

Table of Contents

Preface

Chapter 1: Advanced Materials Science, Chemical Engineering and Processing Technologies

High Value Added Utilization of Vanadium Slag T. Du, X. Fang and X.P. Zhang	3
Preparation of Zeolite 4A Using Laterite Nickel Slag and the Characteristic Study of CO₂/N₂ Separation T. Du, S.L. Li and F. Yang	7
Bi₂S₃ Nanoflowers Synthesized via Hydrothermal Method X.L. Chen and Y.P. Ji	11
Study of Oxidation Degradation Eosin by Ferrate D.S. Li and X.L. Chen	15
The Relationship between Calcium Hydroxide Concentration in Pore Solution and the Strength of Stabilized Soils L. Dai and X.X. Deng	19
Development and Application of the Screw Separator J.B. Yin, J. Lu, L. Zhao and S.S. Wang	23
On Laser Shock Processing to Improve Hot Corrosion Resistance of In718 Superalloy Y.C. Bai, Y.Q. Hua, Z. Rong, Q. Xue and R.F. Chen	27
Extraction and Purification of Fluorene from Wash Oil Y.S. E	31
Microwave Hydrothermal Synthesis and Characterization of In₂O₃ Nanocrystalline Y.Y. Hu, W.X. Ye, J. Lei, Q.X. Zhu, W.Q. Xiong and X.H. Liao	35
Synthesis of High-Strength and Water-Resistant Phosphogypsum Small Hollow Block H.B. Xie, W.B. Ma and C.T. Ye	39
Study on Laser Micro Shock Effect on Electrical Resistivity of Nanometer Copper Film Q. Xue, Y.Q. Hua, Y.C. Bai, R.F. Chen and H.X. Liu	45
Effect of Process Parameters on Residual Stress Distribution during Direct Laser Metal Deposition Shaping H. Wang	49
Plasma-Induced Degradation of Benzene in Aqueous Solution H.L. Qi, K. Gai and D.P. Ma	55
Liquid Phase Rhodamine Boxidation Induced by Plasma with Glow Discharge Electrolysis K. Gai, H.L. Qi, D.P. Ma and Y.Q. Zhang	60
The Preparation of ZnO: Al Thin Films on Flexible Substrates by Magnetron Sputtering Method X.J. Wang	65
Analysis Analysis and Suggestions on Device Clamp Screw Fracture of 110kV Transmission Line X.X. Xu, W.Y. Li, G.X. Zhang, Y.T. Feng, H. Ke, Q. Wang and H.X. Cui	69
Ply Thickness' Effect on Composite Laminate under Low-Velocity Impact X.C. Luo, T. Zhang and Q.S. Wang	74
Study on the Synthesis of Ethylene Glycol by Catalytic Hydrolyze of Ethylene Carbonate M. Zhang	79
Efficient Synthesis 2,3-Dihydroquinazolin-4(1H)-Ones Using Coconut Shell Char Sulfonic Acid as a Reusable Catalyst in Ethanol X.Y. Liu and Z.G. Yang	83
Study on the Urea Demand Model of SCR Control Technology Z.L. Liu and D. Wa	87

Effect of Sodium Methacrylsulfonate upon the Molecular Weight and Performance of Polycarboxylate Superplasticizer L. Xiong, G.J. Zheng, Y. Bi, C.F. Fu and S.F. Wang	91
Influence of the pH Value on the Water-Reducing Performance of Polycarboxylate-Based Superplasticizers at Room Temperature J.W. Wang, G.J. Zheng, S.F. Wang, C.F. Fu and Y. Bi	97
Preparation and <i>In Vitro</i> Release Behaviors of Paclitaxel-Loaded Pluronic F87/Poly(Lactic Acid) Nanoparticle Z.L. Li, Y.S. Huang, X.Y. Xiong, Y.C. Gong and Y.P. Li	102
Application of High-Efficiency Reverse Osmosis Technology in Reclaimed Water Treatment in Power Plants X. Long, Q. Zhu, X.Y. Wang and J.H. Shi	108
Measurement of Ultra Low Sulfur in IN718 by Using Infrared Absorption Method P.R. Zalupski and F.Y. Liu	115
The Synthesis and Characterization of Polyphenylene Vinylene (PPV) Derivatives with Alkoxy Branched Chains X.Z. Zhang and Y.W. Wang	121
Comparison and Characterization of Two Preparation Methods of Graphene Oxide H.B. Liu, W.Y. Zhang, F. Lin and H.D. Cao	125
Detection of Phase Purity of $\text{Sr}_2\text{FeMoO}_6$ by Raman Spectroscopy Z.F. Xu, Q. Zhang and S.J. Yuan	130
A Novel Environment Friendly Material: Sucrose Char Sulfonic Acid Catalyzed Three-Component Mannich Reaction Y.Y. She, X.Y. Liu and Z.G. Yang	134
Investigation of Sewage Sludge Anaerobic Digestion Performance Using Peracetic Acid as a Pretreatment N. Wei	138
Synthesis and Characterization of Sulfonated Poly(Arylene Ether Sulfone) Multiblock Copolymers for Proton Exchange Membrane T. Xue, Z.X. Hu and S.W. Chen	142
Study on Carbon and Sulfur Detection by Using Infrared Absorption Method M.R. Bayati and P.Y. Wei	146
Effects of the Carboxyl Density on the Properties of Polycarboxylate-Type Superplasticizer C.F. Fu, G.J. Zheng, K.L. Li, Y. Bi and L. Xiong	151
Preparation of Copolymer Modified with Oxidized Starch and Dispersion Ability for Ferric Oxide J.C. Xu, X.S. Rong, X.R. Guo and F.X. Qiu	156
Corrosion Inhibitor Polymer Modified with Acid Activated Attapulgite: Preparation and Performance of Dispersing Ferric Oxide J.C. Xu, X.S. Rong, X.R. Guo and F.X. Qiu	160
Preparation of a Novel Magnetic Stir Bar for the Pretreatment of the Plasticizers in Lake Water R. Feng	164
Simulation of CVD Diamond Film Growth by Method of Revised KMC L.Z. Zhang and F.Z. Wang	168
Relaxation Properties of the Solid Propellant Based on Hydroxyl-Terminated Polybutadiene Z.M. Xie, S.C. Chen and Y.S. Wang	172
Effect of Fiber's Surface Pretreatment on the Interfacial Bonding Strength between Steel Fiber and Resin H. Yang, J.H. Zhang, G.Y. Sun and Y. Zhang	177
Synthesis Alloy and Composite Materials of Nano-Silver-Nickel W.J. Cui, L. Wang, J.W. Fu and D.Y. Zhao	181
Synthesis and Phase Behavior of a New Thiophene Monomer as Nematic Liquid Crystal L. Wang, Y.J. Xie, X.X. Zhang and J.S. Hu	185
Synthesis of Novel Cationic Asphalt Emulsifier and its Investigation by Online FTIR Spectrophotometry M.J. Sun, L.S. Shi, Z.Y. Jin, N. Li and X. Tao	189
Original Silk Pre-Oxidation Treatment of Carbon Fiber from Coal Tar Pitch X.F. Zhao, Y.F. Wen, T. Qi, S.Q. Lai and L.J. Gao	194

4	
X.E. Zhao	199
New Seawater Flocculants	
J.A. Hao, B. Yang, X.Q. Zhang, A.J. Zhang, T.X. Jiang, X.Z. Zhang, J. Wang and Y.S. Zhang	203
Research on the Corrosion Resistance of Tinplate with Reflowing Technology	
C.Q. An, C.M. Liu, H. Wang and S.D. Zhang	208
Effect of Ferrite Volume Fraction on Mechanical Properties of X80 Pipeline Steel	
J. Liu, G. Zhu and W. Mao	212
Computer Simulation: A Tool for Researching the Basic Physical Properties of NiAl and Ni₃Al	
C. Xu and D. Chen	216
Newly Determined Crystal Structure and Optical Property of the Intermetallic NiAl and Ni₃Al Alloys: A First-Principles Computer Simulated Investigation	
C. Xu and D. Chen	220
TiO₂-Based Composite Film for the Photodegradation of Methyl Green	
N. Song, F. Li and M.M. Yao	224
Synthesis and Characterization on a Kind of Polycarboxylate Superplasticizer	
X. Li, G.J. Zheng, Y. Bi, C.F. Fu, M.H. Yuan and S.F. Wang	228
Synthesis for an Amide-Ester Type Polycarboxylate Superplasticizer and its Application in Concrete	
C. Sun, G.J. Zheng, Y. Bi and H. Zhou	233
High Cycle Fatigue Performances of Advanced High Strength Steel CP800	
L.M. Gui, X.C. Jin, H.T. Li and M. Zhang	238
Preparation and Dielectric Property of Ag/PVDF Composite Film	
Y.J. Wang, J.W. Zhai, F.F. Wang and C.G. Feng	242
Microstructure and Wear Resistance of Cu_{0.9}NiAlCoCrFe High Entropy Alloy Coating on AZ91D Magnesium Alloys by Laser Cladding	
K.J. Huang, Y.Y. Wang and X. Lin	246
Temporal and Spatial Characterizations of Zn Ions in Plasma by Pulsed-Laser Ablation of Zinc Metal in Vacuum Condition	
Y. Jiao	251
Lignite-Fired CFB Boiler SO₂, NO Emission Control Technology Research	
J.M. Yang, B.Z. Wang and W. Wang	256
Laying the Ground of Indoor Restrooms by Using Foam Glass and Waterproof Coating	
S.M. Shi	260
Influence of Mo Addition on a Nickel-Base Single Crystal Superalloy	
K. Zhao	264
Superhydrophobicity of Silicon-Based Microstructured Surfaces	
G. Li	267
Research on Erosion Resistance of TiB₂ Ceramic Particle Reinforced MMC Coating	
J.J. Fang, Y.J. Song and Z.X. Li	270
The Application of New Material in Industrial Design	
L.L. Wang, T.T. Xie and Y.J. Liu	276
Spherical SrCO₃ Nanopowder Synthesized by Super Gravity Method	
Z.S. Yang, J.H. Jin, B. Li, X.W. Zou Qi and Y.Z. Gang	280
Synthesis of a Novel Donor Unit for Organic Light-Emitting Materials: 10-octyl-3,7-di(thiophen-2-Yl)-10H-Phenothiazine	
Z.B. Tang, X.X. Sun, L.P. Miao and H.Y. Shen	284
Current Situation and Latest Development of Intelligent Materials	
G.M. Lin, F. Yuan and Y.H. Li	288
Synthesis of a Novel D-A Type Molecule Based on Carbazole Unit for Organic Light-Emitting Material Applications	
Z.B. Tang, X.X. Sun, H.W. Yan and L.P. Miao	292
Growth Behavior of WC Grains in Ni₃Al Matrix during Liquid Phase Sintering	
W.B. Zhang, W. Peng, J.Z. Long and X.Y. Wei	297
Synthesis and Characterization of Nano Melamine Phosphate	
Z.Z. Wang and S.H. Xu	301

Preparation and Characterization of Transparent Oxyfluoride Tellurite Glass-Ceramics Containing CaF₂ Nanocrystals	305
Z.X. Hou, H.X. Li, S.H. Wang, M.H. Wang and X.D. Hu	
Influence of Electrolysis and Plasma Polishing on Surface Properties of SUS304 Stainless Steel	308
X.M. Zong, J. Wang, Y.F. Wang and J.F. Liu	
Effect of Initial Concentration of Cu²⁺ on the Adsorption Performance of Hydroxyapatite	312
Y.T. Guan, S.H. Wang, M.H. Wang, Z.X. Hou, X.D. Hu, H. Wang, H.L. Fan and N. Zhang	
Li_{0.95}Na_{0.05}Ti₂(PO₄)₃/C with Good Performance as Anode Material for Aqueous Rechargeable Lithium Batteries	316
J. Zhu, Y.G. Liu, Q.Q. Tian, L. Wang and J.L. Cao	
Effect of Melting Temperature on Microstructure of <i>In Situ</i> TiC/Al Composite and Formation Mechanism of TiC	320
H.L. Yuan, Z.H. Zhou, Z.H. Wang, Z.J. Zhong, X. Zhang and X.F. Xue	
Effect of Cr on Microstructure and Mechanical Properties of Al–3.2Mg Alloys	325
Z.J. Zhong, Z.H. Zhou, Z.H. Wang, X. Zhang, H.L. Yuan and X.F. Xue	
Research on Preparation of Aluminum-Metal Coating and its Microstructure by Melting-Casting	331
X.F. Xue, Z.H. Zhou, Z.H. Wang, J. Shao, H.L. Yuan and Z.J. Zhong	
Research Progress of Graphene-Based Composites in Supercapacitor	337
Z.X. Hou, G.B. Li, S.H. Wang, M.H. Wang, X.D. Hu, Y. Zhou and S.M. Li	
Dielectric Barrier Discharge Plasma Reduced Pt Catalysts Supported on Activated Carbon and their Electrocatalytic Activity	340
L.B. Di	
Preparation of Au/P25 Catalysts for Removal of CO by Dielectric Barrier Discharge Plasma	344
L.B. Di	
Kinetics of Inverse Emulsion Copolymerization of Dimethyl Diallyl Ammonium Chloride and Acrylamide	348
X.N. Wang, R.Z. Zhang and N.S. Jin	
Research of Formation Mechanics on Nanostructured Chips by Multi-Deformations Based on Finite Element Method	352
C.L. Wu, Z.R. Wang and W. Zhang	
Single Frequency LD-Pumped 2.09 μm Cr, Tm, Ho: YAG Microchip Laser	356
Y.M. Nie, Y.K. Guo, X. Ding and M.M. Guo	
Review and Prospect on Tear Damage Research for High-Performance Flexible Fiber-Reinforced Composite Material	360
S. Cao, L.B. Liu, H.D. Xiao and M.Y. Lv	
Influence of Volume Fraction of Piezoelectric Ceramics on Properties of PZT672/Epoxy1-3 Piezocomposite	364
B. Zhang, L.K. Wang, L. Qin, C. Zhong, D. Long and J.J. Liu	
Luminescence Properties of Rare-Earth Co-Doped Phosphate Glasses for White Light Emitting Diodes	369
G.H. Chen, X.L. Kang and Y. Yang	
Monolithic Porous Graphene/Poly(Vinyl Alcohol) Gels: Preparation, Structure and Dye Adsorption	373
P. Wang and Y.P. Guo	
Research Progress for High Strength Structural Steel and Key Issues of Application in Seismic Zone	379
L.X. Ji and T. An	
Luminescent Properties of Ca_{1-x}Ba_xSnO₃: Eu³⁺, Dy³⁺ Composites Prepared by Coprecipitation	383
L.M. Dong, F. Lv, Q. Li, Z.D. Han and X.Y. Zhang	
Study of Dislocation Densities of Thick GaN Films	387
Y.G. Li, X.Q. Xiu, X.M. Hua, S.Y. Zhang, S.P. Gu, R. Zhang, Z.L. Xie, B. Liu, P. Chen, P. Han and Y.D. Zheng	
The Luminescence Properties of Green YPO₄: Tb³⁺, Ce³⁺ Phosphors for WLED	391
J. Li, L.M. Dong, Q. Li and Z.D. Han	

Preparation and Luminescent Properties of Single White $\text{Ca}_2\text{MgSi}_2\text{O}_7$: Eu^{3+}, Ce^{3+}, Tb^{3+} Phosphor for WLED	
X.Q. Zhang, L.M. Dong, X.C. Tang, Q. Li and Z.D. Han	395
The Temperature Control of the Preheating Tank in the Procedure of Chloroacetic Acid's Crystallization	
Z.F. Wang, C.Y. Liu, X.L. Song and Y.X. Gao	399
Effects of SnCl_4 Concentration on the Properties of Electroless Deposited Ni-Sn-P Coatings	
X.R. Wang, W.T. Wang and B. Yang	403
Application of Environmental Rubber in Concrete Road Engineering	
R. Yang	407
Hot Water Extraction of Corncob Hemicelluloses to Prepare Composite Films	
Q.X. Yu, G. Yu, Y.D. Zhang, Y.F. Liu, H.S. Wang and F.Q. Chu	412
Analysis of the Atmospheric Particles Governance Based on Aerosol Hygroscopicity	
T.Y. Sun, Q.Y. Wang, J. Zhang and J.X. Ren	416
Effect of Ni on Corrosion Resistance of Weathering Steels in Wet/Dry Environments	
R. Liu, X.P. Chen and Q.N. Shi	420
Corrugated Waist Rail Microstructure Evolution Simulation	
J.H. Ma, B. Tao and X.H. Yao	425
The Recrystallization of Corrugated Waist Rail in the Rolling Process	
J.H. Ma, B. Tao and X.H. Yao	429
Behavior of Geosynthetic Clay Liners due to the Migration of Heavy Metal	
J.J. Fan	433
Study on the Morphology and Thermal Stability of $\text{Li}_2\text{SrSiO}_4$: Tb^{3+} Materials	
P.L. You	437
Study on CO_2 Adsorption of Halloysite Modified by Silane Coupling	
H.L. Zhang, X.Y. Lai and H.J. Wu	441
Electrochemical Behavior of the Initial Atmospheric Corrosion of 2Cr13 Steel in Guiyang City Atmosphere	
L.Y. Li and Y.N. Hu	446
The Difficulties of Dyeing of Flax Fiber and the Improving Method	
Q.Y. Zhang, Z.D. Liu, Y. Zhang and L.B. Xu	450
Spatial Distribution of Heavy Metal in Urban Soil of China	
X.X. Li	454
Research on Chloride Appropriate Dosage for Incorporated Accelerated Corrosion	
Q.X. Liu and S.L. Zhan	458
Effects of Feed Rate and pH Value on the Physical and Electrochemical Properties of $\text{LiNi}_{0.4}\text{Co}_{0.2}\text{Mn}_{0.4}\text{O}_2$ Cathode Material for Lithiumion Battery	
F. Du and L.F. Peng	462
Optical Absorption Study of Ar^+ Implanted SrTiO_3 Single Crystals	
Y.S. Wang, M.J. Zhang, Y.D. Gao, D.F. Liu, Y.W. Chen and P.F. Wang	467
Au Nanoparticles Prepared by Microwave Irradiation	
Y. Qiao and A.N. Jiang	471
Test and Research on Controlled Cooling Technology for High Carbon High Silicon Wire Rod of S87B	
L. Zhang, J.L. Sun, Y. Li, J. Cui and F. Zhang	475
Simultaneous Determination of Ruthenium, Zinc and Zirconium in Waste Zirconium Dioxide Loaded Ruthenium-Zinc Catalysts Using Inductively Coupled Plasma Optical Emission Spectrometry	
X.J. Wei and J.M. Pan	480
Propagation Characteristics of Seismic Waves Taking Stratigraphic Composition into Consideration	
B.B. Xu, K. Nakai and T. Noda	484
Effect of SO_2 on Mn-Mg-O_x Catalyst Treated by Non-Thermal Plasma for NO Catalytic Oxidation	
R.Y. Lai, X.L. Tang, H.H. Yi, K. Li, Y. Xiang and X. Sun	490
Synthesis and Characterisation of a Novel Thermoresponsive Dendronized Monomer Bearing Azobenzene Moiety	
C.A. Yang, W.J. Xiao, E.X. Liang, Y. Lu and G.Y. Li	494

