

Table of Contents

Preface and Organizing Committee

Chapter 1: Applied and Computational Mechanics

Certain Question Research on Nonlinear Finite Element Analysis of High Arch Dam Z.Q. Wang and K.H. Zheng	3
Optimization Design and Performance of Vibration Suppression for Delayed Dynamical Vibration Absorber with Broadband Y.Y. Zhao and C.G. Li	7
The Chart Method of Multi-Columns Effective Length with Difference Axial Force J.L. Zhu, D.H. Zhou, Y. Zheng, Z.L. Ouyang and C.X. Han	12
A Symbolic Dynamics Approach to Random Walk on Koch Fractal H. Luo, Y. Tan and S.L. Peng	17
A Miniature Cutting Tool for Elliptical Vibration-Assisted Turning: Design and Kinematical Analysis Y. Gao, R.L. Sun and W. Bai	23
Kinematics Analysis of a Hot-Line Live Working Manipulator X.L. Ma, H. Chai and Y.J. Li	28
Numerical Method of the Axial Force Moment Curvature on RC Section K.C. Yao, D.H. Zhou, W.Y. Liao, L.Q. Li, G.F. Li and X.Y. Geng	35
Finite Element Simulation of Deformation of Steel Belt of Overwind Protection for Vertical Shaft Lifting Q.M. He and F.L. Shen	40
The Analysis for the Leaking Flowrate in the Plane Valveplate J. Wei and C.Y. Shan	46
Mathematical Model for Calculating Aerodynamic Characteristics of Overhead Transmission Lines N. Tokenov, M. Dzhamanbayev, A. Bekbayev, D. Eskendirova and O. Baimuratov	52
Time Marching Simulation of Aeroelasticity Based on a Coupled Numerical Method R. Xi, Z.L. Ji, H.G. Jia and Q.J. Xiao	60
Dynamic Response of Hammer Impacting Pile under Gravity Field D.H. Chen and L.Q. Wang	65
Application of Response Surface Model on Aerodynamic Characteristic of Airfoil C.L. Liu, H. Zhu and Z.G. Yang	70
Strength Checking of Caterpillar Tractor Guide Wheel Crankshaft under Working Condition L.H. Ouyang, X.T. Deng and Z.F. Yue	74
Study on Seismic Performance of Offshore Platform with Rocking Wall - TMD System J.G. Zhang and Z.W. Jiang	78
Determining the Effective Length of Frame Column in the Action of the Fore with Variable Directions Z.L. Ouyang, D.H. Zhou, Y. Zheng, J.L. Zhu and C.X. Han	84
Nomo-Graph for Determining the Effective Length of Columns with the Leaning Columns Y. Zheng, D.H. Zhou, Z.L. Ouyang, J.L. Zhu and C.X. Han	88

Chapter 2: Research and Design in Mechanical Engineering

Mini UAV Design and Manufacture with Bungee Launched / Parachute Recovery L.S. Shyu and Y.C. Hsiao	97
Magnetic Actuating Alcolock Device with Double Plunger Solenoids Q. Zhou	101

