zhang and W.X. Peng	1716
The Decision Analysis on the Development of Green Products Based upon Manufactures' Competition	
J. Cao, G.G. Zhou and Y. Qi	1721
Analysis on Function Components and Biohealth Function of Black Bamboo Biomass	
Q.Z. Ma, F.J. Wu, D.Q. Zhang and W.X. Peng	1727
Design of Cantilever Semi-Ball Valve Seat Assembly Machine	
T.C. Li	1731
A Logic of Traffic Light Controller Modelled and Analyzed by Statecharts	
T.H. Liao and Y.S. Huang	1736
Study on Viscosity of Titania Bearing Blast Furnace Slag	
J.Z. Zhang, L. Wen, M.H. Long and B.N. Yang	1742
Mine Internet of Things Based on Neural Network and its Research and Application	
Z.Y. Wang, C.L. Wang, Z.D. Wang and S.Y. Jia	1746
Biodiversity Preliminary Investigation of Nature Reserve Taoyuan Cave	
Y.M. Tan	1753
Research on the Construction of College Culture in New Age	
X. Fang	1759
WDB's Query Interface Extraction Method Based on Watir & Ruglar Expression	
L. Zhao, P.G. Lin and P.Y. Nie	1764

An Improved Segmentation Algorithm for Infrared Imaging Object J. Liu, M. Li and H.B. Ji	1770
The Application of Modal Analysis in Hole-Defect in Lumber S.Q. Song, H.D. Xu and L.H. Wang	1776
Implied Volatility Surface Estimation Using Transductive Gaussian Fields Regression H.J. Park, D.W. Lee and J.W. Lee	1781
Impersonation Attack on RFID Authentication Protocol and its Countermeasures Y.C. Lee	1787
Configuration Software WinCC Application in Concrete Production X.S. Che and J.W. Jiang	1793
True RMS Detection of Non-Sine Wave for Power Grid X.S. Che, X.X. Gu and L. Wang	1798
Finite Element Analysis of Track Rollers of the Crawler Excavator Based on ANSYS L. Zhou, Q.W. Qu, C.J. Wang and H.Q. Zhang	1803
Design and Implementation of a Control System for Sludge Dehydration Based on S7-1200 PLC B. Qin, S.B. Yang, L. Li, X. Wang and D. Yan	1808
The Effect of Information Sharing on the Dynamics of a Two-Stage Supply Chain H.X. Liu and C.G. Xue	1814
Research of Noise Induced Intermittent Chaos in Power Converter W. Jiang, Y.F. Zhou, J.N. Chen and F. Yuan	1820
Mechanical Parameter Analysis of Rock Material via PLSR Model Z.B. Liu, W.Y. Xu, F. Xu and L.W. Wang	1826
Wireless Sensor Failure Identification Technology for Thermal Monitoring System of NC Machine Tools Based on Bayesian Networks X.H. Yao, Z.Y. He, J.Z. Fu and Z.C. Chen	1832
The Prediction on the Size and Location of Internal Defects of Standing Trees Using Ultrasonic Technology N. Wang, L.H. Wang and H.D. Xu	1838
PVC Sheet Blow Forming Finite Element Simulation and Experimental Study C. Zheng, Y.S. Zhang and D.Q. Li	1846
Study on Automation Technology and Method of Forest Measurement in Fixed Sample Based on Total Station and PDA F. Yan, W.W. Guo, Z.K. Feng, M.L. Cao and L.L. Wu	1852
Analysis on Torsional Fatigue Life of Turbo-Generator Shafts Y.J. Gu and T.Z. Jin	1858
Region Classification of Forestry Ecological-Economy System with BP Neural Network M. Zhang, J.H. Wen and Z.X. Zhang	1864
Research on Automatic Detection Technology for Coal Seam Floor Failure Features G.M. Zhao and X.R. Meng	1870
Reconstruction of the Stomach with Smooth Muscle Cell Seeded Constructs in Rat Model Y.X. Zheng, L.Q. Zhang and Q. Bao	1876
Influence of the Regenerative Process on the Trans-Critical CO₂ Cycle J. Lv, Z.B. He, D.Z. Yang and X.Z. Huang	1881
Research on Enterprises Scientific Development Performance Evaluation Model Y.J. Geng	1887
The Development of Walking Assistant Robot for the Elderly L. Zhang, Q.X. Cao, C.T. Leng, A.L. Tang and F. Shi	1893
Development of Fuzzy-PID Temperature Controller for Heating Furnace Based on ARM9 X. Zhang, J.W. He and S.J. Wu	1899
Embedded Speech Recognition Based on Multiclass Support Vector Machine J.F. Zhao and Y.P. Zhu	1905
New Technology Research on Granulation of Methyl Cellulose J.H. Ren, W. Wang and J.G. Ren	1911
A New Technique for Camera Calibration Using Circle Template Y.W. Liu and J.W. Li	1917
Crankshaft of RMP Analysis Based on CAE B. Peng	1921