Temperature Controlled Dispersion of Multi-Walled Carbon Nanotubes in Water with Poly[(N-Isopropylacrylamide)-Co-(Ionic Liquid)] W.J. Xiao, C.A. Yang, J.J. Peng, J.Y. Li and Y. Bai	498
Rapid Repair of Titanium Aero Structure with Cracks Y.S. Guo and Y. Zhang	502
Determination of Novel Brominated Flame Retardants in Flexible Polyurethane Foam by GC-MS Y.J. Chen, P.G. Dai, L.Z. Peng, C. Du and S.J. Liang	506
Affect of Brominated Flame Retardant on the Flexible Polyurethane Foam Y.J. Chen, L.Z. Peng, P.G. Dai, D.L. Li and L.J. Wu	511
Effect of Reinforcement Addition on Microstructure and Mechanical Properties of Al Matrix Composites G.J. Ma, Y.T. Ding and P.P. Jin	515
Preparation and Properties of Complex Antioxidants LDPE Antioxidant Film H. Yang, L. Li, F.X. Yang, Y.Y. Zhou, L.J. Ou and S.F. Hu	519
Photo-Switchable Binding between a Photochromic Calix[4]Arene Derivative and Lanthanum Ions Z.L. Liu, X.H. Li and Z.N. Yu	523
Highly Efficient Photodegradation of MO Dye by TiO₂ Nanoparticles X.Z. Fang and L.S. Gao	527
Preparation of Visible-Light Active Mn-Doped TiO₂ Photocatalyst and its Photodegradation of Methylene Blue from Solution Y. Chen and X.J. Ma	531
Adsorption and Inhibitive Properties of 1-phenylaminomethyl-benzimidazole on Corrosion of Mild Steel in Hydrochloric Acid T.J. Su and K.H. Li	536
Progress in Preparation of Nano-Sized Magnesium Hydroxide from Concentrated Seawater and Brine H.H. Wu, C.J. Gao, B.J. Luo, D. Wu, S.Y. Lu and X.P. Huang	540
The Network Prediction of Hot Temperature Flow Stress and Dynamic Recrystallization of AZ61 Alloy Q. Li, W.J. Liu, R.J. Cheng, C. Li, S. Jiang, S.Q. Luo, X.Q. Jiang and F.S. Pan	544
The Finite Element Simulation of Thermal Deformation and Microstructure Evolution Forecast of AZ61 Alloy Q. Li, W.J. Liu, R.J. Cheng, C. Li, S. Jiang, S.Q. Luo, X.Q. Jiang and F.S. Pan	548
Research Progress of Tungsten Nanorods and Nanoplatelets A.M. Jiang, X.Q. Jiang, J. Yang, R.J. Yang and R. Yu	552
A Method for Scale-Up of Grooved Nanofibers via Flat Off-Centered Core-Shell Structure Spinneret H.H. Wu, X.H. Meng and Y.C. Zeng	556
The Preparation and Characterization of Polybenzoxazole Copolymerized with Multiwalled Carbon Nanotube via Direct Friedel-Crafts Acylation Y. Chen, J. Qian, Q.X. Zhuang and Z.W. Han	560
Different Chemical Oxidant of Benzene Series Pollution Site Repair Effect D.L. Li, X.L. Fang, M.D. Yu, H. Lv and Y. Yang	564
Design, Synthesis and Anticancer Activity of 4-Morpholinothieno[3,2-D]-Pyrimidine Derivatives Bearing Chromone Moiety C.Y. Sun, C. Chen, C.J. Wu, P.W. Zheng and W.F. Zhu	568
Vertical Flow Constructed Wetland Spherical Light Ceramsite Substrate Nitrogen Factor Research Y. Yu, H.J. Yu and T. Jiang	572
Effect of Post-Weld Heat Treatment on Carbide Precipitation and Impact Properties of Coarse-Grained Heat-Affected Zone of Q690 Steel Z.S. Li, S.L. Li, L. Tian, X.H. Zhang and J.Z. Liu	576
Preparation of Polypropylene/Sisal Fiber Composites and Study on the Fiber Orientation R.Y. Chen, Z. Huang, W. Zou, H.C. Zhang and J.P. Qu	581
Mechanical Properties of Chopped Carbon Fiber Reinforced PBS/CF Composites W. Li and J.P. Qu	587

Study on Optimization of Degradation of Landfill Leachate by Electrochemical Oxidation Process with Response Surface Methodology Y. Yu, H.J. Yu and Y.P. Zhao	591
Experimental Research on Silicon-Based Composite Resistance Characteristic under Thermal Load Z.H. Du, X.F. Hu, M. Wei, L. Wang and B.F. Ren	595
Electrical Simulation Experiment and the Analysis of Thermal Conductivity of Materials W.B. Li, Y.G. Jin, S. Yin and P.Y. Chen	599
Study on the Impact of DO and Organic Matter on Aerobic Granular Sludge Treating Municipal Sewage Y. Yu, H.J. Yu and C.C. Ma	603
Flame Retardancy Finishing on Wool Fabric via Sol-Gel Method W. Zhang, Q.H. Zhang, G.Q. Chen and T.L. Xing	607
Minimum Particle Diameter of the Vanadium/Iron Co-Doped Nano TiO₂ Transparent Hydrosol at Room Temperature L. Li, W.M. Zhang, H.Y. Zhang, Z.H. Xu, S. Wang, X.W. Li and G.Y. Dong	611
Design of the Portable Detector for Formaldehyde L. Fu and X.W. Fu	615
Numerical Simulation of the Nanofluid Phase Separation by Lattice Boltzmann Method S.G. Yao, X.W. Jia, C.J. Zhou and Y.H. Nie	619
The Emission Property of Phosphors LEDs Based on ZnCuInS/ZnSe/ZnS Quantum Dots K. Bi, W.Y. Liu, T.Y. Xu, T.Q. Zhang and Y. Zhang	623
The Synthesis of Ionic Liquid Crystal Polymer and the Study of as Chromatographic Stationary Phase S. Fu and J. Zhang	626
Research on Properties of CB/EVA Semiconductive Shielding Composites B.Z. Han, C.Y. Li, C.C. Zhang and C.M. Li	629
Hygrothermal Ageing Modeling and Numerical Testing of Unidirectional Polymeric Composites B. Imran Shaban and Y. Zhao	634
Attenuation Characteristics of Ultrasonic Velocity and Acoustic-Based TC4 Alloy Uniformity Nondestructive Evaluation G.H. Wu, Y.F. Lu, Y.X. Huang and W. Wu	638
Preparation and Application of Blocked & Crosslinked Waterborne Polyurethane Microemulsion as Paper Strengthening Agent X.J. Lai, M.N. Gong and L. Wang	644
The Fatigue Life Prediction for EB-PVD Thermal Barrier Coating Y. Hao and H.Y. Qi	648
Research on Performance Features of Shape Memory Alloys G.M. Lin and Y.H. Li	652
Structural and Optical Properties of Al Co-Doped ZnCoO Thin Film P. Cao and Y. Bai	656
The Most Probable Mechanism Function of PVC Thermal Decomposition N. Xu, G.C. Li and R.F. Guan	660
Preparation of Polyacrylic Acid/Rice Straw Composite Superabsorbent and the Loading and Release Properties for Urea F. Zhang, G. Tang, S.T. Yu, G.H. Hou and N. Xu	665
Low-Temperature Catalytic Combustion of VOCs over MnO_x-ZnO Mixed Oxides Supported on Cordierite Ceramic Q. Huang, Y.W. Chen, S.B. Shen and M.D. Chen	671
Ionic Liquid [Bmim]OH Grafted Catalyst for Cycloaddition of Carbon Dioxide X.L. Zhang and D.F. Wang	676
The Molecular Orientation in Monomolecular Layer of Phthalocyanine and Porphyrin Derivatives C.P. Zhang, H.M. Guo, H.N. Cui, H.S. Wang and S.Q. Xi	680
Research on Grinding Ti6Al4V Alloy with Inner-Lubricating Wheel W.G. Huo, X.Y. Zhang, Q.Y. Dong, L.R. Cai and J. Shao	684
The Studies of ScB₂ (0001) Surfaces from the First-Principles H. Zhao and Q. Han	688

Synthesis and Fluorescence Study of Cobalt(II) Deuteroporphyrin Dimethyl Ester C.M. Yu and B.C. Hu	694
A Study of the Effect of Starch in Polymer Blends of Carboxymethyl Cellulose and Chitosan N. Keungputpong, N. Matchariyakul and S. Tiptipakorn	697
A New Type Aluminum Alloy Backup Frame of FAST Project B.Q. Zhao, Q.M. Wang, Q. Zhao, X.D. Gu and J.W. Hu	701
Changes in Water Adsorption Desorption Isotherms of Cement Mortars Caused by Carbonation Coupled with Humidification-Drying Cycles T.P. Son	705
Research Progress of Sintered Wall Material Products Synchronous Cutting Machine H.M. Liu, C.Q. Wu, X. Zhang and Y.B. Xu	710
The Higher Order Crack Tip Fields for Anti-Plane Crack in Linear Functionally Graded Piezoelectric Materials Y. Dai, X. Chong and S.M. Li	715
The Crack Tip Fields for Anti-Plane Interfacial Crack between Functionally Graded and Homogeneous Piezoelectric Materials Y. Dai and X. Chong	719
The Preparation and Detection of Quality Standard about Houittuynia Spray T. Xia, Q.D. Chen, J.K. Wang, J. Zeng and J.Y. Guo	723
Ethylene Oligomerization by Ni(II) Complex Based on Peptide W. Bai, C.G. Cao, H.X. Pei, K.H. Hu, H. Zhou, M. Peng, T. Jiang and J.Y. Dong	727
Synthesis of Nickel(II) Complexes and its Application to Ethylene Oligomerization J.B. Kou, S.N. Zhao, C.G. Cao, H. Zhou, K.H. Hu, M. Peng, G.S. Su, T. Jiang and J.Y. Dong	731
In Situ Formation of Insect Repellent Delivery System D.R. Lin and L.J. Hu	735
Structure of Bridged Silsesquioxane Material Bearing a Pendant Dodecylamine D.R. Lin and L.J. Hu	739
Hedgehog Buckyball: High-Symmetry Complete Polyhedral Oligomeric Silsesquioxanes (POSSs) Characterized by UV-MALDI-TOF Mass Spectrometry D.R. Lin and L.J. Hu	743
Effect of Temperature on the Growth and Biochemical Composition of <i>Sargassum muticum</i> C.Y. Yuan, S. Yang, Y. Wang and Q.M. Cui	747
Numerical Simulation of Cr12MoV Steel during Quenching Process W. Zhang, Z.D. Qu, X.H. Deng and X.W. Duan	751
Effect of NH₄Cl Flux on Structural and Luminescent Properties of CaS: Eu²⁺ Phosphors Y.J. Zhang, J. Zhao, D.J. Wang and J. Ma	755
Preparation and Properties of Multi-Elements Doped Perovskite-Type Mixed Conductors for IT-SOFC Cathodes J. Fu, J. Zhao, Y. Fu and R.R. Li	759
Research on Microstructure and Properties of Plasma Powder Spray Welding Layer Based on 3D Printing E. Meheretu, Z.M. Wang and H.C. Han	763
The Bioactivity of Gradient Composite Bioceramic Coating with Two Kinds of Rare Earth Oxide Fabricated by Wide Band Laser Cladding P.Z. Jiang, Q.B. Liu, L.Y. Zhang, H.B. Jiang and Z. Zhang	767
Discussions on the Pretreatment of the Air-Conditioning/Cotton Blended Fiber – The Application of Tea Saponin Y.J. Zhang and Y.Y. Zhang	771
Effect of Mixed Multiple Rare Earth Oxide on the Microstructure of Bioceramic Coating Prepared by Wide Band Laser Cladding Z. Zhang, Q.B. Liu, L.Y. Zhang, H.B. Jiang and P.Z. Jiang	775
The Chemistry Model of Ion-Ion Interaction Energy of Full Ionized Hydrogen Plasma L.S. Guo, X.R. Zheng and Z.R. Wu	779
Study on Catalyst for Catalytic Ozonation to Leachate and Catalytic Process B.J. Jiang, Z.J. Tian and J.M. Jiang	783
Carbon Nanotubes-Assisted Fabrication of TiO₂ Nanocomposite Film for Optimum Electrochromic Application S.P. Liu, W. Wang, L.L. Cui and H.N. Guan	789

Evaluation the Effect of Anti-Oxidation of Chondroitin Sulfate L.P. Xu and X. Wang	793
On Pretreatment Experimental Study of High Strength Gypsum by Yunnan Phosphorus Gypsum S.C. Quan, Z.M. Zhao, R. Tian and S. Han	797
Research on the Treatment of the Yellow River Micro-Polluted Water in Shanxi by Ozone-Activated Carbon Process X.B. Tang, J.F. Zou, K.F. He, J. Liu, J.J. Zhou, F.J. Wang, Y.X. Yuan and J.G. He	803
Dye Adsorbent Prepared by Crosslinking of Poly(γ-glutamic acid) and Gelatin W. Wang, S.P. Liu, H.N. Guan, J.Z. Liang and C. Tan	809
Study on the Growth Model of Expandable Graphite F. Ye, C.G. Zhu and Z.H. Zhang	814
Coupled Hydrogen and Oxygen Isotope Analyses for the Mainstream of Poyanghu Lake (Jiangxi Province) and their Environmental Implications D.R. Lai, A.D. Wang, C.G. Li, Y.P. Chen, Z.B. Yan and J.J. Wan	820
Experimental Study the Affection of the Dust Emission on Sand Stockpile by the Height of Windbreak Wall and Wind Speed Z.Q. Liu, L.Y. Ma and X.Y. Zhao	823
Adsorption Removal of Phosphorus from Wastewater by Steel Slag Filter Material J.T. Wang, Y.Z. Yu and L.L. Gao	827
Simulation of Vapor Absorption of Aqueous LiBr Solution on Alternate Heat and Mass Transfer Surfaces of Corrugated Plates and Mesh Pecking R.B. Cao, Y.P. Chen and J.F. Wu	831
A Novel Multilayer Structure with Frequency Selected Surface for Electromagnetic Compatibility J. Li and D.L. Xu	837
Study on Processing Technology of Brewer's Grains on Acid Dye Brilliant Cresyl Blue Wastewater Y.H. Jiang, X.L. Jiang and C.G. Cai	841
A New Harmless Disposal Method of Aluminium Phosphide Residue X.C. Wang, D. Li, S.L. Duan, D.B. Li and X.L. Qi	845
Experimental Study on Sewage Treatment by Vortex-Grid Flocculation Technology F.P. Hu, H.H. Li, L.Y. Wang, Z.G. Tong, Q. Zhang and H.L. Dai	849
Study on Removing Atrazine and Chlorothalonil in Raw Water in Reservoirs in North China by PAC Adsorption and Enhanced Coagulation J.F. Zou, X.B. Tang, M. Yu, J.J. Zhou, F.J. Wang, J.G. He and Y.X. Yuan	853
Modified Reduced Graphene Oxide with Enhanced Solubility and Conductivity and its Application X.P. Zeng	859
Aero-Optical Effects of $Mc=0.5$ Supersonic Mixing Layer L.F. Tian, S.H. Yi, Y.Z. Zhu, Y.X. Zhao and L. He	863
Simulation Realization of Frequency-Variable and Speed-Adjustable System Based on Vector Control Y. She	867
Research Status and Application Prospect of Deep Cryogenic Treatment Technology on Cemented Carbide T.H. Guan, H.M. Liu, Y.B. Xu, C.Q. Wu and Y. Lv	871

Chapter 2: Applied Mechanics, Construction and Testing Technologies

The Fatigue Performance Evaluation of Pressure Vessel Steel Using Modified Staircase Method H. Xue, R.F. Li, L.X. Wu, W.J. Peng and J.Q. Huang	879
The Welding Residual Stress Analysis on High Performance Bridge Steel with Different Testing Method H. Xue, R.F. Li, L. Yu, D. Liu and W.J. Peng	883
A Study on the Sample Overheat Phenomenon of Fatigue Test H. Xue, J. He, J.Q. Hu, L.X. Kuang and W.J. Peng	887

Numerical Simulation Study of Stress-Magnetization Effect on Different Notch Steel Specimens	891
X.W. Xi, S.K. Ren and Y. Huang	
Study on Factors of Axial Crushing of Thin-Walled High-Strength Steel Sections Used in Passenger Car	898
G.F. Zhao, Y.W. Hu, X. Cheng and K. Xiao	
Study on the Borehole Stability in Liulin Coal Reservoirs	903
L.Y. Song, L.J. Xiao, J.W. Wang, J. Zhang and T.L. Zhuang	
An Improved CEM with Regard to the Crack-Tip	908
Y.S. Lin	
Efficiency Prediction of Limestone-Gypsum Wet Desulphurization Based on Support Vector Machine	913
J.M. Yang, B.S. Sun and N.Z. Qi	
Research on Failure Mechanism Consistency in Accelerated Wear Test of Metal Materials	918
X.B. Ma and B. Cheng	
Stability Analysis of Single-Pier Variable Cross-Section Box-Girder Continuous Bridge	923
G.S. Yin, J. Bai and J.J. Feng	
Effect of Convex Platform on Stress Distribution in Nickel-Based Superalloy Plate Produced by Vacuum Countergravity Casting	927
C.M. Zou, S.Q. Su, H.W. Wang and Z.J. Wei	
Calculation about Stress Concentration Coefficient of Welded Cruciform Joints of Magnesium Alloy Based on FEM	931
B.L. He, Y.X. Yu, X.D. Zhang and S.S. Xia	
Finite Element Calculation about Stress Concentration Coefficient of Welded Butt Joints of Magnesium Alloy	935
Y.X. Yu, B.L. He, X.D. Zhang and S.Y. Lei	
Effect Study of Water on the Mechanical Behavior of Gangue in Chongqing Tongliang Mine	939
Y.J. Zang	
Experimental Research on Tensile Strength of Out-of-Plane Composite Joints for Integrated Composite Cabins	943
D.H. Zhang, X.H. Zhou and L.W. Zhou	
Modeling and Simulation Analysis on Building Temperature and Toughness	947
Q. Zhang	
Relationship Modeling between Tensile Strength of Steel Building and Temperature	951
Q. Zhang	
Study on the Affects of Partition of the Parallel and Cross Tunnel Adjacent Construction	954
W. Zheng and L. Gao	
The Application of MASW Method on the Studying of the Vibrations in Civil Engineering	958
K. Luo	
Experiment Research on Mechanical Properties and Penetration Performance of UHMWPE Fiber Concrete	961
Y.W. Zhang, L.H. Yan, L. Zhu, S. Zhang and L.F. Li	
Treatment of Simulated Acid Mine Drainage by Permeable Reactive Barrier: Column Study	966
C.F. Cai, F.Z. Qi, X.L. Lin and L. Jiang	
New Method to Predict the Bearing Capacity and End-Bearing Ratio of Friction-Type Long Pile	970
Z. Qian and K.H. Wang	
Research on the Succession of <i>Artemisia ordosica</i> Community in Mu Us Sandy Land	975
J.H. Zhang	
Research on Performance of Coupled Heat Pump System with Different Backfill Material	978
J. Liu	
Numerical Simulation of the Kinetic Energy Projectile Oblique Penetration into the Concrete	982
J. Chen and X.J. Ye	
Analysis on Aerostatic Stability for Jianghai Direct Ship Channel Bridge in Finished Stage	986
L. Yu, S. Wang, Y.Y. Che and G.H. Zhao	