The Characteristics of Boiling Heat Transfer of R-600a-oil Mixture in a Circular Tube with Porous Inserts	
M.Y. Wen and K.J. Jang	106
Office Chair Design Methods Based on Dynamic Sitting Behavior	
J.F. Xu, H.N. Zhang and Z.C. Nie	111
AC Drive System with Multiphase Induction Motor for High Power Mining Haul Trucks	
Y. Gao, B.C. Huai, K. Ji, F.X. Yuan, J. Zhu and B. Hua	117
Design and Analysis of a Sawing-Milling Compound Machining Center for Special-Shaped Stone Products	
D.H. Zhao, J. Sun, K. Zhang, Y.H. Wu and F. Lu	123
Thermal Analysis of Water-Cooled Permanent Magnet Synchronous Motor for Electric Vehicles	
S.W. Wang, Y. Zhang and J.M. Hu	129
Research of Armored Vehicle Cabin Environment Comprehensive Evaluation	
W.P. Liu, X.Z. Yan, G.S. Huang and Y. Jin	136
High Power Factor LED Driver with Improved Inductance	
L.Q. Chen, Q.H. Chen, Y.C. Liang and Y.M. Lu	142
State Estimation for 4WD In-Wheel Motor Electric Vehicle	
B.L. Gao, H. Chen, S.G. Xie and J.F. Gong	147
Design of Double-Disc Friction and Electromagnetic Hybrid Brake System of Passenger Car	
R. He, X.D. Gu and J. Shi	156
Energy Analysis for Electric Hydraulic Power Steering System of Electric Bus	
G.B. Shi, S. Wang, P. Gu, H.X. Xie and Y. Lin	164
Modeling and Simulation of Environmental Factors on the Operating Characteristics of PV Module	
J.Y. Wang, L.B. Sun, J.H. Shi and J.D. Zhao	169
Research on Vibration Control of Offshore Platform Based on Self-Recentering Rocking Wall	
J.G. Zhang and Q. Niu	173
A Novel Single-Stage LED Driver Based for Interior-Lighting Applications	
Q.H. Chen, L.Q. Chen, Y.C. Liang and Y.J. Chen	178
A MR-Compatible Finger Stimulator for Simultaneous Pressure and Heat Stimulation	
H.S. Kim, M.H. Choi, I.H. Lee, N.R. You, U.H. Jeong, J.H. Yi, D.W. Lim and S.C. Chung	182
The Design of Squib Analysis Algorithm Based on Raster Data	
L.H. Kong and Q.M. Su	186
A Rapid Design System Integrated CBR with Variant Design	
Q.Z. Niu and Y.F. Song	190

Chapter 3: Technology and Method for Measurement, Test, Detection and Monitoring

Application of Optical Fiber Sensing Real-Time Monitoring Technology Using in Ripley Landslide	
X.F. Zhang, Z.H. Lv, X.W. Meng, F. Jiang and Q. Zhang	199
Research on the Nonlinear Ultrasonic Testing of CFRP Based on Abaqus	
S.S. Yu, H.F. Zheng, W. Cheng and T.H. Tang	205
Measurement Error Correction of y Coordinate in Three Dimensional Localization of Tomatoes Using Binocular Stereo Vision	
R. Xiang, H.Y. Jiang and Y.B. Ying	209
LabVIEW Applications for Fiber-Optic Remote Test and Fiber Sensor Systems	
L.Y. Su	216
Efficient Electronic Seal System	
X.Y. Bao, J.Z. Zhong, Q. Feng and Y. Guo	221
A Digital Carrier Monitoring System Based on Software Defined Radio	
Y.J. Yang, G.W. Han, Z. Yang and H. Shao	225
Laser Ranging Controlling System Based on Virtual Instrument	
Q.Y. Lv, D.D. Zhang and Y.Z. Quan	229

USRP: A Flexible Platform for Spectrum Monitoring J.J. Yang, M. Huang, J. Yu, L. Li and L. Li	233
Structural Damage Identification Method Based on Displacement Data H.Y. Sun and F. Wen	241
Fractal Dimension and Characteristic of Tree Branch Growth J.Z. Wang and Y. Guo	246