The Investigation on TSSC Based on 3C B. Peng	1927
The Research of Hierarchy Assembly Semantic Model Based on Intelligent Assembly Process Planning M.Y. Lv, W.J. Hou and X.J. Li	1933
Research on N-Body Problem with FMM Algorithm Based on FPGA Acceleration Y.H. Chai, M. Cao, W.M. Xu, Q.G. Li and Y.H. Zheng	1940
Research of Decision-Making in the Multi-Agent System Based on Interactive Influence Diagrams B. Li, J. Luo and J.F. Zhuang	1947
Workspace Measurement Positioning System Based on Optical Scanning and Wireless Sensor Network L.H. Yang, J.G. Zhu, B. Wu and X.Y. Yang	1953
Research and Implementation of Color Schemes in Color Digital Jacquard CAD P. Fang, Y. Sun and Y.N. Rui	1959
An Adaptive Clonal Selection Algorithm with Stage Mutation Operation for Unrelated Parallel Machine Scheduling Problem with Sequence-Dependent Setup Times Q. Niu, F. Zhou and T.J. Zhou	1967
Study on Hardware and Software Realization of Harmonic Detection in Power System K. Zhang, X. Zhao and Z.H. Zheng	1973
Study of Key Techniques on Electrocardiogram Printouts Digitizing G.J. Shi, G. Zheng, M. Dai and S.L. Mou	1979
A Novel Method of Identifying Threshold for Gabor Transform Filter Based on Inter-Cluster Distance Probability D. Fan, M.Y. Cao and L.M. Rai	1985
Study on Specialized Emergency Navigation Terminal for Disaster Relief F.Z. Zhang, J.Z. Geng and P. Cheng	1991
The Design and Realization of Laser Performance Test Software W.L. Cao, B. Chen and Y.Y. He	1997
The Software Design of Inverter Test System Based on VC and NI Controls W.L. Cao, B. Chen and Y.Y. He	2002
Self-Adaptive Parameters Adjustment Scheme for Load Balancing in LTE Systems W. Zheng, X.M. Wen and H.N. Ge	2007
Fabrication of Microfluidic Rapid Micromixer H.C. Hsu, H.C. Liu and C.J. Han	2013
Bayesian Image Denoising Using an Anisotropic Markov Random Field Model Y.Q. Cui, T. Zhang, S. Xu and H.J. Li	2018
Studies of Protein Absorption and Fouling Behavior on Amphoteric Charged Polypropylene Microfiltration Membrane Y.J. Liu, C.Y. Lv and J. Yang	2024
Research on Influencing Factors for Facilitating Innovation Capability: Evidence from Chinese High-Tech Industries W.W. Li	2030
Statistical Analysis on Practice of Human Capital Pricing within Chinese Aeronautical Manufacturers W.W. Li	2036
An Efficient Sport Video Segmentation System X.B. Zhao, X.C. Zou and Z. Ma	2042
Risk Assessment of Investment Projects Based on Principal Component Analysis Y.C. Li, L. Zhang and J.S. He	2048
Composition and Microstructure of Laser Cladding of 316 Stainless Steel K. Zhang, M.Y. Li and X.M. Zhang	2054
Designing of Assembly Cell by CA System Support A. Javorova, E. Hrušková and K. Velíšek	2060
Assembly and Disassembly via Automation Tools A. Javorova, E. Hrušková and K. Velíšek	2066
Study on Financial Market Risk Management Based on the Dynamic Copula Model Y.L. Xu and L.L. Wang	2072

Quality of Service Support in Wireless Sensor Networks R. Tati, F. Ahmadi, F. Jafari and M. Tofighi	2078
Application of Nanoscale Poly(divinyl-Benzene Vinylpyrrolidone) as Solid-Phase Extraction Adsorbent Prior to LC-MS-MS for the Determination of Paralytic Shellfish Poisoning Toxins in Shellfish X.L. Zhang, B. Feng, Y.Q. Cai and H.J. Yu	2085
Context-Aware Recommender System for Location-Based Advertising H.C. Ahn and K.J. Kim	2091
Simulation of the Fixed-Point Number Arithmetic F. Wang and X.L. Zheng	2097
The Study of PNN Quality Control Method Based on Genetic Algorithm J. Li, S.L. Kan and P.Y. Liu	2103
Application and Research of Virtual Design for Superfine Wood Powder Pulverizer with Multi-Granularity L.Y. Yang and Y. Li	2109
Key Technology Research for Wood Powder Disintegrator Used in Fuel Based on ADAMS Environment L.Y. Yang and Y. Li	2113
VCHR: Virtual Cluster-Based Hybrid Routing Protocol Z. Wang and L. Huang	2117
Moving Vehicle Classification Using Cloud Model Z.Y. Zeng, B. Li, X.J. Tan and J.Z. Zhou	2123
Evaluated Preference Genetic Algorithm and its Engineering Applications T.K. Liu, H.Y. Chang, W.P. Wu, C.H. Chen and M.R. Ho	2129
The Effect of Organizational Support and Self Efficacy on the Usage Intention of E-Learning System in Hospital Y.H. Chuo, C.H. Tsai and Y.L. Lan	2137
Coordinated Control among High-Speed Trains Based on Model Predictive Control Y.H. Zhou and Y.P. Wang	2143
Flower Robot – A Product of Biomimetic Technology N. Sy Hung, P.D. Anh Tuan, P. Nguyen Ngoc and N. Truong Thinh	2149
Risk Prediction of Environmental Impact Assessment - Actual Protein Project as an Example J.H. Zhou, B. Wang and X.T. Gou	2155
Research on Noise Reduction in Boiler Room - An Actual Case on North Boiler Room J.H. Zhou, J.G. Tan, H.X. Wang and H.Z. Ma	2159
The 3D Geological Structures Modeling in the Hei 47 Area of Daqingzijing Oil Field Z.J. Gu, J.L. Zhang and F. Ding	2163