Chapter 3: Bio- and Medicine Research

Spectrophotometric Method for the Assay of Norfloxacin Lactate Y.H. Lei	993
Co-Expression of Threonine Dehydratase and Acetolactate Synthase in Escherichia Coli for L-Isoleucine Production J. Wang, J.K. Sun and Q.Y. Xu	997
Developing a Sensitive Reporter System for Monitoring of Pancreatic and Duodenal Homeobox Gene 1 (Pdx1) and Neurogenin 3 (Ngn3) – Mediated Transdifferentiation from Human Hepatic Cells into Insulin-Producing Beta-Like Cells C. Xie, W. Donelan, S. Lu and L.J. Yang	1003
A Method for the Determination of Atropine in Pharmaceutical Preparation Using CE-ECL Q. Xiang, X.D. Yang and Y. Gao	1007
Effect of Natural Clarifying Agents ZTC1+1 II on Purification of <i>Angelica</i> Polysaccharides C.L. Li, Y. Men, L. Yang, A.M. Yang and Q. Shang	1011
Effect of Ginkgo Biloba Extract on Contractility Enhancement of Diaphragm of Rats with Type 2 Diabetes X.S. Li, R.Y. Wu and Y. Hu	1015
Study on Degradation of Radix Isatidis Polypeptide in Artificial Gastrointestinal Environment N. Nan and X.J. Liu	1020
Repetitive-Element PCR Technology for Identification of Mulberry Pathogens G. Li, H.Z. Song, J. Wang and F.A. Wu	1025
Optimum Process for Extraction of Total Flavonoids from Castor Leaves by Orthogonal Test Y.H. Jiang, X.L. Jiang and C.G. Cai	1029
Comparative Bioenergetics of Diploid and Triploid Pacific Oysters <i>Crassostrea gigas</i> at Different Temperatures X.Y. Li and Z.M. Zhou	1033
Prognostic Significance of Glycoprotein 96 in Human Hepatocellular Carcinoma X.P. Wang, H.P. Lin, B. Xu, K.P. Zhang, J.G. Fang and Y.X. Yang	1037
An Evaluation of the Potential for Pharmacokinetic Interaction between Tramadol and Cytochrome P450 2D6 Inhibitor Promethazine P. Liu, L. Sun, J. Zhang and R.C. Guo	1041
Effect of Crude Polysaccharides from <i>Discorea bulbifera</i> L. on the Liver in the Mice Bearing U14 Cervical Carcinoma H.X. Cui	1044
Design, Synthesis, and Biological Evaluation of Sorafenib Analogs Bearing a Sulfonylurea Unit as Novel VEGFR2 Kinase Inhibitors W.F. Zhu, C.J. Wu, S. Xu, W. Li, H.H. Fang, Z.C. Chen, X.H. Tu and P.W. Zheng	1048
The Effects of the Film Made by Citral β-Cyclodextrin Inclusion Complex Combined with Chitosan on Fresh Beef H.J. Chen, F.X. Yang, L.J. Ou, D.X. Zhou and L. Li	1052
Polysaccharide from <i>Eucheuma Gelatinae</i> Enhance Immunocompetence against Murine H22 Tumor <i>In Vivo</i> J. Tang, Z. Kong, D.Y. Liu and A.J. Liu	1056
Analysis of Paclitaxel in Pharmaceutical Injection by Ultra Performance Convergence Chromatography X. Gong, X.B. Huang, Y.H. Wei, N.L. Qi, L.J. Lin and Y.Y. Liu	1060
Study on the Genotoxicity of Organic Extracts of the Water from a Reservoir by Using Comet Assay J.T. Wang, Y.Z. Yu and X. Li	1064
Wireless Power Transmission System of Radio-Telemetry System for Physiological Parameters Detection Z.W. Jia, H.R. Ren and G.Z. Yan	1068
Study on Degradation of Traditional Chinese Medicine Wastewater with Cu/Cu₂O Composite Photocatalyst C.H. Yuan	1073

Design Consideration of a Health-Information-Technology-Supported Intelligent Urinalysis System T. Dong	1077
An Improved Medical Image Fusion Method Based on Nonsubsampled Contourlet Transform Y.C. Yang, J.W. Dang and Y.P. Wang	1082
Interactive Medical Image Segmentation Method with only Positive Label Examples C.G. Zhang, Y. Zhang and X.H. Zhang	1088
The Influence of Perceptual Load on Inhibition of Return X.J. Liu, Z.H. Fan and J.Z. Zhou	1093
The Design and Application of the Information Management Platform for the Prevention and Control of AIDS on the Basis of the Residents' Health Records S.H. Shi and S.W. Xiong	1097
Mobile Nurse Information System with Efficient Physiological Monitoring for Patient F. Wu and H. Wang	1103
College Female Students' Physical Health Evaluation Index Correlation Research Based on the PDCA Cycle Model J. Shou	1107
The Risk Factors for Pediatric Care and Preventive Measures L.B. Liu	1111
Design and Evaluation of the Primers for Rift Valley Fever (RVF) Virus RT-PCR Detection Z.X. Yang, B. Wang, Q.M. Xu, X.P. Yao, L. Zhu, Z.W. Xu, K.Y. Wang, G.L. Li, S.Z. Peng and Y. Wang	1115
Detection on the Pulse Signal of Human Body Based on Piezoelectric Impedance Technique J. Zhang, B.Z. Guo and H.M. Tang	1120

Chapter 4: Resource, Energy and Electronic Development, Environmental Engineering

The Making of Mathematical Models for Ecological Cities Y. Xu	1127
Multilayer Architecture on Urban Public Crisis Decision Support System Y.C. Ren	1131
Accurate Calculation Receiving Power of the Electromagnetic Wave Scattering between Two Stations on Sea Surface X.M. Li, T.L. Dong and G.M. Huang	1135
Simulation and Analysis for Damage of Certain Electrical Power Equipment in Battlefield X.Y. Yang, Q.S. Ma, P.Y. Cheng, Q. Zhang and L. Zhang	1141
Application Research on Technique of Re-Entry Old Wells in Sulige Area Y.F. Xue, Z.Y. Zhu and D. Li	1146
Unsteady Heat Transfer Analysis: Saving-Energy and the Regionalism Design on Air-Conditioning System for Car L. Ouyang and D. Li	1150
Constructing of Low Carbon Ecological Index System for Planning: Liaobin New Town as an Instance J.C. Yuan, S. Chen, M.Z. Huang and L. Fang	1157
Ballast Water Discharge and the Influence of Seawater Environment X.Y. Li, S. Liu and Z.M. Zhou	1161
A High-Order CMOS Bandgap Voltage Reference Q.N. Zhou, Y.S. Li, J.Z. Lin, H.J. Li, C. Li, Y. Pang, G.Q. Li, X.M. Cai and Q. Li	1165
Multistage Amplifier Using Dual-Miller with Nulling-Resistor and Dual-Feedforward Structure Q.N. Zhou, Q. Li, J.Z. Lin, H.J. Li, C. Li, Y. Pang, G.Q. Li, X.M. Cai and Y.S. Li	1169
Photovoltaic Inverter Output Current Research of Adaptive Active Harmonic Compensation Device F.J. Chang, H.Q. Ma, C. Cui and J. Zhang	1173
A New Optimal Method for Load Transfer in Power Distribution Network Q. Wang, L. Yao and Z.L. Zhang	1177

Reliability Evaluation for Distribution System Including Protection System Failures Z.L. Zhang, L. Yao and Q. Wang	1181
The New Technology of PV Power Generation System Based on Extremum Seeking Control J.Y. Shi, K. Zhang and Y.G. Zhang	1185
Evaluation of the Yangtze River Littoral Wetland Soil with Total Organic Carbon Z.W. Luo and X. Wang	1189
Public Greenbelt Layout Optimization for Ecological Civilization City Construction C.G. Chang, M.H. Qi, W. Li and K. Yin	1192
Design, Simulation and Experiment of Polarization Transformers Based on Twisted Chiral Metamaterials Z. Yang, Z.S. Jing, Q.Y. Su, G.W. Qin and Z.L. Zhou	1196
The Research of Atmospheric Pressure Cold Plasma Jet Generated by Auto-Excited-Pulsed DC Discharge Y.L. Hu, Q. Wang and Z.Q. Chen	1200
The Research of Hybrid Genetic – Particle Swarm Optimization Algorithm Based Reconfiguration of the Electric Distribution Network X.N. Zhou, D.P. Ke, Y.Z. Sun and L.Y. Xu	1204
Effects of Geomembrance on the Contaminant Transport in Compacted Clay Liner System J.J. Fan	1208
The Higher Order Crack-Tip Fields for Anti-Plane Crack in Exponential Functionally Graded Piezoelectric Materials Y. Dai, X. Chong and S.M. Li	1212
The Effects and Countermeasures of Low-Carbon Economy on China's International Competitiveness of Industries J.B. Hu	1216
The Application of Transformer Protection in 220KV Substation W.L. Peng, W.L. Bian and M. Wang	1220
Analysis of Data Center Power System H. Song and Z.T. Wang	1224
Urban Ecological Environmental Quality Evaluation System Research X.X. Li	1228
Eco-Environmental Construction in Zhengzhou X.X. Li	1232
The Influence of Lanzhou Reach of Yellow River to Temperature-Humidity Effect on Surrounding Lawn and Brick Underlying Surface G.C. Liu, Y. Huang and S.Q. Gao	1236
Study of Morphological Changes Induced by Man-Made Coastal Project T. Xu	1240
Simulation of Salinity Changes Induced by Man-Made Sea Embankment T. Xu	1244
Forecast of Energy Consumption and Carbon Emission of Urban Traffic by Using System Dynamics Y. Zhang, L.J. Wan, L. Zhang and D.X. Cheng	1248
Study on Feasibility of Concentrated Activated Sludge Reflow of Biochemical Pool of Small-Sized Wastewater Plant Y.C. Guo and Y. Chen	1252
Analysis on Fluctuation Characteristics of Wind Power Y. Wang	1256
Partial Discharge Characteristics Research Based on RVM Y.H. Meng, H.Q. Li and Y. Hu	1260
Regional Water Resource Utilization Evaluation and Influential Factors Analyses Y.Y. Wang and X.P. Hu	1264
Mineralization Process of the Bauxite in WZD Area T. Cui	1269
Inhibiting Effect of Nonlinear Shielding Layer on Electrical Tree Propagation inside Insulation Layer of High-Voltage Cable C.M. Li, B.Z. Han, L. Zhao and C.P. Yin	1273

The Power Supply Area Divided Based on Improved Voronoi Diagram L. Liu, X.B. Tang, C.H. Zhao, Z.Y. Sha and X. Chen	1278
Investigation on the Energy Efficiency of Innovative Hybrid Impact Hydroforming S.H. Wang, L.H. Lang and L.J. Lin	1282
Investigation on Nutrient Loads of Lake Taihu in China H. Wang, K. Xia, B. Li and Y.Y. Zhou	1286
The Soil Enzyme Activities with Age of Tea in Three Gorges Reservoir Area L.P. Zhang, G.M. Jia and Y. Xi	1292
Temperature Effect on the Hypergene Mineral Formation Process (The Case of Tailing Dumps of Komsomolsky Tin-Ore District) V.P. Zvereva, A. Kostina and K. Frolov	1297
Evaluation of Technogenous Processes Proceeding in Tailing Dump of the Central Concentrating Mill of Dal'Negorsk District and their Effect on the Hydrosphere with Method of Physicochemical Modeling V.P. Zvereva, A.I. Lysenko and A.M. Kostina	1301
Some Ecological Problems of Development of Mineral Raw Materials in Amurskaya Oblast' L.T. Krupskaya, V.P. Zvereva and O.O. Panfilov	1305
Study on Sewage Treatment Process in Stone Production M. Zhao, W.W. Guo, Q. Xiao and J. Zhang	1309
Accumulation of Chromium in <i>Vetiveria zizanioides</i> Assisted by Earthworm (<i>Eisenia foelide</i>) in Contaminated Soil K. Zhang, Q. Chen, H.B. Luo and X.T. Li	1313
Study on Response of <i>Cyperus alternifolius</i> to Cr(VI) and Ni Combined Pollution M.C. Liu and W. Zhou	1319
A Research of Environment Management Policy Based on the Externality Theory H.C. Che and F. Cao	1324
Research on the Simulation and Realization Approach of Urban Low-Carbon Transport X.L. Gao, T.J. Hu and P. Peng	1328
The Spatial Effect Identification of Pollution Treatment Investment in China L.X. Huang and M. Liu	1333
Characteristics of Heavy Atmospheric Particulate Pollution under Beijing Fog and Haze J.X. Liu, P. Yang, A.G.D.M. Liu and J. Liu	1338
Urban River Water Purification Experiment by Strengthening Ecological Engineering Methods S.H. Yin, Y.C. Wang, W.Q. Peng, Y.L. Du, B. Gao, J.J. Gao, H.D. Zhou, Q.Y. Meng and Q.J. Li	1341
The Combinatorial Prediction about Chaotic Times Series of Natural Circulation Flow under Rolling Motion C. Yuan, Q. Cai, G. Liu and F. Yan	1348
A Rapid Determination Method of ⁴⁰K Concentration in the Soil W.W. Lu, H.G. Yue, J. Li and Y.X. Zhang	1352
Effect of Hg in Jiaozhou Bay Waters-Settling Process D.F. Yang, F.Y. Wang, H.Z. He, Y.F. Wu and S.X. Zhu	1356
The High Resolution Sequence Stratigraphic Isochronous Framework in Threezhao Peripheral Zone Z. Na, C.Z. Liu and P. Li	1359
Use Horizontal Aeration Method to Treat Organic Pollution in Soil L.Y. Xu	1364
Study on Identification Method of Fructus Lycii Origin by Mineral Elements Y.P. Pang, K. Liu, Z.L. Zhao and X.T. Li	1368
Establishment of Models for Tight Sandstone Formation Evaluation in the Ordos Basin of Northwest China X.L. Wei, J. Li, R. Xu and L.L. Zhi	1372
The Research and Application of Multiple Collaborative Anti-Sloughing Drilling Fluid M.T. Jiang, H.Y. Wei, Y.H. Li and W.Z. Shi	1376
Vertical Zonation in Penecontemporaneous Period of the Bauxite in WZD Area T. Cui	1380

Preservative Features of the Fossils in Bauxite Deposit of WZD Area, Northern Guizhou, China T. Cui	1384
Characteristics of Interlayers in Bauxite Deposit of WZD Area, Northern Guizhou, China T. Cui	1388
Research Progress of Bauxite in WZD Area, Northern Guizhou, China T. Cui	1392
Evaluation Method of Coral Reef Integrity: RMDI and Coring Rate Comparative Analysis Method J.C. Wang, C.Y. Wang and Z.Q. Han	1396
Special Structure and its Geological Significances of WZD Bauxite T. Cui	1400
Analysis on Oxidized and Reduced Conditions in Penecontemporaneous Period on the Bauxite in WZD Area T. Cui	1404
Beneficiation of a Low-Grade Barite Ore in Myanmar T.T. Li, S.Q. Liu, Y. Zhao and H.J. Wang	1408
Research on the Flotation of Low Grade Copper-Nickle Ore Z.B. Deng, X. Tong, X. Wang, Q.Y. Zhao, X. Xie and X.W. Lv	1411
Concentration and Distribution of Cr, Pb and Zn in the Jurassic Coals from Northern Shaanxi and Ningxia, China H. Wang, M.L. Du and G.T. Zhang	1415
The Quantitative Model Research of Impact of Water Level Changes on Channel Capacity T. Liu, L. Yao and C. Zhao	1419
Porosity Inversion under the Sequence Stratigraphy Framework W. Yang and M.Y. Hu	1424
Analysis on Acidity and Alkalinity of Metallogenic Environment in Penecontemporaneous Period on the Bauxite in WZD Area, Northern Guizhou, China T. Cui	1428

Chapter 5: Advanced Technologies in Modelling, Simulation and Optimization, Computation Methods and Algorithms, Intelligent Engineering Applications

An Optimal Algorithm for Estimating Fundamental Matrix by Removing the Outliers L.Q. Guo, J.B. Liao, F.P. Zhong, X. Yu and J. Tao	1435
Complex Network Optimization Research of Personalization-Based Recommendation Algorithm C.X. Gao and C.P. Qi	1441
Algorithm Study and Application of Personalized Intelligent Recommendation Engine G.L. Pu	1445
Research on Marine Fuel Boiler Drum Water Level Model and Dynamic Analysis M. Zhu	1449
Studies on Broad-Sense Sample Method in Data Mining Y. Tang	1453
The Application of Maximum Differential Algorithm in Adaptive Ocean Sampling Y. Wang, C.S. Wu and Y.Q. Shi	1456
Parameter Estimation for Wiener Systems with Preload Nonlinearities Y.X. Ni and J.D. Cao	1460
A Vertical Handoff Decision Algorithm Based on QoS Evaluation Y. Tao and K. Zhou	1464
A Video Digital Watermarking Algorithm Based on Chaotic Maps Y.W. Li	1469
Zero Watermarking Method Based on Enhanced Bit-Plane J. Zhao, B.F. Yang and X.Y. Wu	1473
Research on Simulation of Modern Storage System with Flexsim Q.T. Han	1477

Study on Application of Vendor Managed Inventory Model Q.T. Han	1481
Research on Material Inventory Model and Application Q.T. Han	1485
A Fuzzy Clustering Algorithm of Automatic Classification Based on EnFCM H.W. Han, L. Tian and J.Q. Miao	1489
Knowledge Representation of Art Patterns Based on the Calculation Mental Image S.R. Kuang	1493
Improved Software Cost Estimation Method Based on COCOMO Model and Linear Regression H. Yang	1497
Research on Improved Staged Software Cost Estimation Method Based on COCOMO Model H. Yang	1501
Analysis of Knowledge Fusion System Model Based on Ontology and Multi-Agent Theory L. Lei and M. Zhang	1505
Research on Classification and Encoding of Digital Cultural Relics L. Lei and M. Zhang	1509
An OCL-Based Formal Model for Cloud Forensics J. Wang, Z.M. Tang and X.L. Jin	1513
Research on Customers Churn Prediction Model Based on Logistic M. Jiang, N. Chu and X.M. Bi	1517
Site Selection of Customer Operation Center for Pull and Drag Transportation Based on the Analytic Hierarchy Process X.Q. Luo and X.Y. Yin	1522
Research on the Layout of Integrated Freight Hub Based on Two-Stage Model Y.Y. Chen and T.X. Liu	1526
The Optimization of Logistics and Distribution W. Xiong and L.Y. Zhang	1532
Research on Rough Set Theory-Based Customer Division G.J. Song, X. Cao and X.Y. Wang	1536
A K-Nearest-Neighbour Based Classifier for Securities Text Categorization T.B. Liu	1541
Research of Intelligent Warehouse Layout Base on Genetic Algorithm and Dynamic Programming L.Q. Yang and Q. Yan	1547
A Generalized Attributes Significance Measure Method F.C. Li, M. Li and S. Liu	1551
A Fusion Method of Point-Cloud Based on Parallel Estimation of Distribution Algorithm Z.T. Jiang, L. Zhou and L. Zhou	1555
Bacteria Genome Compression Based on the Weighted Context Model M. Chen, X.M. Jia and L. Liu	1561
Research on Blind Source Separation Algorithm Based on Particle Swarm Optimization H. Zhou, C.Z. Chen, X.M. Sun and H. Liu	1566
The Data Mining Technology of Particle Swarm Optimization Algorithm in Earthquake Prediction X.Y. Zhang, X. Li and X. Lin	1570
An Improved Weighted Centroid Localization Algorithm Based on RSSI C.L. Liu and Z. Li	1574
A Parallel Implementation of the K-Means Algorithm Based on MapReduce W. Yan, J. Zhou, Q. Huang and L. Shi	1578
A Inflexion Nonlinear Global Particle Swarm Optimization (PSO) Algorithm L.X. Lv and X.Y. Lin	1582
The Research of Improving Clothing Crossing-Selling Based on Apriori Arithmetic C. Zhang, Y. Liu, F.S. Sun and L. Yao	1586
Research of Propagation Behavior on Tibetan Network Public Sentiment Y.X. Li, A.L. Wu and Y.N. E	1590