Chapter 4: Intelligent Systems, Processing of Signal and Data

A Comparison of Methodologies for Intelligent Computing Used to Integrity Analysis of a Structure Aeronautic F. Parra dos Anjos Lima, F.R. Chavarette, S. Silva Frutuoso de Souza, A. dos Santos e Souza and M. Lúcia Martins Lopes	253
A Retrieval Method for Failure Mode Based on Semantic Z.M. Lei, Z.L. Wang, Y. Ren and L.L. Liu	258
On-Line Handwriting Recognition Based on Hopfield Neural Network J.Y. Zhang, L. Yang, R. Zhao and L.H. Yang	265
Synchronization for Stochastic Complex Networks with Time Varying Delayed and No-Delayed Coupling Y.L. Wang, Y.L. Luo and C.R. Xie	270
The Optimization Selection of Input Variables for Mid-Term Power Load Forecasting Based on Gradually Similar Method J.P. Zhu	274
Detection of Organic Pollutions Using Artificial Neural Networks and Domain Transform Techniques L. Gao and S.X. Ren	279
Robust Speech Emotion Recognition with Novel Sub-Band Spectral Centroid Weighted Wavelet Packet Feature G.B. Zhang, Y. Li and Y.M. Huang	283
Automatic Counting System for Nuclear Track Based on DSP and Mathematical Morphology Algorithm Y. Pan and L.J. Liu	287
Efficiently Mining Maximal Frequent Itemsets Based on Digraph Q. Wu, D.W. Wu, Q. Wang, S.M. Wen and R. Tu	291
An Inspection Method of SMD Component Type Based on Moment Features and BP Neural Network Z.J. Wang, X.D. Huang and P.P. Gu	296
Hybrid Clustering Algorithm Based on KNN and MCL Y. Chen and Q.Z. Niu	302
A Face Recognition Method on Mobile Terminals Based on Manifold Learning Y.G. Li, R. Zhu, C.C. Zhang and X.W. Gong	307
Deductive Synthesis of Algorithms in Human-Computer Interaction H.H. Shi and H.P. Shi	312
Information Entropy Based Fuzzy Pattern Recognition Model for Identification of Vulnerable Groups in Water Resource Conflicts L.F. Lv and Y.P. Chen	316
Co-Processing Strategies for Feature Detecting in Smart Video Sensor Y. Zhu, S.L. Mei and J. Le	320
Researches on Software Cost Combined Estimation Based on RBF Neural Network and RVM T. Zhang, M.F. Zhang, H. Zhang and Y.Q. Hu	325
Multi-Template Processing of Fingerprint Recognition Algorithm L.Y. Zou, Y. Zhou, X. Dong and Y. Chen	332
A Unitary-UCA-Root-MUSIC Algorithm Based on MSWF Q. Guo and Y.F. An	339
An Improved TLBO Algorithm for Balancing Stochastic Two-Sided Assembly Line D.S. Li, C.Y. Zhang, X.Y. Shao and Z.P. Xie	345

Time Bayesian Net Fault Prognostics Y. Wu and T.D. Zhao	350
An Improved Adaptive Threshold Skin Color Model H.W. Di and W. Xu	358
Probabilistic Neural Network Southern Jujube Pest Stress Index Leaf Pigment Estimation Model Based Hyperspectral P. Zhou, X.W. Dou, Q. Zhao and M.D. Shi	362
Modified UCT Algorithm with Risk Dominance Methods in Imperfect Information Game J.J. Zhang, X. Wang, L. Yao, J.P. Li and X.D. Shen	367
Fuzzy Roughness Degree Measurement Model Based on Level Effect F.C. Li and J.N. Yin	377
Implementation of Optical Flow Base on Pyramid on the Zedboard J. Le, S.L. Mei and Y. Zhu	381
Speech Perception Hash Authentication Algorithm Based on Immittance Spectral Pairs Y.B. Huang, Q.Y. Zhang, Z.T. Yuan and P.F. Xing	385
Anti-Occlusion Algorithm for Object Tracking Based on Multi-Feature Fusion J. Cao and X. Liang	393
A New Radar Signal Sorting Method Based on Data Field W. Jian and W.M. Song	401
A Compressed Sensing Improvement Algorithm Based on Power Quality Transient Disturbance Signal Y. Zhong, K. Zhang and X.J. Zheng	407
A New Definition of Countably PS-Compact L-Fuzzy Sets S.Z. Bai and H.M. Guan	414
Research on the Simulation of Textile Fabric Pattern Designs Based on Digital Image Processing Technology J. Zhao, X.J. Fan and Q. Xu	420
A Video Super Resolution Algorithm Based on Wavelet Coefficient W.J. Liu, S.D. Xiao and R.H. Yao	425
Research on the Edge Detection Algorithm of Smokescreen Based on Mathematical Morphology X. Sun, X.Y. Wang, Z.R. Luo and H. Xiao	429
Lossy Source Compression Using Belief Propagation with Decimation over Multi-Edge Type Factor Graphs of LDGM Codes W. Guan and L.P. Liang	437
FDCT on the Edge of the Image Detail Enhancement Improvement Y. Zhang and Y. Qian	443
Automatic Discovery Approach of Digital Image Topic C. Jin and S.W. Jin	449
An Improved Method on Telemetry Data Processing C.H. He, S.B. Su and K.D. Huang	454
A Novel Level Set Method for Remote Sensing Image E.J. Xu, Z.H. Jia, L.J. Wang, Y.J. Hu and J. Yang	457
Unsupervised Image Segmentation via Affinity Propagation W.F. Peng, S. Du and F.X. Li	464
Pattern Recognition Application of Improved SURF Algorithm in Mobile Phone H.B. Wang and L.N. Yang	471
Design and Realization of Intelligent Travel System Based on Data Mining C. Ruan, Y.M. Shen and G.D. Sun	477
Analyzing POI's Attractiveness Variation Based on Taxis' Trajectories Y.Z. Liu, L.S. Li, Z.H. Liao, J.X. Liu and M.D. Tang	482