Research on Anti-Plagiarism in the Education Informatization Background B. Fu and B.G. Xie	1594
RETRACTED: Towards the Evaluation of Suffix Trees X.P. Wang	1598
Research of Geomagnetic Matching Algorithm Based on Artificial Fish Swarm Searching Strategy X. Li and Z.L. Zhu	1602
Given the Principal Disjunctive Normal Form of Simple Proposition Formula Z.J. Chen, H.Z. Shi and Y.J. Liu	1607
Online Long-Term Object Tracking Based on Compressed Haar-Like Features via Sparse Representation M. Zhao, L.P. Wang and L.P. Zhang	1610
A New Virtual Visual Servo Algorithm M. Li, X.N. Wang and J. Zhu	1615
A Path Planning Algorithm Based on the CNN Model under the Curvature Constraint S.J. Wang, X.N. Wang and P. Jiang	1621
Niche Brain Storm Optimization Algorithm for Multi-Peak Function Optimization H.J. Zhou, M.Y. Jiang and X.Y. Ben	1626
Research on the Validation Method of Product Data Quality P. Wang and B. Wang	1631
Stock Price Prediction Model Based on IWO Neural Network and its Applications H. Liu and X.Y. Lv	1635
An Interval Slope Approach to Fuzzy C-Means Clustering Algorithm for Interval Valued Data Y. Jin and J.H. Ma	1641
Stock Price Prediction Model Based on BA Neural Network and its Applications X.Y. Lv, S.L. Sun and H. Liu	1646
A Fast Locating Algorithm of Vehicle License Plate under Complex Scenes Y. Lei and Y. Zhang	1652
A Multidimensional Model of Data Warehouses Z.Y. Chen and T.X. Zhao	1657
Architecting Service-Oriented Publish/Subscribe Applications: Data Model and Matching Algorithm B. Dong	1660
Research on Psychology Data Clustering Algorithm Based on CUDA L.L. Dong, Z.S. Ma, W. Dong and X. Zhang	1664
Cell Selection Algorithm Based on Coordinated Beamforming Z. Liang, Y.B. Li and F. Ye	1671
Research on Sub-Band Synthesis Algorithm of MIMO-SAR Y.A. Xie and Z.M. Tan	1676
Comprehensive Similarity Measurement Model Based on Three Algorithms N. Liu, B.L. Long, X.K. Zheng, L.F. Han, T. Qu and B.J. Cui	1680
Mean Evolutionary Algorithm Based on Intermediate Value Theorem of Continuous Function Y.C. Tan, C.S. Deng and Y. Liu	1686
Meta-Analysis and Evaluation of Visualization Support to Decision Trees Classification Z.Y. Chen and T.X. Zhao	1692
Allocation Scheme of Short Training Sequence Based on OFDM-PON S.L. Guo, X. Chen, C.X. Xu, Y. Jiang and Y.C. Li	1695
Three-Dimensional Yarns Modeling for Tufted Carpet Simulation J.H. Li, G.F. Chen, Q.Q. Huang and X. Wei	1700
Decision Making Support Model for the Incident Emergency Management of Migrant's Group Based on CBR D.H. Zhang, L. Cheng, R.W. Wu, J. Wang and J.Y. Liu	1704
Equivalent Integral Equations of the Static Schrödinger Equation by Variation of Constants Method S. Zhang, B. Cai and D. Wang	1712

Kink-Type Solutions of the MKdV Lattice Equation with an Arbitrary Function S. Zhang, Y.Y. Zhou and B. Cai	1716
An Improvement of the Method for Paraphrase of Chinese Double Negation Z.J. Wang, S.J. Zhang, Y.F. Gao, Y.F. Lin and Z.J. Wang	1720
Water Fluid Simulation with an Improved SPH Method X. Zhao	1724
Analysis of Convergence Rate for Improved Generalized Ant Colony Optimization Algorithm D.Y. Zhang and H. Zhao	1728
Convergence Speed of Multi-Objective Generalized Ant Colony Optimization Algorithm D.Y. Zhang and P. Fu	1732
The Applications Based on the Rough Set Theory Algorithms to Determine the Weight N.N. Chen	1736
Takeoff Performance Algorithms Analysis of EFB Based on iOS J. Lu, Q. Li, B.B. Zhao, F. Xiao and W.Y. Qiu	1739
Region Analogy-Based Quantization Method for Numerical Data Y.D. Sun	1743
Application of Improved ANT Algorithm to Planning of Anti-Ship Cruise Missile Route Y.T. Yu and Y. Ding	1747
Application of Improved Intuitionistic Fuzzy for Sea-Battlefield Situation Assessment Y.T. Yu and Y. Ding	1751
Imbalanced Data Classification Using Cost-Sensitive Support Vector Machine Based on Information Entropy W. Duan, L. Jing and X.Y. Lu	1756
Develop Local Fuzzy Classifier to Modify Low-Confidence Output of Global Classifier P. Ling, X.S. Rong, Y.Q. Dong and G.S. Hao	1762
The Improved Algorithm about Binocular Vision of Flexible Structure in On-Orbit Modal Identification Y. Zhao, J.B. Gao, C. Xu and C.F. Zhang	1766
An Algorithm of Uncertain Reasoning Considering Subjective Factors Y.H. Han, K.T. Chen, H. Shao and L. Du	1770
A Fuzzy Clustering Algorithm of Web Customers Based on Attributes Reduction H.X. Wan and Y. Peng	1775
The Application of Graph Model in the Cultural Archives P. Sun	1779
Deobfuscate Non-Returning Calls and Call-Stack Tampering in Instruction Traces J. Qiu, X.H. Su and P.J. Ma	1782
Constructing Attractors via the Improved Eugenics Genetic Algorithm L.M. Du, F.Y. Wang and Z.Y. Han	1786
Comparison Results between Jacobi and USSOR Iterative Methods T. Zhou and S.G. Zhang	1790
Convergence Results of the Improving Modified Gauss-Seidel (IMGS) Iterative Method for a Symmetric Positive Definite Matrix S.G. Zhang and T. Zhou	1794
A Fast Algorithm for Computing the Determinants of the Heptadiagonal Matrices X. Li and L. Yang	1798
Two-Parameter Conjugate Gradient Projection Method and its Application H.F. Cui	1802
Generalized J Sets Based on Periodic Orbit and Attract Time L.M. Du, F.Y. Wang and Z.Y. Han	1806
Static Fault-Tolerant Strategy for High Performance Computing Platform Y. Sun and J. Liu	1810
Prediction of Mine Inrush Water Based on BP Neural Network Method A.J. Shao, Q.X. Meng, S.W. Wang and Y. Liu	1814
Fuzzy Comprehensive Evaluation Model of Selecting Football Coach C.J. Rao and J.H. Dong	1821

Calculation of Dynamic Stress Intensity Factor by the Boundary Element - Laplace Transform Method W. Zhang	1825
Point Rupture Solutions of a Singular Quasilinear Elliptic Equation Arise from Non-Newtonian Fluids Z.J. Cui, M.Y. Xu and R. Zhang	1829
Application of Ant Colony Algorithm to the Hierarchical Routing in Wireless Sensor Networks L. Sang and D. Long	1833
Study on the Optimization of Data Mining in Big Data G. Xin and H. Yan	1837
Design and Implementation of Instruction Expert System Based on Improved Genetic Algorithm D.Q. Wu and S.S. Wang	1841
Investor Selection Model under Uncertain Information Environment C.J. Rao and C. Wang	1845
A Novel Multiobjective Memetic Algorithm Based on IWO-DE and its Application in Nutrition Decision Making Problem G.P. Wang, M. Zhang and W.W. Zhao	1849
An Improved Genetic Algorithm for Text Clustering S.D. Yu, Y. Ding, X.C. Ma and J. Sun	1853
Applied Technology with a Modified Sixth-Order Convergent Iterative Method for Solving Nonlinear Equations L. Fang, Y. Li, H.Q. Wang and R. Chen	1857
Research on Improved AES Encryption Algorithm Z.H. Yang, N. Li, L.Y. Liu, R.J. Qi and L.L. Yu	1861
CMA Blind Equalization with Quasi-Newton Algorithm in Underwater Acoustic Channels Based on Simplified Cost Function Y. Xiao and R. Ruan	1865
The CPML for Hybrid Implicit-Explicit FDTD Method Based on Auxiliary Differential Equation Y.F. Mao, P.H. Huang and L.G. Ma	1869
Parameters of Support Vector Machines Model Optimized Method Based on Genetic Algorithm Y.Z. Xie, Z.G. Wang and X.W. Dai	1873
Robust Exponential Stability of Stochastic Discrete-Time BAM Neural Networks with Markovian Jumping Parameters and Delays L.D. Guo, J. Nie and Y.S. Zhang	1877
A Correlation Coefficient Estimation Algorithm Based on Subspace Decomposition N. Wu, W.J. Si and S.H. Jiao	1883
A Multi-Objective Coordinative Optimization Model and its Cultural Immune Algorithm C.G. Chang, W. Li, K. Yin and M.H. Qi	1887
The Implement of Parcel Sea Map Automatic Mapping Algorithm D.R. Song, K. Cao and Y. Hao	1891
A New Network Traffic Classification Method Based on Optimized Hadamard Matrix and ECOC-SVM H.Z. Wang and L.H. Yan	1895
A Novel Blind Watermark Extraction Algorithm Based on Nonsubsampled Contourlet Transform L. Feng, X.F. Shi, H.Y. Chen, Y.H. Li and Y.L. Zhang	1901
An Improved Algorithm for Multi-Tag Anti-Collision in RFID System Y.R. Zhao and W.L. Miao	1905
Numerical Simulations of Two Four-Petal Gaussian Beams Propagating in Strongly Nonlocal Media Z.F. Yang	1909
An Approach for Sentiment Tendency Analysis on Comment Text M. Li, M.D. Chen and X.B. Li	1913
Extending the α-Algorithm to Mine Repetitive Task Based on Complex Structure H. Li, Y. Wei, X.H. Ye, S.W. Yao and J. Yang	1918

Process Mining: Overview and Comparative Analysis of the Mining Algorithms H. Li, Y. Wei, L. Liu, S.W. Yao and J. Yang	1924
A P2P Resource Management Model Based on Cloud Computing Y. Lu and G.F. Liu	1930
Architecture Research and Design of Cloud Computing Service Based on REST K. Huang	1934
High Precision Data Processing Method Based on the Complex-Step Differentiation F.L. Tan, Y.K. Guo, Y.M. Nie and F. Sun	1938
Routing Algorithm with Energy-Efficient and High Quality of Clusters in Wireless Sensor Network Y.H. Yi and R.L. Wang	1942
DSP Memory Allocation Strategy Based on Greedy Algorithm Y.H. Fan, X.F. Ma, J.S. Jiang, X.M. Xu, Q.Y. Hao and P. Zhang	1946
Research on an Embedded Ultra-Low-Bit-Rate Speech Coding Algorithm Y. Li, Y.H. Fan, F. Yuan and X.M. Xu	1951
Research on Materialized Views under Disk-Space Constraint in Data Warehouse L. Ma	1955
Review of Otsu Segmentation Algorithm Y.X. Dong	1959
Non-Linear Least Squares Large Misalignment Estimation in Transfer Alignment Y. Lu and X.H. Cheng	1962
Singularly Perturbed Systems with Diffusion and Time Delay C.Y. Wang, Q. Dou and X.W. Li	1969
An Algorithm of DOA Estimation in Linear Canonical Transform Domain H. Zhao, Y.H. Zhang and H.H. Li	1973
Computerized Simulation of Board-Level EMC in High-Speed PCB X.Z. Wu, C. Zhang, S.F. Yang and L.Q. Zhao	1977
On Application of Texture Mapping Technology in Simulation W. Zhang, C.H. Zhang and Y. Zhang	1981
The Discussion on the Improved Association Rules Algorithm in Data Mining T. Wen, L. Sun and L. Zhu	1985
An Information Classification Optimization Model Based on Improved Ant Colony Algorithm C.M. Hao	1989
Simulation Analysis of a Statistical Model for Herd Mentality Trend S.Y. Pan	1993
Virtual Simulation of Aerobics Movement Based on Vision X.H. Wang	1997
The Research of Key Data Classification Optimal Mining Methods for Massive Data Y.Y. Li and Y.Z. Wang	2001
Group Customer Special Line Correction Algorithm Design and Application Based on PTN Technology H.J. Zhu and D.F. Li	2004
Position Mobil Information Encryption Algorithm Based on Key Attributes of Reduced Rank Agent under Cloud Storage H.L. Guo and H.L. Yu	2008
Network Intrusion Detection Model Based on Genetic Algorithm Optimizing Parameters of Support Vector Machine C. Liu	2012
A New Method of Face Modeling with Construction of Local Texture Model J.B. Shan, W.W. Jiang and S.L. Mu	2016
Simulation of Data Mining System Design in Database R.Y. Zheng	2020
Analysis on Digital Signal Processing and Algorithm Based on Coherent Light Y. Xing, L. Zhang, Z.Y. Cheng and K. Gu	2024
A New Improved Attribute Weight Algorithm Based on Rough Sets Theory for One Command Information System S.M. Yang, Y.M. Yan, K. Wang and Z.Y. Xie	2029

Research on Learning and Evolutionary Algorithm of Agent for Task Oriented G.F. Xu and Y.W. Cai	2033
Research on Modeling of Brain Function Network in Major Depressive Disorder L.M. Niu, H. Guo and J.J. Chen	2037
A Classification Algorithm of Moving Military Vehicle Y.F. Ma and F. Chen	2043
Analysis of Fuzzy Clustering for the Adoption in Data Mining Y.J. Wang	2047
Joint Spectrum and Power Allocation for Femtocell Based on Graph and Game Theory Y. Wang and Q. Zhu	2051
The Research and Application of Data Glove in Virtual Interaction System Y.X. Xu and X. Zhu	2057
Brief Report of Implementation of T9 Input with Python and Evaluation Y.J. Wang	2062
Simulation Analysis of Mind Sports Games Based on Artificial Intelligence G.W. Cui and X.Q. Li	2065
Genetic Algorithm Design on Scalable Data Mining of Cultural Industry H.W. Xue	2070
Simulation Study of Waveform Variation of Fixed Assets Based on Logical Database Structure S.P. Liu	2075
The Research of Data Mining Based on Neural Networks Q. Guo and J. Niu	2080
RETRACTED: Towards the Simulation of Evolutionary Programming X.W. Li, L. Zhou and L.H. Yuan	2084
Based on Canny Operator with Regional Growth Combined Research on Accurate Image Segmentation Algorithm J.Q. Miao	2088
RETRACTED: Studying Sensor Networks and Multicast Algorithms with TACKY C.C. Xu	2093
The Analysis and Realization of Interpreter Language in Nuclear Industry Z. Zhang, H.B. He and H.L. Lu	2097
Time Prediction Based on Process Mining Taking Concept Drift into Consideration F.F. Huang, L.Q. Zhang and Z. Li	2101
SBN Constructing Algorithm Based on Extended MEBN S. Ge and X.Z. Xia	2106
A Mobile-Terminal-Oriented and Mobile-Cloud-Computing-Based Localized Scheduling Algorithm R.X. Liu, Y.H. Zhang and Y. Tang	2111
Research of the Ubiquitous English Learning Based on Cloud Computing S. Han and X.D. Zhang	2115
Simulation of Neural Network Recognizing Isolated Words under MATLAB Environment F. Zhao	2119
The MapReduce Parallel Study of KNN Algorithm C.Y. Wang and X.F. Zhou	2123
Software Structural Stability Evaluation Method Based on Motifs C. Shan, L. Huang, C.Z. Hu, X.L. Zhao and J.S. Ma	2128
Locating Method for Character 2D Barcode Z. Liu, S.C. Yin, S.C. Ye and H.R. Zheng	2135
Research on Motion Model of “Wind-Blowing & Trees-Swinging” and “Leaves-Falling & Branches-Broken” Based on Fractal Theory H.Q. Liu, J. Wang and L.P. Feng	2139
Algorithm of Representing and Preparing for Resources in EEM Q. Yu, T. Li, X. Zhang, Y. Lin, Y. Yu and N. Zhao	2144
Research of Computer Forensics Based on Benford’s Law M.J. Shan	2148
Using Zipf Distribution to Predict Popularity Data for Storage Systems Y. Yang, W.Y. Li, M.N. Zhang, X.M. Ding and J. Dai	2152

A Method for Transforming the Online Handwritten Mathematical Formula into MathML D.Q. Fu, W.Y. Zhang and S.T. Jhang	2156
Adaptive Bit Allocation Algorithm for OFDM System W. Wei and W.D. An	2161
Stepped Cooling Control Model Based on Optimal Algorithm Z.W. Yan, H.A. Bu, G.S. Ma and D.H. Zhang	2165
Cluster Center Initialization Parallel Algorithm for K-Means Algorithm B. Yan, Y. Zhang, H.Y. Su and H. Zheng	2169
Study for Embedded Colony Algorithm Based on Morphological Technology K.Y. Chen, X.Y. Zheng and H. Yu	2173
A Semantic Retrieval Method Based on Ontology Q. Shen and M. Zhang	2179
Using PROSEPCT and SVM for the Estimation of Chlorophyll Concentration J. Lv, F.L. Deng and Z.G. Yan	2184
Distributed Collaborative Filtering Recommendation Model Based on Expand-Vector Y. Zhu, H.Y. Su, C.Q. Wang, B. Yan and H. Zheng	2188
Improved Ant Colony Algorithm Based on PSO and its Application on Cloud Computing Resource Scheduling H. Yang	2192
Study on Traveling Salesman Problem Based on the Improved Chaos Ant Colony Algorithm H. Yang	2196
An Improved Scheduling Algorithm for Cloud Storage P. Wang	2200
A New Spatial Correlation Model Based on the Distributed RC-Π Model X.X. Liu, J.B. Shao and L.L. Zhao	2204
Study on Modeling of the Minimum Lethal Dose while Rescue Poisoning C.X. Zhao, Y. Jiang, H. Yang and M.T. Cui	2208
Maneuvering Target Tracking Algorithm Based on Particle PHD Filtering S. Gao, C.B. Chen and Q. Gong	2212
Applying Grey System Theory in an Ideological and Political Education Course M. Zhang	2216
Ideological and Political Education Linear Regression Theory M. Zhang	2220
An Improved Genetic Algorithm in Vehicle Dispatch S.H. Zhu and P. Tang	2223
Research on Robustness of Typically Opportunistic Network Routing Algorithm under Flooding Attack G. Yu, D.F. Yuan, Y. Cui, Y.D. Wang and P. Zong	2227
A Localization Algorithm Research to Eliminate the Indoor NLOS Error J.Z. Dong, Y.W. Wang, F. Wei and J. Yu	2232
Communication Network Alarm Correlation Based on the Confidence Fusion Algorithm H.S. Gao and Y.M. Li	2237
A Purchase Prediction Based on Collaborative Filtering Algorithm Z. Fu and L.F. Zhou	2241
K-Means Clustering Algorithm Method Based on Shuffled Frog Leaping Algorithm Z. Tang and K. Luo	2245
A Modified Regularized Super-Resolution Reconstruction Algorithm Q. Xie and W.Y. Chen	2250
Simulation of Whole Movement Process of Muzhuping Landslide with DDA and Prediction of Surge Z.H. Dong, X.L. Ding, A.Q. Wu and B. Lu	2254
State-Space Model and Simulation for Dynamic Stall W.D. Lei, G.C. Hu and Q. Liu	2258
CFD Simulation of Gas Distributor with Two Chambers D.F. Zhao and F.G. Liu	2264
Ratio Based Weapon System of Systems Capability Gaps Assessment Method Research X.X. Zhang, K.W. Yang, B. Zhang and J. Jiang	2268

Study on an Improved Median Filtering Algorithm H. Zhang, M. Gao and H.L. Ren	2273
The Application of Cross-Correlation Algorithm in CSAMT Received Data Processing Z.P. Zhou, Y. Zhu and T.H. Wang	2278
Assignment Performance at Beijing South Railway Station Based on Anylogic Simulation Y.J. Liang and Z.Z. Yuan	2283
Study of Storm Surge Numerical Simulation in the Bohai Sea Y.Q. Zhang, Q.L. Leng, Z.J. Hu, Z.C. Zhu, W.J. Zhang and S.H. Bian	2288
A Method of Domain Compound Concept Extraction Based on Multilevel Filter B. Wu and L.B. Ouyang	2292
Design and Realization Based on Cloud Stack Hybrid Cloud Computing Platform P. Cheng and H. Qu	2297
A Particle Swarm Optimization Algorithm Based on Simulated Annealing Z.C. Yan and Y.S. Luo	2301
The Gray Relation Analysis of Non-Coal Mine Accidents Causation X.Y. Meng, R.H. Chen and S.B. Wang	2306
Research on Algorithm of Video Segmentation Based on Self-Adaptive Single Gaussian Model Y. Zhu, D.H. Wang and J.L. Liu	2310
Research on the Evaluation Method of OSHMS Performance Based on Fuzzy Theory H.M. Zhou and D.T. Hu	2314
Parallel Sets Based on the Improved ACLEARCR Algorithm H.K. Zhang, N.W. Sun, C. Zhang, T.T. Jiang and C.H. Dai	2318
Evaluation of Ground Thermal Infrared Camouflage Using Pure Technical and Pure Scale Dynamic DEA Model L. Li, X.L. Lü, B.Z. Li, X.P. Li and H.X. Wang	2323
2D Numerical Simulation of Thermal Discharge in Coastal Area T. Xu	2328
Study on Settlement Process of Dredger under Current Force T. Xu, Z. Xiao and L.C. Sun	2332
The Effect of Enterprise Business Process Reengineering Fuzzy Comprehensive Evaluation S. Ling and C.Y. Ye	2336
A New Highway Safety Model Based on Cellular Automata L.X. Li	2340
A Model for Seat Allocation of Railway Passenger Transport Based on OD's Priority Y.T. Zhu, F.Z. Wang, X.H. Shan and X.Y. Lv	2344
IBC-Based Authentication Protocols and a Method of Data Sharing for Cloud Systems K.K. Chen, C.L. Cao, J.Y. Liu and R. Zhang	2349
J-Integral Computation in Mixed Mode I and II Y.M. Cai, F.Y. Zhang and Y.J. Xie	2356
A Kind of MSD Performance Compensation Method Based on the Strategy of Sliding D.X. Zhu, G. Fu and Q. He	2360
Research on Phase Locked Loop Software Parallel Processing Methods R.L. Li, G. Fu, Y.J. Wu and L.P. Wang	2364
An Algorithm to Control Watermarking Capacity Using PSNR Y. Xing and D.S. Wang	2368
Simulation of Dynamic Compaction on Soft Soil Foundation Y.L. Pang and D.M. Dai	2373
Look the Partial Equilibrium with the Global Optimum from the Problem of the Shortest Circuit for Three Villages X.W. Jiang, Y. Hu, Y.T. Yang and T. Luan	2377
Adaptive Discriminant Linear Local Tangent Space Alignment Algorithm on Face Recognition Y.X. Lv, Y.N. Deng, Y. Shi, Q. Li and W. Peng	2381
Research on the Traffic Rules of the Freeway Y.X. Jiang	2385
A Collision Detection Algorithm Using AABB and Octree Space Division H.Y. Wang and S.G. Liu	2389

A Visual Hiding Algorithm Based on Human Visual System R. Dong and D.S. Wang	2393
Augmented Lagrangian Method for Nonlinear Programming with many Complex Constraints X.W. Jiang, Y.T. Yang and Y.L. Lu	2398
Consensus Equilibrium Point Analysis for Heterogeneous Multi-Agent System in Undirected Graph Y.J. Sun, G.L. Zhang and J. Zeng	2402
A Projected Conjugate Gradient Method for Box-Constrained Optimization T.F. Li, Z.Y. Liu and Z.B. Du	2406
Decomposition of New Construction Land Quota in Rural Land Based on AHP X.W. Cai, H.Y. Wang, Y. Sun and C.H. Gao	2410
Design and Implementation of General High-Speed Data Storage System G. Fu, W.J. Geng and R.L. Li	2414
Research on Software Algorithm Capture of Spread Spectrum TT&C Signals R.L. Li, G. Fu and G.Z. Wu	2418
Improved Genetic Algorithm in Vehicle Management S.H. Zhu and T. Kuang	2422
Detecting Epistasis by LASSO-Penalized-Model Search Algorithm in Human Genome-Wide Association Studies Z.H. Zhou, G.X. Liu, L.T. Su, L. Han and L. Yan	2426
A Fuzzy Clustering Algorithm Based on Parameter Optimization in Large Transaction Database W. Su, X. Zhang and J.J. Xu	2431
A Hybrid Approach for Critical Technology Identification C.Y. Li, J. Jiang and M.J. Li	2438
Coupling Sentiment Dictionary and SVM Classification for Text Orientation Analysis M.Z. Gao, F.F. Li, Z.Y. Ding and W.D. Xiao	2444
Research on the Optimization of the Storage Strategy of HDFS H. Cao	2450
Research on Packet Encryption Algorithm in the Cloud Storage H. Cao	2454
ZFDV: Zoom Financial Data Visualization in the Era of Big Data T.T. Jiang, Q.G. Wang, H.K. Zhang, W.D. Xiao, C. Zhang and B. Ge	2457
A New Analysis of the Iterative Threshold Algorithm for RPCA by Primal-Dual Method R.Y. Fan, H.X. Wang and H. Zhang	2462
Robot Path Planning Based on Artificial Fish Swarm Algorithm under a Known Environment J. Wang and L.J. Wu	2467
A Study of the Keep-Right-Except-to-Pass Traffic Rule on Cellular Automata W.B. Cao	2470
Probabilistic Model Checking by Model Equivalent Reduction and Abstraction Z.L. Bai, L.Y. Xu and Z.S. Yu	2474
Computing Volumes Surrounded by a Quadric Surface and a Plane with MATLAB Q.L. Yin	2480
A New Defogging Algorithm Based on Atmospheric Degradation Physical Model X.G. Li	2484
The Evaluation of Teaching Quality Based on Fuzzy Method J. Zhu, J.Y. Tian, J.H. Hao and S.Y. Zhang	2488
Identical Distributed Pairwise NQD Random Variables Sequences with a Novel Mutation Operator J. Cao, G. Li and C.R. Ma	2491
Improving Performance of Wireless-Optical Broadband Access Network by Interpolation Algorithm of Zadoff-Chu Sequence J. Cao, C.R. Ma and X.J. Hu	2495
Image Fusion Algorithm by Improved Chaos Immune Genetic Algorithm in Multi-Wavelet Transform Domain J. Cao, T.F. Li and Y.P. Gao	2499

Interpolation Algorithm Application Using Neural Networks for Flywheel Energy Storage System S.S. Wan, J. Cao, Q.S. Zhu and C. Yan	2503
The Application of Correlation Dimension in the Multi-Objective Comprehensive Evaluation of the Large Complex Equipment Procurement Scheme Y.X. Yang, F.J. Wei and F. Wang	2507
Modeling and Simulation of Vehicle Traffic Detection System Based on Ground Sense Coil J.W. Ju, J.Y. Liu, W. Yang and N. Liu	2511
Efficient Simulation for Dynamic Systems with Discontinuities Q. Yuan	2515
Optimization Model and Algorithm for Responsive Closed-Loop Supply Chain Logistics Network with Direct Shipment under E-Commerce J. Liu, Q. Li and H.W. Wu	2519
Tabu Search for Bus Crew Scheduling with Feasible Sets of Shifts J. Wang, J.H. Ma, W. Guan and H.T. Gu	2523
Modified Harmony Search Algorithm for Unconstrained Numerical Optimization Problems H.G. Xia and Q.Z. Wang	2528
A Modified Harmony Search Algorithm for Numerical Optimization Problems H.G. Xia and Q.Z. Wang	2532
Modified Differential Evolution Algorithm for Numerical Optimization Problems H.G. Xia and Q.Z. Wang	2536
People Counting Based on the Moving Feature of the Mass P.Z. Qiao, T. Li, T. Xiang and X.Z. Zhang	2540
A Cloud Storage Encryption Scheme Based on Separated Key and Encryption Policy P. Wang, F.Z. Zhang and C.L. Han	2543
Method Based on the Minimum Deviation for Multi-Attribute Decision-Making and its Application H.A. Zhou	2547
Orthogonal Semi-Supervised Marginal Fisher Analysis X.Z. Liang and Y.E. Lin	2551
Simulation Research on GM Navigation Based on AFSA Z.L. Zhu, G.L. Yang, J. Li, S.J. Yang and Y.Y. Liu	2555
Currency Crisis Prediction Using Wavelet-Based Support Vector Machine Q.L. Zhang	2560
An Improved Speech Enhancement Algorithm Based on Wiener-Filtering Y.H. Liu, D.M. Zhou and J. Di	2565
Research of License Plate Recognition under Complex Environment F. Gao, Z.J. Dai, K. Zhou and Y.P. Dai	2569
Hidden Markov Modeling for Nakagami Fading Channel Y.H. Yang, L.F. Wang and Y.P. Sun	2576
Application of Multipurpose Decision Making Problem with AHP and Rectilinear Norm in Old Town Renewal Proposals B.J. Zhang	2580
Application with AHP in Assessment of House Plans B.J. Zhang	2588
Algebraic Immunity, Correlation Immunity and other Cryptographic Properties of Quadratic Rotation Symmetric Boolean Functions J.L. Huang, Z. Wang and M.R. He	2593
Relations among E-Derivative, Derivative, Algebraic Degree, Correlation Immunity and Annihilators for H Boolean Functions J.L. Huang, Z. Wang and J. Li	2599
Moving Vehicle Detection Scheme Using Edge Information and Background Subtraction in YCbCr Color Space W.X. Yu and J. Su	2605
A Hybrid 2-Population Genetic Algorithm for the Job Shop Scheduling Problem Z. Xu, R. Wang and Z.M. Wang	2609

Robust Principal Component Analysis Algorithm Based on Nonparametric Correlation Coefficient Matrix	2613
N. Zhao and H.Y. Shao	
Design Modeling and Simulation by Interpolation Algorithm of Zadoff-Chu Sequence	2617
S.S. Wan, Q.S. Zhu and J. Cao	
Particle Swarm Optimization by Improved Chaos Immune Genetic Algorithm	2621
S.S. Wan, J. Cao and Q.S. Zhu	
The Research of Financial Risk Warning Model about Real Estate Enterprises in China	2625
X.R. Tian, H.D. Jiang and J.L. Liu	
Prediction Model of Aerosol Fire Extinguishing Agent Performance Based on Combination of Genetic Algorithm and Back-Propagation Neural Network	2629
Z.J. Chen, C.G. Zhu and Z.H. Zhang	
$F_p + vF_p + v^2F_p$	2634
L. Chen and M.J. Shi	
Dynamic Network Model Analysis Based on Communication Network	2639
N.Q. Yuan, T. Jiang, S. Bai, H. Sun and J.M. Zhao	
The New Class of Laplacian Integral Graphs	2643
S.F. Lu and J.Y. Zou	
An Efficient Methodology for Estimating Interconnect Crosstalk Noise in Deep-Submicron Technologies	2647
X.X. Liu, J.B. Shao and L.L. Zhao	
Feature-Based Real-Time Visual SLAM Using Kinect	2651
Y. Song and B. He	
Research Progress in Topological Relations of Objects with Holes	2655
S. Di, J.M. Zhang, Y.F. Shi and L.L. Zhang	
Complexity Research on Second Class Orthogonal Weight Function Neural Networks	2659
D.Y. Zhang and R. Zhao	
Research of the First Kind of Padé Weight Function Neural Networks	2663
D.Y. Zhang and Y. Xu	
Time Complexity Research on the Second Type Neural Networks of Padé Weight Functions	2667
D.Y. Zhang and L. Yang	
Research on Safety Comprehensive Assessment Method for Air Traffic Control Based on RBF Neural Network	2671
X.S. Gan and H.P. Li	
On the Application of Ant Colony Neural Network for the Highway Traffic Safety Facilities System	2675
G.L. Jia, R.G. Ma and Y.J. Deng	
Numerical Simulation of Cook-Off for Passive RDX	2679
C. Chen, W.B. Li and J. Liu	
Traffic Flow Prediction with few Data Using Fuzzy Neural Network Method	2684
W. Zhou and X.X. Wang	
The Evaluation to Influence Factors of Concrete Durability Based on Grey Correlation Degree Method	2688
X.P. Su and H.Y. Sun	
Camshift Algorithm Based on Multi-Features, and its Further Improvement Study	2693
J.H. Lin and G. Fu	
Study of Numerical Simulation of RF Wave in Magnetized Plasma	2697
J.F. Jiang, Z.H. Jiang, X.F. Sun and W.X. Guo	
Research on Workpiece Deformation in Electromagnetic Forming Process with Finite Element Method	2702
C. Peng, L. Qiu, K.S. Gong and D.J. Wang	
Research on Learning Algorithm of RBF Neural Network Based on Extended Kalman Filter	2705
X.S. Gan and H.L. Gao	
Interpolation Algorithm Application of Zadoff-Chu Sequence Using Neural Networks	2709
J. Cao, Y.B. Li and C. Yan	

Comparison on Turnovers of Agricultural Products Futures Based on Hilbert-Huang Transform	
Q.B. Han and H.L. Shi	2713
From Epanechnikov Mixture Model to Rule-Centered Fuzzy Model and its Application to Stock Index Prediction	
Q.L. Zhang	2719
A Multifactor Grey Forecasting Model of Agriculture Output Value	
W.Z. Chen and L.J. Liang	2723
Research on Software Demodulation of PCM/FM Algorithm Based on MSD	
G. Fu, Y.J. Wu, R.L. Li and L.P. Wang	2727
Mixed Features Based Improved Human Action Recognition Algorithm	
H.L. Jia and K. Cao	2731
Knowledge-Based Fuzzy Diagnostic Model	
H.W. Lv, X.K. Li and K. Wang	2735

Chapter 6: Advanced Technologies in Mechanical Engineering, Mechatronics, Automation, Measurement, Control and Manufacturing Technology

Design and Simulation for New Type Pulley Straightening Machine Based on Pro/E	
J.H. Geng, B. Yu and B. Fan	2741
Based on the Modeling and Simulation Analysis of the Spray Pump of Solidworks	
D.D. Jiang, Z.B. Zhou, J. Xu, L. Chen and M. Li	2745
Study on the Statics Analysis of Promoting the Drilling Efficiency of PDC Anchor Bit	
Y. Li, Y.F. Song and Y.L. Mao	2749
Impact of Tooth Shape Parameters on Strength Safety Coefficient of Herringbone Planetary Train	
Z.B. Zhu, C.Q. Shu, Y.L. Xu, C. Li and M. Yin	2753
Design of Monitoring System for Hydraulic Support Based on LabVIEW	
S.S. Tang and C.K. Wei	2758
Research of Laser Induced Fluorescence Detection Techniques Based on Microfluidic Devices	
Y.Q. Cheng, C.L. Guo, B. Zhao and L. Yang	2761
Detecting Ultra Low Carbon and Sulfur Contents in Steel by Using Infrared Absorption Method	
M.R. Bayati and P.Y. Wei	2764
Research Progress of Detection Method of Sulfur in Iron-Base Alloys	
M.R. Bayati and P.Y. Wei	2768
Experimental Study on Active Vibration Control of Flexible Manipulator Based on Improved PPF Algorithm	
F. Du and T.B. Ma	2774
The Wind and Light Power Supply System Controller in the Mobile Base Stations	
H. Ma	2778
Study on Dynamic Mechanism of LOGINK Service Innovation Based on System Dynamics	
L.L. Li, S.W. Ji and L.S. Wang	2782
Numerical Simulation of the Kinetic Energy Projectile Deflected by Targets Moving along Transverse Direction	
J. Chen and X.J. Ye	2787
City Sludge's Differential Scanning Calorimetry Analysis	
L. Yang and S.H. Lin	2791
Research on the Regionalism Air-Conditioning System Design of Car and Saving Energy	
L. Ouyang and D. Li	2796
Design of the Hydraulic System for Carrying Manipulator with 6-DOF	
M. Wang, C.D. Wang, H. Zheng and G.F. Fan	2802
Simulation and Study of SPWM Variable-Frequency Drives of Asynchronous Motors Based on Aerostatic Guide Way	
W. Long, Y. Liu, X.L. Zhang and T.Y. Wang	2807

Implementing Lean Techniques on the Shop Floor Improvement of a Delivery Company J. Shay and P.I. Shieh	2811
Research on Direct Torque Control Adaptive Fuzzy Neural Network Controller of Permanent Magnet Synchronous Motor C.F. Lu and H.B. Yu	2815
The Series and Parallel Energy Storage System Based on Super Capacitors K. Zhao, Y.B. Zhang and B. Yu	2820
Nonsmooth Bifurcations in a Cracked Rotor-Active Magnetic Bearings System F.H. Yang and H.Z. Tong	2825
Modeling and Analysis of Arresting Property of EMAS H.H. Zhao and H.B. Yu	2829
Comparison Research on Aerodynamic Drags and Pressure Coefficients of Reference Car Models in Automotive Wind Tunnel Y.C. Zhang, W. Ding, Z. Zhang and J. Li	2834
Performance Analysis and Simulation Study of Boiler-Turbine Coordinated Control System Y.Y. Jiang and D.F. Wang	2839
Exploration on the Dual Spool Design of Rotary Hydraulic Valve L.J. Qiu and S.Y. Xu	2845
Computing Method of Auto-Rotated Precision Index of Gun Barrel Based on Exterior Ballistic Computation Y.D. Yang, J.S. Ma and C.Z. Jia	2849
Parameter Matching and Simulation Analysis on Power System of Plug-In Hybrid Vehicles D. Ji, H.F. Zhang and J. Yang	2854
Buckling Stability Analysis of Parallel Micro-Spring J. Zhang, L. Sui, X.H. Guo and G.H. Liu	2859
Passivity-Based Control of Motor for Reaction Wheel R.L. Yu and J. Jin	2865
The Study of Mine Explosion-Proof Enclosure Design and Optimization Q.L. Zhang and S.J. Yang	2869
Research for Guide Groove Configuration of Rotary Valve S.Y. Xu	2874
A Study of Influence of Shape Technique on Radar-Scattering Characteristic for Tank Turret Y. Ma, W.D. Xu, F.M. Shi, J. Liu, F. Lu and L.Y. Zhu	2878
Feasibility Investigation for Visible-Laser Compatible Camouflage Thin Film L.Y. Zhu, W.D. Xu, A. Wan, Z.Y. Zeng and Y. Ma	2882
PWM Control for Actively Clamped Resonant DC-Link Inverter on Soft-Switching Y. She	2886
Design Improvement on Shipping Container Spraying Production Line S.O. Okorie and J. Shi	2890
Overview of the Control Methods for LTCC Substrate Shrinkage X.D. Liu, S.H. Wang, Z.X. Hou, D. Zhou and L.Q. Yang	2895
Research on Fault Diagnosis Method for Crankshaft of Drilling Pump Based on Operational Deflection Analysis F.F. Bie, J.F. Pei and F.X. Lv	2899
Hydraulic Vibration Exciter and Hydraulic Circuit Design Research J. Yang	2904
Path Planning for Circular Cutter Envelop Milling of Steam Turbine Blade J.J. Wang, K. Wang and Q. Wu	2908
Improving Design of Cup Conveying Part for Sealing Machine Based on PLC L.A. Pan, Q.L. Du and Y.L. Wu	2913
Research on the Optimal Design and Gear Modification of Gearbox of a Wind Turbine Based on the Virtual Prototype H.B. He, H.Y. Li, J. Yang, G.C. Lu and T. Gu	2917
Thermal Structure Coupling Analysis of Lathe Built-In Electric Spindle under Intermittent Load K. Wang, J.H. Liu, G.K. Wu and X.W. Sun	2922