Chapter 5: Control and Automation

Research on Advance Control of Chaotic Vibration Machine with High Vibration Intensity (I) - Mechanical Properties and PLC Control Decision X.L. Yang, J.F. Liu, H.S. Yang, B.Z. Kong, J.W. Li and M.N. Si	489
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

Linear Motor Intelligent Control System Based on LabVIEW W.N. Liu, D.N. Su, J.Y. Ma and L.F. Yang	493
Research on Cooling Control System of Flue Gas Based on Fuzzy Control M.G. Zheng and N. Wei	497
Attitude Control Module of Modular Spacecraft Simulation Based on Matlab/Simulink G. Wang, X.H. Li and Q. Wei	501
The Realization of a Mixed Automatic Production Line Based on PLC J.L. Zhang, A.R. Zhang and Z.L. Zhang	506
Control Approach Design for Electromagnetic Satellite Formation Flying S.H. Wan, Y. Su, N.P. Mao and M. Hu	510
The Fruit-Picking Robot X.J. Fu, R. Yuan, T. Li, L.M. Zhou, H. Ye and C.L. Que	515
Design and Research of LED Intelligent Lighting System X.R. Li, H.P. Wang and G.S. Li	519
Novel Stabilization for Systems with Two Additive Time-Varying Delays L.L. Xiong, D. Li and Y.F. Zuo	523
Interacting Multiple Mode Tracking Algorithm Based on Modified Coordinate Turn Model S. Xiao, X.S. Tan and H. Wang	534
Traffic Control Strategy Research in Logistics Park X. Kai and X.X. Weng	540
Research on Continuous Trajectory Planning for Ultrasonic Manipulator H.F. Zheng, S.S. Yu, Y.B. Wang and T.H. Tang	544
The School Bus Safety System Design for Preventing Children Forgotten in the Car X.M. Zhang, B. Peng, J.M. Liu and X.Y. Qiao	549
The Software Design of the Intelligent Lappet Loom M.Y. Zhao and Y.P. Shi	552