Analysis of Impact of Driving Amplitude on Resonance Frequency of Silicon Microgyroscope	
S.D. Jiang, Y. Su, Q. Shi and A.P. Qiu	2926
Research on Credit Evaluation and Verification Model in Equipment Manufacture Industry	
L.F. Zhao and S.H. Zhou	2931
The Improvement for the Structure of the Coil Transporters and its FEA	
Q. Wang, Y. Sun, Z. Li, X.Q. Peng and B. Han	2935
The Influence of Diamond Graver's Edge Radius in Diffraction Grating Scoring Process	
P. Sun, H.W. Wang, X.Y. Zhang, L.M. Qiao and X.L. Wei	2939
Stress Characterization and Mechanical Analysis for Supporting Leg of SiGe/Si MQWs Based Bolometer	
B. Jiang, T. Dong, Y. He and Y. Su	2943
Analysis of Aircraft Hydraulic System Failures	
W.G. Zhang and G.M. Lin	2947
Design and Realization of Remote Control UAV's Flight Controller	
Y. Tian, H.D. Deng and H.Y. Zhuang	2951
Study of AT Based on the Lever Method	
J.J. Li and J.H. Li	2955
Design and Analysis of Hydraulic Piston Structure Exciter	
S.J. Wang and K.L. Yu	2959
Design of Underground Gas Concentration and Humidity Monitoring System Based on RS-485	
Y.H. Long	2962
Adaptive Controller for ROV Based on Hybrid Theory	
Y.H. Xie	2965
Data Storm Monitoring System of Large Power Industrial Control Network under Non Uniform Format	
L. Liao, Y.H. Huang and C.J. Zhao	2970
Design and Calculation of a New Type of Elastic Gear Coupling and Finite Element Analysis	
F. Chen, Z.F. Li and Y.X. Liu	2975
Study of Sub-Synchronous Control Interaction (SSCI) Based on the Test Signal Method	
B.F. Gao, J. Liu and S.Q. Zhao	2980
Estimation of a State Vector of an Inertial Unit	
H.P. Zhang, P. Pei, R. Ceschi and O. Rabreau	2985
Study of a Predictive Compensator for Internet-Based Remote Vehicle Steering Control	
M.G. Zhong and H.C. Hong	2990
Research on Auto-Test System of Telescope Laser Indicator	
N. Zhou, Y.H. Li and X.Y. Li	2995
The Development of Underground Personnel Data Terminal Based on RSSI Location	
H.Y. Li and C.Z. Chen	2999
The Design of Embedded Video Monitoring System Based on DSP Processor	
W.B. Hu	3003
A Calibration Method of Binocular Stereo Vision System Based on Halcon	
Z.X. Zhang and Z.D. Zhu	3007
The Brief Introduction of Several Common Subway Shock Absorber Fasteners in China	
H.P. Luo, D.J. Cai, M.L. Liu and P. Wang	3011
Design of the Improved Accompanying Temperature Logger	
J. Guo, S.Y. Liang and Z.T. Yin	3015
Coiling Tension Control System of PID Simulation	
Z.C. Wang, Y. Ding, H.Y. Zhao and X.D. Hu	3019
Structure Principle and Measurement Index of New Energy Reclaiming Suspension	
J. Bai, Y.Z. Guo and M. Peng	3025
Method Research on Bending Fatigue Test of Vehicle Steering Wheel	
X.J. Xu and L. Tian	3029
The Method of the Abnormal Sound Detection for Final Drive Based on DSP Technology	
X.J. Xu and Z.G. Fang	3033

The Multi-Body Dynamics Contact Simulation on Transmission Gears X.H. Deng	3037
Analog Circuit Parameters Measurement System Based on Multiplier Y.X. Wang and M. Hu	3041
Numerical Simulation of Skid Steer Loader Steering Characteristic F. Ren, X.H. Liu, J.S. Chen, P. Zeng, X.F. Jia and Q.M. Wang	3045
A Improvement of the Keep-Right-Except-to-Pass Rule in the Model of Modified CA (Cellular Automata) Y. Ma	3050
Design and Implementation of Remote Control System Based on Embedded Mobile Network J.X. Wei	3054
Vibration Analysis of Cable Suspended Parallel Mechanisms with Dynamic Base Platforms Y.P. Hu and L.M. Tao	3058
The Design of Monitoring System in Large Hydraulic Press Aiming at the Precise Closed-Loop Control H. Du, B. Huang, L. Wang and S.M. Chen	3062
Based on the Geostress to Research Slope Stability in the Deep Open Pit Q.W. Li, L. Qiao and L. Chen	3070
Improvements on Structural Static Pushover Analysis Method in High-Rise Building Structure M. Yu, Z.H. Dai and G.J. Hu	3075
Dynamics Analysis of Manipulator in the Hot Line D.D. Zhang	3079
Design and Implementation of Driving Mechanism on Software Aerospace Measurement and Control System G. Fu, M.X. Kou and R.L. Li	3084
Research on Workshop Layout Based on SLP and Witness Q. Cheng, T.M. Guan, L. Sun and F.B. Jing	3088
Study on the Voltage Measurement in a Battery Manage System Based on LTC6802 Y.W. Zhu and B. Shi	3092
Research on Multistage Horizontal Well Fracturing in the East of Sulige Gas Field Y.F. Xue, D. Li and Z.Y. Zhu	3096
Numerical Analysis of Heat and Mass Transfer Performance of the Packed-Type Parallel Flow Dehumidifier R.H. Zhang, Z.Y. Wang and R.P. Niu	3100
A Novel Vertical Lift Machine and its Precise Pose Control X.B. Liu, X.F. Wei, X.D. Yuan and W. Ni	3105
Investigation on Flat Wheel In-Suit Measuring System and Errors Compensation for Wheel Radius under Aspheric Grinding Process F.M. Nie, Z.G. Li and Q.T. Wu	3110
An Intelligent Fault Monitoring System for Hydraulic Excavator L. Ni, X.S. Chen, A.L. Wang and S.K. Cao	3114
Modeling and Simulation of Feed Drive System Vibrations Based on Dual Inertia System L. Luo, W.M. Zhang and Y.L. Zhang	3117
Comparative Study of Moving Target Analysis System M. Feng and H.C. Du	3122
The Injection Mold Design of Clamshell Phone Upper Cover G.D. Liang and J.H. Liu	3127
Based on PMAC Control 4-DOF Manipulator J.W. Fan, Y.J. Liu, L. Chen and C. Liu	3132
Development of a Rotary Drilling Mechanism for Impregnated Diamond Bits Z.T. Li, Y.Z. Ma and K. Itakura	3136
Studies on Backward Median Current Waveform Control Research in Pulsed MIG Welding Q. Zhu, J.X. Xue, X.L. Zhang, C.W. Dong, Z.S. Chen, Z.H. Li and P. Yao	3140
Soil Moisture Monitoring System Based on RS485 Bus L. Wang	3145

The Finite Element Analysis of the Large-Diameter Composite Slurry Valve Gate J. Wu, Z.M. Yang and D.Z. Wang	3149
Fit Degree Calculation of an Aircraft Part Manufacturing Process X.F. Huang, F. Zhu and N. Wei	3153
Fuzzy Adaptive PID Controller Optimization Design in Temperature Control System X.P. Li and L.Z. Chen	3157
Research on the Correction of Regeneration Opportunity of DPF Using GW4D20 Engine S.J. Qiao and Y. Liu	3161
Dynamic Characteristics of Arch Steel Tower in Construction Stages L. Yu, Y.Y. Che, S. Wang and G.H. Zhao	3165
Inhibition of Return Effect Reversed by Perceptual Load X.J. Liu, Z.H. Fan and J.Z. Zhou	3169
Brushless DC Motor Speed Control System Based on Fuzzy PID Control Y.H. Zhang and L.P. Song	3172
Research on Algorithm to Improve Performance of Multi-Wheel Steering Control System S.S. Wan, J. Cao, Q.S. Zhu and C. Yan	3177
Research on Image Vectorization Based on Dual-Thumb Pneumatic Flexible Robot Hand S.S. Wan, J. Cao, Q.S. Zhu and C. Yan	3181
Based on ANASYS with Finite Element Analysis and Calculation of Cracked Pipeline X.M. Zhu and Y.P. Lv	3185
Simulation Study of Magnetic Memory Signal Correlation Effect of Dual Defects by ANSYS X.W. Xi, S.K. Ren, Y.F. Zhang and Y. Huang	3189
Temperature Control Features and Simulation Research on High and Low Gimbals Z.J. Xiao, X.X. Guo, H.B. Zhu, Z.G. Xu and Z.Y. An	3195
Prediction System Design on Noise Airworthiness Compliance G.H. Yan, S.Q. Liu and W.Q. Song	3199
Separating the Time Field Signal of Rotor Unbalance Vibration Based on EMD Method S.H. Zhang, X.W. Guo and Z.M. Zhang	3204
Application of Rapid Prototyping Technology in Product Design D.T. Li, Z. Zhang, J.W. Deng, M.Y. Huang, X.F. Wan and H.J. Ni	3208
AHP Effectiveness Evaluation of Electronic Warfare Command and Control System under Complex Electromagnetic Environment G.S. Wang and Z.F. Qi	3212
Design of Quadrotor's Control System Based on DSP Q. Lv, P.P. Ni, G.S. Wang and F. Liu	3216
Fault Diagnosis of Rolling Bearing Based on MED and Morphological Filtering S.K. Liu, G.J. Tang and B. Pang	3220
Transform a Mechanical Testing Machine into High-Temperature Disk Spring Stress Relaxation Test Equipment X.Y. Zhou and Y.Z. Yu	3224
Vista of Silt Brick Cutting Machine Development Situation Z. Zhou, Y. Lv, H.J. Ni and C.Q. Wu	3228
The Design of the Single-Phase Inverter Based on DSP (TMS320F2812) Z.X. Zhou and J.E. Huang	3231
LDO of High Power Supply Rejection with Two-Stage Error Amplifiers and Buffer Compensation Y.T. Chang, Y.D. Shiao, P.C. Wu, R.H. Xue and P.Y. Cheng	3236
The Research of Numerical Control Transformation Based on Turbo PMAC H.C. Sun, L.N. Li and S.P. Deng	3240
Rotor Local Rubbing Fault Feature Analysis Based on Teager-Huang Transform S.K. Liu, G.J. Tang and B. Pang	3244
Coupled FE-SPH Simulation of a High-Speed Grinding Process Using a Multiple-Grain Model R.D. Shen, X.M. Wang and C.H. Yang	3248
Sensorless Control of Switched Reluctance Motors Based on Pulse Injection, Position Sectors Divided and Variable Thresholds Z.F. Jia, D.A. Zhao and Y.Y. Zhao	3252

Research on the Static Cushioning Property of Folding Corrugated Cushions Y.M. Qi and W.H. Gao	3258
Interesting Packaging Structure Design of Children's Biscuits Y.M. Qi and W.H. Gao	3262
Study on Axis Calibration Method of the Coordinate Measurement System Based on Binocular Vision Z.M. Zhang, S.H. Zhang and Y.N. Yu	3266
Research on Cantilever Used for Thermal Flow Meter as Switch Z.L. Zhang, Y.Q. Wu and C.M. Liu	3270
The Design of Multichannel Marine Seismic Acquisition Unit Based on ADS1282 Z.L. Zhang, Y. Zhang and P. Chen	3274
Complicated Manufacturing System Dynamic Measure-Control and Intelligence Diagnosis J. Ma, W.W. Li and P.T. Liu	3278
Communication Module Design of Offshore Drilling Platform Cleaning Robot Y.X. Jiang, J.F. Liu, X.H. Zhang and Y.L. Zhao	3282
Design of Pneumatic Parachute-Packing Machine Y.F. Wang, S.P. Deng, B. Chen and L.L. Zhang	3286
Development of G-Code Based on PMAC in CNC Machining Center C.C. Cao, Q.H. Sun, S.P. Deng and Y. Zhou	3290
Research on Automatic Changing Film Mechanism of PM_{2.5} Sampler Y. Mei, S.P. Deng, K. Yang, W.F. Zhou and J.T. Wu	3294
Design of Shock-Absorbing System for Disaster Rescue Robot L. Xie and Y.M. Qi	3298
Failure Analysis and Preventive Measures of Cooling Tower Fan Gearbox J.P. Chen, Y.L. Wang, C.X. Zhao and X. Li	3302
Application of Viscous Pressure Forming in Aeronautics and Astronautics J.G. Li, J.G. Zhang, J.P. Liu, R.F. Zhao, Y. Li, Y.C. Li, S.X. Yu and Z.J. Wang	3306
Methods of Metal Parts Unfolding Y. Li, J.G. Zhang, J.G. Li and Y.C. Li	3310
Equipments of Pulsed Welding System and its Application L.Y. Lou and Y. Gao	3314
Reviews on Automobile Abnormal Sound Fault Diagnosis G.L. Tan, D.H. Miao, Y.M. Qi and S.P. Deng	3319
Research on Disassembling Equipment for Construction Machinery Hydraulic Cylinder X.H. Zhang and J.X. Zhang	3323
Stiffness Modeling and Sensitivity Analysis for Worm Geared Transmission L. Han and H.J. Qi	3328
Theoretical Surface Roughness Model in High Speed Face Milling T. Zhang, G.H. Li and L. Han	3331
An Analysis of Electric Inertia Simulation Method on the Test Platform of Electric Bicycle Brake Force Z.X. Yu and H.B. Yu	3335
A Simple Criterion for Robust Stabilization Design of Interval Time-Delay Systems C.H. Lee and P.S. Liao	3340
Optimization of Operation Frequency in the Evaluation of TBCs Using Microwave Technique Y.E. Yang and G.M. Zhang	3344
Damage Detection of the Honeycomb Sandwich Panel Based on Frequency Dactylogram G.C. Li, Y.Q. Li and Y.L. He	3349
The Research of Fluid in the Cross Micro-Channel J.Y. Li, W. Zhou, X. Zhang, Y.F. Jiang, L. Yang and S.X. Zhang	3354
Research to the Model Design of Real Platform Based on the Simulating Network G.Q. Liu	3359
Fatigue Loads Prediction Based on a Hybrid Road Approach Y.H. Mei and Q.S. Xie	3363
Assessing the Harmonic Emission Level Based on Partial Least-Squares Regression with Data Envelopment Analysis X. Li, M.Y. Chen and Y.W. Zheng	3367

Software Design of Micromouse Dash Motion H.M. Zhang, L.S. Peh and Y.H. Wang	3371
Double DSP Communication Based on CAN Bus Interface H.D. Deng and Z. Yan	3375
Aerospace Test and Launch Process Dynamic Management System Based on the Network Diagram Method Y. Wang, H. Wang and Y. Li	3379
Research to the Development of Network-Anticipated Controlled System Based on Arbitrary Bounded Packet Loss G.Q. Liu	3382
Flatness Feed-Forward Control Model Based on Neural Networks Z.W. Yan, H.A. Bu, D.H. Zhang and J. Sun	3386
The Design of Greenhouse Environment Monitoring System Based on ZigBee G.S. Chen, Z.S. Wang and X. Shang	3390
The Design of Portable Granary Thermometer G. Qin and D.Q. Cui	3394
Research and Design of Light Moisture Tester Y.P. Tang	3399
Software System for Unmanned Surface Vehicle Using PCI8602 X. Shi, S.M. Wang, Z. Xu and Q.Y. He	3407
Research on Integrated Application of Multi-Display Technology in the Mobile Terminal X.M. Mao and J.G. Liu	3411
Design of Remote Monitoring System of Temperature and Humidity Based on Internet of Things Technology L. Wang	3415
The Design of Intelligent Home Furnishing System of Internet of Things L. Wang	3419
Transmission Delay Monitoring Method in Intelligent Substation X.H. Song, Z.Z. Guo and G.B. Li	3423
Study of Maximum Power Point Tracking Control Based on GRNN Neural Network K. Liu, T.Z. Ji, X.Y. Li, X.F. He and M. Zhang	3427
Arrangement of Sensor Nodes for Wireless Sensor Network in Aquatic Products Breeding B. Shi, S.K. Xu and J.M. Jiang	3433
A Platform of Lightning Protection Business Based on Tablet-PC Y.H. Zhang, J.C. Zhou, X. Jiao, J. Zhou and Q.F. Zeng	3437
Prediction and Analysis of Safety Production Accident in Mining Based on the GM(1,1) C.F. Jiang, K.P. Hou and H.F. Sun	3443
A Production Planning and Scheduling Process Study Based on Dynamic Information Feedback Q. Yang and Y.H. Ni	3447
The Key Technology Research on Information Acquisition about Tropical Crop Production Environment L.L. Wang, K. Lu, H.X. Luo and J.H. Fang	3452
Flow Field Simulation in Water Washing Tank of Explosion-Proof Diesel R.S. Long, Z.S. Lian, S.N. Sun and Q.L. Wang	3456
Research on Jet Current Field Characteristic under Waves by Numerical Modelling in Flowing Ambient Fluid M.C. Li, Q. Si and Y. Wang	3460
Feedforward Improved PID Algorithm to Control the Smart Car Y.H. Xie and X.Q. Liu	3464
Evaluation of Various Turbulence Models in Predicting Airflow and Turbulence around a Generic Vehicle Model C. Wu, Y.P. Wang and X. Yang	3468
Ground Simulation Method for Envelope Performance of Airship in near Space L.B. Liu, P.P. Mi, S. Cao and M.Y. Lv	3473
Based on 3-D Modeling and Value Simulation of the Intake System in CNG J.H. Li and J.J. Li	3477

The Metabolic GM (1,1) Prediction of the Absolute Gas Emission Quantity in a Certain Mine	
X.Y. Meng, R.H. Chen and S.B. Wang	3480
Numerical Analysis of the Wind Tunnel Effect on the Chinese Kang in the Northern China	
Z.L. Lu, Y.H. Xu, H.L. Wang and D.D. Xi	3485
Photometric Data Proceession of the Swift/UVOT Instrument	
X.P. Li, C. Yang, L. Zhou and H.T. Yang	3489
Process Simulation and Parametric Analysis of Gas Fractionation Unit	
Q.R. Li, P. Li and P. Zhang	3493
Design and Simulation of Airborne Circular Omni-Directional Slot Antenna	
L. Ren, Y.Z. Zhu, D. Su and X. Deng	3497
Based on Small Current Grounding Fault Analysis and Testing	
H.L. Lv	3501
Prediction Model of Silicon Content in Blast Furnace Hot Metal Based on Artificial Neural Network and Genetic Algorithm	
Y.H. Cheng, C.W. Niu and Y.X. Zhang	3505
Comparison of Two Computing Method on Thermal Conductivity of Aluminum Nitride	
X.M. Cai, Q.N. Zhou and J.M. Wang	3509
Numerical Simulation and Experimental Study on Thawing Time of Cylindrical Frozen Food	
A.M. Ji, X.C. Niu, B.N. Tang and F.L. Li	3513