Chapter 6: Applied Information Technology

An Evolving Web Service Interaction Network Model Y.K. Liu, L. Zhang, F. Tao and L. Wang	559
Self-Diagnosis Architecture for QoS and QoE Management in IPTV Services over IMS Network J.X. Lu, C. Dousson and F. Krief	568
A Compatible Public Service Platform for Multi-Electronic Certification Authority Y. Sun, D.W. Liu, P. Zhang, X. Zhang and T. Yu	579
Research on Information Sharing Application Technology for the Occupation Skill Teaching Y.H. Shi and G.X. Wu	584
Resource Sharing and Allocation in P2P Social Networks Q.F. Zhang, S. Wang and D. Liao	588
An Assessment Framework of Satellite Information Application Chain G. Liu, Z.M. Li and X.X. Huang	595
Building the Next-Generation Data Centers Infrastructure Cloud F. Fang and X.F. Yu	601
A SVM Intrusion Detection Method Based on GPU Y.X. Xia, Z.C. Shi, Y. Zhang and J. Dai	606
A Strategy of Database Project Task Based on the Crontab L. Xu, S.X. Cao and L.M. Ma	611
The Research and Implementation of Auto-Dimension in Engineering Drawing Based on Pro/E Z.B. Zhao and Q.Z. Niu	615
The Analysis of Research Frontier and Hot Topics about User Behavior in Network Community Based on Mapping Knowledge Domain L.N. Jiang and X.H. Shan	620
Cognitive Backoff Algorithm Research J.S. Wang, R.J. Qiao and Y.N. Zhang	627

Automatic Detection of Grid Delivery Services Using a Real-Time Monitoring System Y.N. Kim, G.W. Kim and G. Woo	633
Virtual Environment to Aid in the Teaching of Multiplication Tables to Elementary and Middle School Students with ADHD W.M. Sanchez, L.T. Kawamoto, S.C.M. Rodrigues and A.P. da Silva	638
Feature Recognition for Virtual Environments M.H. Ear, C. Cheng, S.M. Hamdy and A. Marwah	642
A Visualization Strategy with a Pentacle and its Application in the Intrusion Detection System J.X. Li, J.B. Xia, Y. Liu, Y.Z. Huang and B. Luo	647
A Visual Simulation System Based on QT-STKX Research S.X. Liu, X.H. Li and J.K. Zeng	653
The Design and Implementation of Multi-Protocol Database Audit System H. Li, J.F. Qiao, C.Y. Liu and Z. Wang	658
The Application of CMIC in Cultivating Learners' Cross-Cultural Communication Competence X.M. Li and Y.G. Wang	667
Identification Method of Directed Digraph in Organization Knowledge Unit Y.H. Zhang, J. Ren and G.N. Yin	673
Information Quantitative Analysis on Psychological Research C.J. Ren and Y. Liu	680
A Fast Block-Matching Motion Estimation Method Based on Difference Search Algorithm C.J. Liu, C. Chen, A.F. Zhang and X.L. Yan	686
Task Scheduling of Cloud Computing in Weapon Network System Q. Tao, B. Pan and W.Q. Cui	695
Discussion on the Construction of the Campus Desktop Virtualization H. Wang and M.Y. Wang	699
The Development of Sokoban Game Based on Android System Y.P. Shi	703
Analysis of Media Cloud Architecture and Security Technology C. Li, Z.T. Jiang and X.L. Huang	707
Analysis of E-Mail Security Events and its Solutions P. Niu and Z.T. Jiang	712
Robust Analysis on a Privacy Preserving Recommendation Algorithm under the KNN Attack Y. Gao, J.B. Xia, J.J. Ji and L. Ma	717
The Research of the Hybrid Volume Rendering Algorithm Based on GPU Technology J.J. Xiang, F. Deng and T.X. Ning	722
Triangulation-Based Point Cloud Data Processing Technology Research and Application K.H. Wu, W.C. Cui, B.H. Cheng and Q.Y. Zhang	729
Recent Advances in Script Identification K. Ubul, G. Tursun and A. Aysa	734
Improved Elliptic Encryption Algorithm Z.Z. Shao, J.F. Qiao, H. Li and Y.P. Li	741
A Collaborative Filtering Recommendation Algorithm Based on Cloud Model, Item Attribute and User Data J. Sun and X.Y. Chen	747
Research and Test on User Privilege Elevation Method in Windows 8 J. Du, H. Wang and J.Y. Yang	752
The Application of Compound Document Storage Technology in Forensic Analysis System J. Du, B.L. Chen and Z. Qin	756
Construction of an International IT-Driven Sharing Platform for Inheriting and Communication of Dongba Manuscripts X.L. Xu, G.X. Wu, H.J. Wang and T. Chen	760
A DNA Computing Model for the AND Gate in Three-Valued Logical Circuit J.Y. Shan, Z.X. Yin, X.Y. Tang and J.J. Tang	764

Data Warehousing and Data Mining Technology Implementation in Jpeen_CRM System Design	
H. Ding, Q.Y. Zhang, Y.P. Wang and Y. Jiang	769
Design and Implementation Logistics Cloud Platform Based on SOA	
Z. Zhe and J.H. Xu	775

Chapter 7: Communication, Network Engineering and Navigation

Joint Energy-Efficient Resource Allocation Scheme for AF-Based Multi-Relay OFDM Networks	
Z.K. Zhou and Q. Zhu	783
Research on Combined Prediction Model for Busy Telephone Traffic	
J.B. Li, Z.H. Jia, X.Z. Qin, L. Sheng and L. Chen	789
Energy-Efficient Opportunistic Routing Protocol in Wireless Sensor Networks	
Z.Y. Zhang, S.J. Wen, W.Z. Yang and F. Zhao	797
A Positioning System For Subway Trains Based on RFID	
H. Zhen, L.M. Jia and G.Q. Cai	808
Design of Vehicle Location and Communication System Based on BeiDou Navigation Satellite System (BDS)	
Z.D. Wang, Q.J. Zhou and Z.Z. Ruan	814
HTSC Cascaded Linear-Phase Filter with Quasi-Elliptic Response	
T.L. Zhang, K. Yang, X.Y. Ren, L. Zang, Y.F. Zhang, J.T. Tang and Z.X. Luo	822
Design and Development of Antennas Design and Testing System	
X.Y. Ran and Z. Yu	827
Safety Strategy Research on Mobile IPv6 Network Anti-Invasion	
H. Dai	835
Design and Implementation of Information Distribution System Based on Car Navigation Map	
C. Ruan, B. Lei, G.D. Sun and G.P. He	840
Application Analysis of TD-SCDMA & Wi-Fi Inter-Working Solution for Coal Mine Industry	
A.Y. Wang, Y.J. Li and Z.H. Yu	846
Analyses of Complex Networks Based on the Random Walk Model	
J.W. Deng, K.Y. Deng and Y.X. Li	850
Statistical Properties Analysis of Relay Channel	
X.X. Yang, C.Y. Zhang and Y.Z. Wang	854
Effect of Noise on Phase Spectrum Time-Delay Estimation Method	
L.L. Deng	862
The Application of Partial Response Window in OFDM Systems without Guard Interval	
L.J. Zhang, Y. Wang and Q.Y. Zhu	867
A 5.8 GHz Band Smart Antenna Using 4x4 Butler Matrix	
N. Soualmi, A. Rouaba and H.M. Li	878
The Research of DV-HOP Positioning Algorithm Based on RSSI Calibration	
J. Cao and M. Chen	882
The Throughput Analysis of IBTCRPP-CSMA in Ad Hoc Network	
H.W. Ding, Z. Wang, Y.F. Zhao, Z. Zheng and Q.L. Liu	888
Probability Detection CSMA with Monitoring Based on the Improved Binary Tree Conflict Resolution Algorithm	
Y.Y. Guo, H.W. Ding, Y.F. Zhao, J. Guo and Q.L. Liu	897
A Novel Algorithm for Long Pseudo-Code Acquisition in Spread Spectrum Communication System	
C.H. Ren and Z.Q. He	905
Improved AODV Routing Protocol Based on SNR	
B. Wang, H. Meng and S.Y. Li	910
Novel Code Acquisition Scheme for Weak GPS Signal	
X.S. Li and W. Guo	915