Chapter 7: Communication, Signal and Image Processing, Data Acquisition and Recognition Technologies

A Modified DFT-Based Channel Estimation Method for OFDM-RoF System	
L.Q. Huang, P. Zhang and G. Yang	3521
Dual Station Based Bearings-Only Tracking Using Unscented Filter	
H.W. Quan, J.H. Li and M.S. Chen	3526
Mobile Wireless Communications Device with Buffered Cock Distribution Network	
J.P. Jia, C.S. Wu, J.W. Chen and Y.Q. Shi	3530
POS Supported ADS40/80 Imagery Direct Geo-Positioning and Positioning Accuracy Optimization	
Y. Zhang, T. Wang, W.F. Feng, Y.H. Fan and J. Rui	3534
The CDMA Spread-Spectrum Cell Mobile Communication Uplink System with Cooperative Diversity	
H.C. Liao	3540
3D Facial Shape Reconstruction from a Single Frontal Image	
Q. Ma	3544
Processing and Mosaicing System of Civil Unmanned Aerial Vehicle Remote Sensing Image	
Y. Yang, L.J. Wang and L. Yang	3548
Image Retrieval Based on Color Histogram of Saliency Map	
J.F. Wu, X.Q. Lv, W.L. Yang, Y. Tao, J. Zhang and S. Yang	3552
Beamforming with Kerdock Codes in LTE System for High-Speed Railway	
Z.H. Yang, L.J. Wang and Z.K. Fang	3556
A Chaotic Image Encryption Algorithm Based on a Dynamical Feedback Operation	
G.S. Gu, J. Ling, G.B. Xie and Y.Y. Ou	3561
The Application of the Movement Video Analysis Technology in the Sports Area	
X. Xiao	3567
Anti-Counterfeiting Technologies for Digital Halftone Images Based on Moire Methods	
J.H. Ge, J. Pan and M.X. Li	3571
Method Research on Based-Static Motion Image Retrieval	
S.Y. Sun and C.S. Wu	3575
Relevance Feedback Based on Particle Swarm Optimize Weight-Vector for Image Retrieval	
F.Y. Lv, X.H. Yang and D.F. Li	3579

Design of Optical Fiber Transmission System Based on Absolute Polar Duty Cycle Division Multiplexing (APDCDM)	3583
X.Q. Chen and L. Tang	
Target Tracking Based on Improved Camshift and Kalman Filter	3587
L.Y. Ban, Y.H. Han and Y.H. Wu	
Sensing Matrix Setting in Cognitive Radio Networks	3591
X.Z. Chen and B.D. Chen	
Wavelet De-Noising Based on Genetic Adaptive Threshold Algorithm	3595
G.W. Wu and C.M. Wang	
3D Graphical Representation of Protein Sequences Based on Conformational Parameters of Amino Acids	3599
Q.J. Xiao and Z.G. Deng	
Adaptive Image Feature Reduction for Object Tracking	3605
C. Lin and C.M. Pun	
Research on Blind Signal Extraction Based on Normalized Kurtosis	3609
Y.J. Zhao	
Extraction of Signals with Reference	3613
Y.J. Zhao and H.N. Jiang	
Research on the Optimal Classification Method for Remote Sensing Image Based on the Gabor-PCA Analysis	3617
J.H. Yang, L.G. Wang and J.X. Qian	
Orthogonal Discrete Frequency-Phase Waveform Design Based on Hybrid Chaos for MIMO Radar	3621
Y.N. Xie and J.J. Wang	
The Communication Capability of Shipboard Radio Based on Path Loss	3625
X.G. Huang, A.M. Zhu and S.J. Yao	
Study of Synchronization Strategy Based on Timestamp	3629
L. Xu	
Research on Multi-Sensor Data Aggregation Based on Clustering Analysis and Correlation	3633
X.C. Dang, Q. Gao and Z.J. Hao	
Automatic Registration between High Resolution SAR Image and GIS Road Network Based on Pairwise Constraint and ICM Optimization	3639
H.G. Sui, F. Hua, G. Chen and C. Xu	
Semi-Automatic Extraction Method for Low Contrast Road Based on Gabor Filter and Simulated Annealing	3644
G. Chen, H.G. Sui, L. Dong and H. Sun	
Multi-Threshold Image Segmentation Based on Improved Particle Swarm Optimization and Maximum Entropy Method	3649
Y.T. Lu, W.L. Zhao and X.B. Mao	
Speech Enhancement Based on EMD and Wavelet Threshold in Noisy Environments	3654
Z.Q. Chen, D.X. Zhang and D.L. Yuan	
Study of SC-FDMA Reduce PAPR Based on the Power Line Carrier Communication	3658
G.J. Gong, D.K. Hao, Y. Zhang, J. Lu and G. Xu	
An Improved Image Stitching Algorithm	3663
D. Li	
Speech Airflow and Air-Pressure Signal Editing Platform	3667
S.L. Lv and Y.S. Jin	
Modeling Difficult-to-Measure Process Parameters Based on Intrinsic Mode Functions Frequency Spectral Features of Mechanical Vibration and Acoustical Signals	3671
J. Tang, Z. Liu, Y.J. Wu and L.J. Zhao	
Image Retrieval of Self-Adapt Distance Measure Based on SLLE	3675
X.F. Wang, H.N. Zhang, X.R. Qiu, J.P. Song and K.X. Zhang	
Study on Deep Structure of Extreme Learning Machine (DS-ELM) for Datasets with Noise	3679
M.M. Ma and B. He	
Design of 2_DOF Simulation Platform for the Testing of Airborne Laser Communication APT System	3683
L.X. Meng, D.X. Zhao, Y.Y. Bai and L.Z. Zhang	

The Method of Optimal Group Based on the Kernel Density Estimation and the Close Degree	
F. Ye, X. Wang, D.H. Peng and C.H. Jiao	3689
Research of Frequency-Hopping Communication for Arbitrary Array Based on Adaptive Beam-Forming	
C.L. Qiao, H.D. Quan and P.Z. Cui	3693
Research on Fabric Image Acquisition Based on Compressed Sensing	
J.C. Dong, S.Q. Guan and L.L. Chen	3698
Adaptive Equalization with Variable Step Size Algorithm Based on Gradient for HF Channel	
F.F. Han and Z.H. Lin	3702
Joint Estimation of Doppler and Time Delay of Wideband Echoes for LFM Pulse Radar Based on Fractional Correlation in Impulse Noise Environment	
L. Li	3706
Parameter Estimation Based on Fractional Correlation under Alpha-Stable Distribution Noise Environment in Bistatic MIMO Radar System	
L. Li	3710
Multi-View Video Coding Based on Video Correction	
T. Yan, X.X. Zhou, W.T. Luo, Z.L. Liu and P.D. Zhang	3714
De-Noising of Underwater Acoustic Weak Signals Based on Compressed Sensing Technique	
L.L. Zhao and X.W. Dai	3718
A Beam Forming Method Based on Amplitude Weighting of Uniform Circular Array	
J.L. Wang, Y.Q. Fu and X. Liu	3722
Impulse Noise Suppression Method for Telemetry Signal by Multi-Scale Median Filtering	
X.F. Liu	3726
Research on Color Vegetable Diseases in Greenhouse Image Pretreatment and Extraction Method	
X.L. Luo	3730
An Infrared and Visible Images Fusion Algorithm Based on Wavelet Multi-Resolution Decomposition	
L.K. Liu and Z.J. Wu	3734
Simulation Research on Rolling Element Bearing Fault Signal Extraction Based on Blind Source Separation	
Y.X. Zhang, J.P. Zhu and S. Zhang	3738
The Improved Membership Matrix Initialization Method of FCM for Image Segmentation	
Z.J. Wu and L.K. Liu	3743
Discovering Frequent Itemsets an Improved Algorithm of Bit Vector and Graph	
N.L. Liu	3747
An Improved Otsu Image Segmentation Algorithm	
Y.X. Dong	3751
Radar Compressed Sensing Imaging Method with Two-Dimensional Separable Sampling	
S.H. Jiao, L. Tang, X. Liu and H. Qi	3755
A MMSE Channel Estimation Method in QC-LDPC Coded OFDM Systems	
G. Sangirov, Y.Q. Fu and Y. Fang	3759
Novel Infrared and Visible Images Fusion Algorithm Based on NSCT	
H.F. Tan, T.W. Luo, J.J. Zhu, G.Z. Li and Q.X. Zhang	3763
A Novel Text Extraction Method from Pure Text Images Using Morphological Operations	
X.Q. Chen, B. He, G.C. Wang and Y.X. Li	3768
Long-Range Communication Scheme Based on Majority Combing	
Y. Peng, X. Huang, L. He and Y.P. Cui	3773
Electromagnetic Scattering from Perfectly Conducting Periodic Rough Surfaces Using Improved Complex Images Method	
L. Li and W.C. Zheng	3777
Application and Analysis of the Full-Wave Band CCD System in Image Interpretation Technology	
W. Han, J. Xie, J.H. Bao, M. Zhao, X.Y. Fan and F. Guo	3782
An Improved DFT-Based Channel Estimation Algorithm for OFDM System on Time-Varying Multipath Fading Channels	
X.L. Ma, T.L. Fan and Y.F. Du	3786

Flattop Broadband Wavelength Conversion Based on Cascaded Second-Harmonic Generation and Difference Frequency Generation in Step-Segmented Quasi-Phase Matched Gratings	
H.D. Wu, J.S. Guo, Y.W. Wu and Z.X. Wang	3790
Investigation of Efficient Wavelength Conversion Based by Difference Frequency Generation in Step-Segmented Quasi-Phase Matched Gratings	
J.S. Guo, H.D. Wu, Y.W. Wu and Z.X. Wang	3794
Wavelet Transform Adjustment Method Study in Color Image Enhancement	
Z.G. Zhang, S.Q. Yan and P. Geng	3798
Accurate Detection of Fault Signal in Large-Scale Communication	
N. Shu	3802
Long Reach 10-Gbps WDM-PON Based on Carrier Distribution and Coherent Detection for Upstream Transmission	
J.H. Liu, Y.P. Ma, S.R. Ren, Y. Yang and B. Zhang	3806
Analysis on Signal Extraction under Sudden Changing Noise Interference Based on Time Frequency Analysis	
S.H. Nie	3810
Application and Research of Data Mining Technology in Communication Network Environment	
Z. Zhang	3814
Study on Optimal Design Approach of One-Card under Multi-Signal Conflict	
H.J. Zhu and Z. Wang	3818
Design and Simulation of Wireless Communication System Channel in Coal Mine Based on OFDM Technology	
R.H. Ma	3823
Astronomical Image Matching Based on the Cross-Correlation Algorithm	
J.J. Sun	3827
Dynamic Simulation of TT&C Signal Based on VFD Filter	
W.G. Yang, W. Li and J. Zhao	3834
Enhancement Algorithm of Color Fog Image Based on the Adaptive Scale and Multi-Parameter Correction	
Y. Gao, L.J. Yun, J.S. Shi and F.Y. Cheng	3838
3-D Reconstruction of Image Sequence Based on Independent Three-View	
C. Li, H.R. Zhao and G. Fu	3844
Study on Enhancing Terminal Identification in Track and Field Using Digital X-Ray Photography Image	
G.J. Lai	3851
Track and Field Image Segmentation Technology of Automatic Multi-Threshold Block Sampling Based on Matlab	
A.L. Yu	3856
The Design of Image Acquisition System Based on CMOS Image Sensor USB Interface	
Z.Y. Hu and L. Li	3861
Locating Method of DPM 2D Barcode Image	
H.R. Zheng, B. Shan and Z. Liu	3865
The Simulation of DS-UWB RAKE Receiver over the Multipath Channel	
K. Zhang, Y. Cao, C.F. Li and W.Y. Liu	3868
Video Sequences Foreground Enhancement Using Hidden Markov Model	
D.Y. Lv, D.Y. Liu, Z.P. Huang, N.H. Yu and J.K. Wu	3872
The Study of a Fast Sub-Pixel Registration Method for Remote Sensing Image	
C. Zhou, J.H. Zhou and D.H. Fan	3877
The Study of Combination Filtering for Removing Mixed Noise of Remote Sensing Image	
C. Zhou, J.H. Zhou and D.H. Fan	3881
Hyperspectral Image Classification via Discriminative Sparse Representation with Extended LBP Texture	
Y.M. Ren, Y.N. Zhang and W. Wei	3885
Channel Reservation Strategies for Multiple Secondary Users in Cognitive Radio Networks	
Q. Peng, Y. Jiang, G. Liu, F. Cui, G.B. He and W.M. Wu	3889

New Enhancement Algorithm of Infrared Images Based on Dual Threshold of the Exponential Transform	
J. Lv, J. Lv, C.F. Wu, Y. Zhou, F.P. Sun and K. Che	3893
Novel Single Image Dehazing Algorithm	
J.P. Chen, D.Y. Bi, C. Liu and Z.L. Fan	3898
Simulation and Application of Space-Time Coding in OFDM System in Coal Mines	
J.X. Wei and C. Sun	3902
Digital Image Technology Mineral Feature Extraction Method Research	
J. Peng and D.B. Li	3906
Image Compression Technology Reseach Based on Lifting Wavelet Transform	
R. Guo, Y.F. Li and F. Liu	3910
Optimization of Traffic Signal Timings Based on Surrogate Measures of Safety	
	3915
Research on the Key Technology of Laser Engraved Image	
S.Q. Zhang, D.M. Zhang and Q.H. Feng	3919
Study of PCM/FM Telemetry Sequence Soft Demodulation	
D.X. Zhu, G. Fu and Y. Feng	3922
Study of Reentry Telemetry Signal in the Environment of Soft Demodulation	
G. Fu, M. Tao and Q. He	3926
Research on Continuous Phase FM Signal Demodulation Based on STFT	
Y. Feng, G. Fu, R.L. Li and L.P. Wang	3930
An Adaptive Filtering Method for Chirp Signal Based on FRFT	
Y.J. Wu, G. Fu and G. Cheng	3934
Research on FM Telemetry Software Demodulation Algorithms	
G. Fu, Y.J. Wu, R.L. Li and L.P. Wang	3938
Performance Analysis on Three Methods for Chirp Signal Parameters Estimation Based on FRFT	
Y.J. Wu, G. Fu and P. Yu	3942
Group Sparsity Regularization Based Compressed Sensing MR Image Reconstruction	
X. Jin, M.F. Jiang and J. Feng	3946
Pulse Coding Soft FM Telemetry Signal Demodulation	
Y.J. Wu, G. Fu and G. Cheng	3952
Design of High-Speed Data Collector of Blast Wave Signal Based on the Post-Trigger Principle	
X.G. Tang	3956
On Matlab's Simulations in Underground Mobile Multipath Channel	
J.X. Wei	3960
Clutter Modeling and Characteristic Analysis for Airborne MIMO Radar	
L. Hao, Y.S. Zhang, Z. Li and J. Xu	3963
Recognition of Paper Currency Research Based on AGA-BP Neural Network	
X. Xiao, Q.H. Wu and Y. Zhang	3968
Wavelet De-Noiseing Algorithm Based on OpenCV for Images Edge Detection	
Y.F. Ma and S.G. Liu	3973
A New Method of Multi-Component Chirp Signal Array Detection	
G. Fu, Y.J. Wu and H.T. Tao	3977
Demodulation Method of Telemetry Signal Based on Virtual Radio	
X.L. Yao, G. Fu and R.L. Li	3981
Multi-Frequency Estimates Based on IIR Adaptive Frequency Estimator	
M.X. Kou, J.H. Lin and G. Fu	3985
Detection and Parameter Estimation of Chirp Signal Based on Time-Frequency Analysis	
G.Z. Wu, G. Fu and Y.J. Wu	3989
Parameters Estimation and Waveform Reconstruction of Chirp Signal Based on FRFT	
Y.J. Wu, G. Fu and F. Liu	3993
Research on Demodulation of Pulse Code Modulated Signal Based on Instantaneous Frequency Measurement	
G. Fu, Y.J. Wu and Y. Feng	3997
LFM Signal Detection Method Based on Fractional Fourier Transform	
Y.J. Wu, G. Fu and Y.M. Zhu	4001

Interference Suppression of VLF Communications in Atmospheric Noise Y.J. Wu, G. Fu and W.J. Geng	4005
Research on Joint Time-Frequency Analysis Methods of Adaptive Radar Signal Q. Xing, W.G. Zhu, Y. Bo and K. Wang	4009
A Study on Same-Beam Interferometry in Deep Space X.Y. Wang, J.C. Hong and K. Hu	4014
The Application and Simulation of OFDM Technology in Power Line Communication Y.W. Chen, B. Xu and J.H. Hao	4019
Research on Demodulation of High Bit Rate Telemetry Signal in FM Baseband L. Yi, G. Fu and G.Z. Wu	4023
Study on Identification Method of Zherong Radix Pseudostellariae with Near-Infrared Spectroscopy Y.P. Pang, K. Liu, L.Y. Xia and S.L. Yu	4028
Color Image Segmentation Based on Secondary Watershed and GrowCut Algorithm J.M. Chen and H.Y. Lu	4032
Tracking Optimization of FH Signal Based on Wiener Filtering Q. He, G.Z. Wu and Y.J. Wu	4038
Detection of Nonlinear Frequency Modulated Signal Based on Fractional Fourier Transform Y.J. Wu, M. Tao and M.Q. Zhou	4042
Detection of Chirp Signal with Time-Varying Amplitude Based on FRFT Y.J. Wu, R.L. Li and X. Wang	4046
Analysis on Ranging and Velocity Measurement Performance of DS/FH Hybrid Spread Spectrum Signal Y.J. Wu, X.L. Yao and J. Xia	4050
Research of Image Denoising Method about Wavelet Transform with Neighborhood Average C. Huang	4054
Application and Debugging of All-Digital Frequency Synthesizer H.B. Fan, X. Meng and J.M. Hou	4058
Electronic Satellite Scheduling Problem and its Heuristic Method J.C. Li, L.N. Xing, Y.W. Chen and X.Y. Wei	4062
Recent Improvements in Image Retrieval Y.S. Zeng and X.L. Ying	4069
Mineral Belt Image Segmentation Using Firefly Algorithm L.F. He, X. Tong and S.W. Huang	4074
The Hidden Terminal Problem of 802.11 MAC and 802.15.4 MAC Protocols Based on NS2 Platform D. Qiu and Y.X. Yang	4078
Research on Halftone Technique of Digital Images W.B. Dai, L. Chen, X.W. Zhang, L. Wang, S.Y. Nie, K.J. Yang and Y.W. Wang	4082
Research and Implement of Digital Image Watermark Based on DCT L.Y. Liu	4086
Face Recognition Based on Gabor Filter and Improved Linear Local Tangent Space Alignment Algorithm X.Y. Xu, J.Y. Liu, Y. Shi and T. Deng	4091
A New Way to Optimize LDPC Code in Multiple Access Channel J.X. Zhang	4095
A Study and Design of Compressed Encoder Based on Neural Network for Remote Sensing Image L. Tao, W.L. Li, Y.Y. Yu, J. Kang and J. Yang	4100
A New Method of Image Matching in a Vision-Based Mobile Robot System C.Z. Cao, W.Z. Gao and H.J. Li	4104
The Research of Starry-Sky Image Bright Stray Light Background Suppression Method S.J. Guo and Z. Wang	4107
Body Surface to External Channel Modeling Y.H. Yang, L.F. Wang, D.Y. Shen and M. Yang	4111