A New Parameter Estimation Method Based on Spectrum Character in Satellite Communication	
Z.Y. Ma, G.X. Zhang, D.M. Bian, Z.D. Xie and J. Hu	921
Research on Low Power Routing Protocol for WSNs	
A. Rouaba, N. Soualmi and H.Z. Wen	927
Simulation Implementation and Analysis of the Performance of M-QAM by Using MATLAB	
L.M. Yang, J. Guo, H.W. Ding, Y. Wang, H.M. Li and H.B. Shao	933
The Model of Routes Design Based on Optimization Theory and its Implementation	
Q.D. Ma, F.C. Jiang, Z.L. Jiao and K.Z. Yang	939
Downsampling Direct Sequence Spread Spectrum Signal Using Orthogonal Pretreatment	
J.B. Zhang, J. Cheng and L. Yang	944
The Loss Rate Analysis of Information Packet in Bi-Directional Cable TV Network	
Y.W. Yang, J. Guo, H.W. Ding, Y. Wang, Q.L. Liu and Y.Y. Guo	949
Dynamical Traffic Engineering in Software-Defined Network	
Y.F. Yu, Y. Li and D.P. Jin	954

Chapter 8: Material Science and Material Processing Technology

Triboluminescent Material for Short Wave Emission Effect and the Tribological Mechanism	
Q. Zhou, R.Q. Xu and S.Y. Xu	961
Research on the Material Model of Cold Deformation Strengthened Steel	
T.S. Zhang and H.H. Luo	967
Mathematical Programming Combined with Cascade Analysis in Refinery Hydrogen Networks Including a Purifier	
L. Ma, J.Q. Deng and Z. Cao	972
Degradable Scaffold Microstructure of Artificial Bioactive Bone Fabricated by 3D Braiding Method	
J. Liu	980
Structural Properties, Modeling and Optimization of Tribological Behaviors of Plasma Sprayed Ceramic Coatings	
S.H. Chen, M.D. Jean, C.D. Liu, S.C. Su, S.C. Chen, W.T. Wu and S.J. Lee	984
2-D Transient Radiative Heat Transfer Analysis on the Slab in a Walking-Beam-Type Reheating Furnace	
J.B. Huang, J.Y. Jang, C.N. Lin and C.H. Wang	993
A Novel Fabrication Technology of Hot Stamping Film	
Q.H. Chen, M.G. Su, Y.B. He, Y.J. Chen and W.G. Wu	998
Analysis and Prediction of Surface Integrity in Machining: A Review	
Y. Gao, X. Huang, M.J. Lin, Z.G. Wang and R.L. Sun	1002
Research on the Theory of the Laser Shock Processing Technology	
J.L. Lin and J.H. Fan	1021
Three Dimensional Analysis of the Slab Reheating Furnace	
J.Y. Jang, C.N. Lin, C.Y. Lee and C.H. Wang	1029

Chapter 9: Engineering Management

Research in Calculation Method of Automotive Eco-Design Assessment	
W. Wang, P. Zhang, J. Wang, J.H. Zheng, Y.J. Hui and N.J. Zheng	1037
The Research on the Long-Effect Mechanism of Industry-University-Research Cooperation Based on Swarm	
Y. Wang, X. Gu, F.N. Yu and M.S. Chen	1042
Competitiveness Analysis of Electricity in End-Use Energy Consumption Based on Fuzzy-AHP in Northeast China	
D.X. Niu, J. Fan, Y.C. Chen, G.R. Zhu and L. Liang	1046

National Economic Evaluation Model about Urban Public Transportation Structure Optimization

L.P. Wu and C.P. Pang

1050

Research on Walking Time of Transfer Pedestrians in Urban Rail Transit Station

J.C. Zheng, C.X. Ji and L. Gao

1053