Research and Solution on Bottleneck Problem in Zigbee J.P. Zhang and X.L. Zeng	4115
A Image Decomposition Method Based on Euler Mapping for Face Recognition Z.K. Li and Y. Wang	4119
Color Space Comparison between RGB and HSV Based Images Retrieval C.H. Su, H.S. Chiu, J.H. Hung and T.M. Hsieh	4123
Blind Detection of Copy-Move Forgery in Digital Images Based on Dyadic Wavelet Transform R.F. Zhang, H.M. Ye, Z.H. Song and M. Wang	4127
The Realization of Receiving and Reporting the HARQ-ACK Information in LTE System P. Sun, J. Yang, Y.J. Chen and C. Zhou	4132
NSCT-Based Image Enhancement Combing Homomorphic Filtering with Fuzzy Theory K. Wen, B. Sun and J. Yang	4136
Realization of Book Locating by RFID Technology in Mobile Phone Libraries Y.P. Wang	4140
Design of a Novel Variable Bit Rate Video Traffic Prediction Model Based on Neural Networks Z.Z. Lian, H.Z. Wang and D.H. Li	4143
The Application of Physical Layer Network Coding in the UAVs Z.M. Yang, Y.J. Hu, C.L. Wang and Q.S. Yuan	4147
Study on the Implementation of RAKE Receiver in 4G System H.Y. Fu, C.R. Zhu and X.D. Jia	4152
The Research of M-Learning Platform Based on 4G Network H.Y. Lin and Y.J. Wang	4157
3D Human Body Data Acquisition and Fit Evaluation of Clothing Z. Wang, Y.Q. Zhong, K.J. Chen, J.Y. Ruan and J.C. Zhu	4161
Design and Implementation of Telemetry Data Post-Processing System X.C. Wu, G. Fu and R.L. Li	4165
An Energy-Efficient Three-Dimensional Positioning Technology for Underwater Acoustic Wireless Sensor Network X.Y. Wei, C. Zhu and S.D. Qiao	4169
Electric Power Communication Network Alarm Data Acquisition System Based on CORBA Northbound Interface Y.J. He, Y. He, P. Peng and R. Chen	4175
Robustness Analysis of Telecommunications Customer Service System B. Wu	4179
A Novel Public Key Image Cryptosystem Based on Elliptic Curve and Arnold Cat Map L.J. Chen and A.D. Shen	4183
Research on Adaptive Face Gender Recognition Based on Compressive Sensing L. Zhang	4187
The Application of a New Demodulation Technology in the Telemetry System M. Tao, G. Fu and G.Z. Wu	4191
Digital Signal Processing Approach of Dithered RLG Based on IFIR Digital Filter K. Zhang, G.L. Yang, W.Z. Zheng and R.D. Ma	4195
A New Framework for Churners' Influence Analysis Using Call Data Records O.O. Georges, S.Q. Cai and Q. Yuan	4200
A Robust Image Preprocessing Algorithm for Face Recognition Y. Wang and Z.K. Li	4205
Feature Representation Method Based on Kirsch Masks Filter for Face Recognition Z.K. Li and Y. Wang	4209

Chapter 8: General Principles of Information Technology, WEB and Networks Engineering, Information Security, E-Engineering, Software Application and Development

Research to Household Sub-Network Development Based on Bluetooth Control Technology L. Qian	4215
---	------

The Archives Management in the Environment of Office Automation H.Q. Zhou and L. Huang	4219
Analysis of Application of Digital Media Arts S. Nie and Y. Liu	4223
Discussion on the Digital Cinema Technology and its Development Trends S. Nie and Y. Liu	4226
Application of Virtual Reality in Forestry W. Dong and W.J. Gu	4229
Optimized Analysis of Cyber Topology Based on Reliable Restraint H. Yan	4233
Application of Complex Network Theory in Computer Network Topology Optimization Research Z.K. Wang	4237
Research on the Model Based on Multiple Websites Browsing Behavior Z.H. Li and L.C. Zheng	4241
LAN Security Strategy Based on AES J.W. Chen, C.S. Wu, J.P. Jia and Y.F. Zhang	4245
A Radio Link Logical Relationship between and One Network Apparatus C.S. Wu	4249
Real-Time Cluster Resources Scheduling Strategy in WIA-PA Networks Y.P. Sun, M.J. Fang and J.H. Sun	4253
Research on Security Issues of the Internet of Things X.F. Wang	4261
Research on Network Control Based on QoS of the Network Y. Zhou	4265
Research on Computer Cluster Load Balancing Mechanism X.Y. Li and T.T. Jiang	4269
Improvement of Cluster-Head Selection Mechanism Based on LEACH Protocol in Wireless Sensor Networks S.P. Fan, X.D. Zhang and H.L. Wang	4273
The Development of Interactive Marine Incinerator Operational Training System Based on Web3D W.L. Yao	4277
A Review of Cluster Based Routing Protocols in Wireless Sensor Networks J. Wu and G.Z. Hou	4281
Analysis of the Technologies for Host and Port Scanning N.F. Zhu, Y. Zhou, W. Wang and L. Lou	4286
The Application of Multicarrier Code Division Multiple Access System in the Internet of Things H.C. Liao	4290
Improved Ant Colony Algorithm and its Application on the Routing Selection of Stable Clusters in Wireless Sensor Networks H. Yang	4294
Research the Architecture of a New Leisure Agriculture Intelligent System Base on the Internet of Things Y.G. Lin	4298
Technical Framework and Functional Framework on Sports E-Government Platform L.X. Wang and L.G. Zhao	4302
Design and Implementation of Portable Software System X.Y. Chen, H.L. Wan and M.H. Guo	4306
Design and Analysis of a Reliable Group Signature Scheme Based on Discrete Logarithm H.L. Wan, G.J. Song and Y.H. Chen	4310
The Solution of Safety of Electronic Cash in E-Commerce under Cloud Computing Environment S.J. Gong and L.P. Zeng	4314
On the China Tourist Hotel E-Business Management F.L. Liu	4318

Design and Implementation of Web Extraction System of Ceramic Products' Information in the Business Website M.Q. Zhan and R.H. Lu	4322
An Improvement for Fully Homomorphic Encryption over Integers with Shorter Public Keys Z.T. Jiang and X.T. Huang	4326
Design and Implement an Application Development Platform Based on Open Source Technology T.B. Liu	4332
Research on Network Management Network L.R. Wang, C.S. Wu, S.C. Zhao and F.H. Liu	4338
The Application Research of Lightweight J2EE Security Framework A.M. Hu	4342
The Solution of P-Teredo Service Traversing Symmetric NAT F.Y. Xia	4346
Design and Implementation of Dynamic Web Services Publishing Software Based on CXF C. Shan, L.X. Wu, Y. Yang and J.F. Xue	4350
The Design and Implementation of Micro Player H.E. Chen	4355
The Application of Digital Information Technology in the Volleyball Game Z. Bai and Q. Zhang	4358
The Application of Computer Digital Simulation Technology in the Technical Structure Study of the Martial Arts M.H. Gao	4362
The Application of Computer Numerical Simulation in the Sports Science Study S.G. Yi Qin	4367
Security Protection Model of QR Code Scanning Software L. Zhu	4371
Based on SVM Tibetan Web Public Opinion Sentiment Classification Y.X. Li, Z.J. Zheng and Y.N. E	4375
Web-Based Data Translation for a Resource Management Grid L. Zhang	4379
Design and Implement of Decision Support System in the Ceramic Information Technology Integration Service Platform H. Huang, Y.L. Zhang and M. Zhang	4383
Design of Campus E-Commerce Platform Based on MVC Model S. Zhao, Y.D. Sun and X.K. Shi	4388
The Study on the Improvement of Observer Pattern Based on .net Framework Z.J. Fan	4392
Design and Implementation of an Intelligent Cross-Platform IaaS F. Guo, Q. Du and J. Yang	4396
A Network Information Filtering Method Based on Node Energy Transfer J. Liu	4400
Improved HEED Based Trust Routing Algorithm for WSNs J.W. Wang and W.Y. Sun	4405
Self-Certified Ring Signcryption Scheme Based on Discrete Logarithm Problem H.S. Qin, Z.X. Jiang, M.K. Geng, J. Luo and S.L. Zhou	4409
Research on Ontology Based Government Affair Workflow S.X. Wang and Z.Q. Wang	4413
The Robustness and Mutual Information Entropy of Random Modular Boolean Networks N. Zhao, B.H. Guo and F.C. Meng	4417
Research and Design of Network Instruction Interaction Mode C. Liu	4421
Research on TCP Congestion Control Mechanisms S.G. Zhang, Q.Y. Sun, Q.H. Gao, M. Wang and Y. Zhang	4427
Research on Forensics Method Based on Log on SaaS G. Zeng	4432

Complexity Analysis of Neural Network Using First Category Orthogonal Weight Functions D.Y. Zhang and J.H. Zhan	4437
Crowdsourcing Software Development Process Study on Ultra-Large-Scale System X.L. Xu and Y. Wang	4441
The Implement of a Linux Database Data Processing Mechanism Based on Cache Y.J. Zhang and C.H. Li	4447
Experimental Data Publishing Based on Browser/Server for Neutral Beam Injection in EAST R. Zhang, C.D. Hu, P. Sheng, X.D. Zhang, Y.Z. Zhao, D.Y. Wu, Q.L. Cui and Y.L. Lin	4452
Three Networks Convergence Analysis Based on SWOT Theory R. Zhang and Y. An	4456
The Research of Multi-Network Switching Model for Power Communication Network Based on Analytic Hierarchy Process G.J. Gong, G.L. Song, D.K. Hao, J.H. Hao and G. Xu	4461
Active Online Thematic Map Cartography Based on Network D.G. Su, L. Wang, X.M. Cui and D.B. Yuan	4466
Study on One Generating Method of Digital Painting Patterns W.D. Xu, J.F. Qin, J.S. Zhu and X.L. Lu	4470
A Wavelet Kernel-Based Support Vector Machine for Communication Network Intrusion Detection Y. Zhan	4474
The Attendance Management System Based on Micro-Cellular and GIS Technology J.F. Zhu, F. Wang and K. Zhang	4478
A Prevention Scheme for Black Hole Attack Based on NS2 X.J. Meng, D.Y. Lin, D.Q. Lin and R. Hua	4482
Design and Implementation of a Software Automation Development Framework for Management Information System X. Cheng and X.X. Qiu	4488
Study on the Adaptive Congestion Control Algorithms for Wireless Sensor Networks Z.J. Zhang and Z.X. Xie	4493
An Approach to Describing Software Logic Model X.G. An	4497
Software Platform of Home-Based Community Care for the old Based on jQuery Mobile H.M. Xin, S.W. Li and M.Z. Fu	4501
Design and Implementation of Personalization Recommendation System in Mobile E-Commerce J.F. Miao	4506
A Novel Feature Selection Method Based on Principal Component Analysis for Network Traffic Classification H.Z. Wang, J.P. Zhang and Z.Y. Shang	4510
A Security Compliance Based Mobile User Authentication Scheme Y.F. Yuan, L.Z. Liu and C.Y. Han	4514
An IPv6 Security Multicast System Based on CA Authentication J.B. Li, X.P. Li, F. Yang and Q.K. Dong	4519
Research on SIQRS Spreading Dynamic Model with Feedback Mechanism on Scale-Free Networks T. Li, Y.M. Wang and Y.P. Yang	4524
Research on Web Service-Oriented Access Control Model M. Liu, L.Z. Liu and Y. Zhang	4528
Network Security Technology Research in the Process of Art E-Commerce Transactions Y.L. Li	4533
The Application Design of Personalized Recommendation System Based on Data Mining to E-Commerce L. Sun	4538
Research on Combine White-Box Testing and Black-Box Testing of Web Applications Security J. Fan, P. Gao, C.C. Shi and N.G. Li	4542

Performance Comparison Based-RSSI for Sensor Networks in Different Environments Y. Feng and B. Yi	4547
Research of Virtual Simulation Scenario Editor for Earthquake Tabletop Exercise B.J. Zhou, Q.L. Jia and K. Cen	4551
HIPPO: An Adaptive, Scalable, Hierarchical P2PLive Streaming System K. Lei, L.H. Li, C. Peng and L.Y. Yu	4556
About the Requirement Analysis Changes of ERP Software Project W.J. Liu, Y.Y. Song, M. Zhao, P. Wang and X. Wang	4562
The Study on Optimization of Energy Consumption for Nodes ZigBee Wireless Sensor Networks Based on Library Information Service J.S. Zhang, B. Sun and D.M. Liu	4566
On the Model Analysis of Wireless Sensor Networks Based on Library Information Service D.M. Liu and J.S. Zhang	4570
Comparative Study of Construction and Operation of the Domestic Famous Park Platform Y. Wu, T. Xu, Y.X. Fang and S.H. Fan	4573
Discussion on the Micro-Blog Information Resources in Disseminating the Local Image Z.X. Luo and S.Y. Li	4577
Design of Multi-Functional Gateway in Mine Internet of Things Y.Q. Su, Y. Liang and Z. Xu	4581
The Research and Design Based on IntelliJ IDEA+Oracle Measuring Management System L. Zhu, L. Bai and R.Y. Zheng	4585
Analysis of Conflict Resolution Model in Campus WLAN Wireless Network H.J. Zhu and R. Wang	4590
Large-Scale Data Mining and Distributed Processing in Big Data Internet C.Z. Xing	4594
Design of Smart Household Monitoring Platform Based on Internet of Things Y. Xu	4598
GNS-Based Simulation and Analysis of OSPFv2 Neighbor Authentication X.H. Li, R.L. Zhang, Y.J. Wang, L. Yang, J. Nie and Q.Y. Yang	4603
Study on the Design of Mobile Digital Library Based on 3G Mobile Internet Technology J. Zhao	4608
Research on Key Technology of Web Network Based on Mobile Computing R. Deng	4612
Jess-Based Argumentative E-Commerce Negotiation System W. Zhang, Y.N. Zhang, S.S. Guo and X.Z. Ma	4617
The Application Research of Information System in the Information Pipe Z.J. Huang	4621
Research on the Information Push System Using Case-Based Reasoning H.L. Shen and L.P. Fu	4625
Analysis of Wireless Mesh Network Routing X.L. Tan, J. Zhou and W.B. Wang	4629
Research of Ad Hoc Network Routing Based on NS2 by Performance Comparison X.L. Tan, J. Zhou and W.B. Wang	4633
Research of the Computer-Aided-Translation Software S. Han and X.D. Zhang	4637
Design and Realization of Alfresco Database of the Micro-Information System X.Y. Yan, Z.P. Lin, X.M. Zhang and W.C. Yang	4643
An Improved RBAC Model and its Application in Development of Information System W.L. Song, H.F. Zhang, W.F. Wu and W.J. He	4650
Research on ASP.NET-Based Task Management Platform F.W. Wang, Z.H. Xing and C. Liu	4654
Research on Application Technology of Body Area Network and the Internet of Things Connection X.F. Liu and C. Liu	4657
A SVM Reliability Evaluation Framework for the Component-Based Web System P. Nie	4660

The Design and Realization of Virtual Editing Environment for News Release C.J. Wang	4665
Reliable Node Based Multipath QoS Routing Protocol on Opportunistic Networks X.B. Ma, L.T. Wang and Z.C. Ouyang	4669
Privilege Separation in Browser Extensions Based on Web Workers C.M. Yu, J.H. Sun, H. Chen and X.H. Xu	4675
Bayesian Inference of Information Theoretic Metrics of Anonymity H.R. Pei, Z.J. Wang and Y. Wang	4680
Software Safety Analysis Based on Multiple State Transition Y.L. Wang, J.L. Xiao, Y.K. Liu, T.Q. Li and W. Wu	4684
Security Framework Based on SDN Y. Yu, Y.N. Wang and W. Yang	4690
Research of Application of 3D Pipeline in Mobile E-Commerce J.Q. Zhang, P. Wu, T. Yu, Q.Q. Cao and F. Xiong	4694
Research on the Structure of Authentication Protocol Analysis Based on MSCs/Promela C. Zhang and Y. Wang	4698
Hot News Recommendation System across Heterogonous Websites Using Hadoop S.W. Xu and Z.Y. Xia	4704
On the Process Modeling of Software Crowdsourcing Based on Competitive Relation X.L. Xu and Y. Wang	4708
On Application of E-Government 2.0 in Basic Public Services Y.H. Hua, P.F. Li, Z.J. Wang and B.F. Liu	4713
The Big Data how to Influence the Development of E-Government B. Li, B.F. Liu and N.X. Liu	4717
Design and Implementation of Topology Management Based on EPON Network Management System Z.G. Yang, D.F. Liu and Y. Gao	4723
The Research and Application Based on Competitive Scheduling Mechanism in Mine Based Wireless Mesh Networks Q. Shen	4727
Study on the Technologies of Operating System Scanning N.F. Zhu, Y. Zhou, L. Lou and W. Wang	4733
Design and Implementation of IPv6 Border Router for Wireless Sensor Networks H. Wang, B.G. Wang, S.Q. Zhao and X.F. Lv	4737
Design and Realization of On-Line Uyghur Handwritten Character Collection System H. Dilmurat and K. Ubul	4742
Researching of Project Management Information Systems Based on WBS W.Y. Du	4747
Research of Access Control Models in Personal Networks Y.L. Zhao and C.F. Jiang	4751
Research of Trust Model for File-Sharing System C.F. Jiang and W. Xu	4755
Research and Implementation of Image Transmission Key Technological Based on WSN Z.S. Wang and D.L. Huang	4759
Research on User Behavior Analysis Engine System S.H. Zhu and P. Tang	4763
Resource Sharing between Social Network and UPnP Network H.L. Jia, Y. He, C.C. Zhang and L. Chen	4767
Research and Design on P2P Business Process Execution Framework for Workflow Management Systems T. Wu	4771
Research on a Theatre Recommendation System Y.L. Li, Y. Li, W. Jiang and Z. Zhou	4775
The Analysis of Constructing Fully Homomorphic Encryption over Integers L. Jin and X.X. Song	4780
Latent Semantic Index Applied in Question-Answering System about Agriculture Technology L.Y. Cao, X.X. Zhang, X.H. San and G.F. Chen	4785

Creating a New Combined Influence Measure: An Analysis of the Citation Network R. Deng	4789
OpenFlow-Based Global Load Balancing in Fat-Tree Networks Y.W. Wu and W. Zhang	4794
Research on the Cloud Services Plat Form Architecture of Digital Library Based on Cloud Computing Technology S.H. Zhu and T. Kuang	4799
Data Integration in B2B E-Commerce Y. Zhang	4802
Election System Based on Prior Knowledge G.D. Wu and Z.Y. Liu	4806
Audio and Video Media Asset Management System Based on Cloud Storage C. Li, S.X. Cao and L.J. Yang	4811
Resource Query Mechanism Research of Structured P2P Network Based on Node Interest Community J.L. Jiao and M.Z. Zhang	4815
Research on Accounting Decision Support System Based on Data Warehouse and Data Mining Z.W. Li and D. Bai	4819
Design of Mobile Police Store System Based on the Technology of Information Security X.Y. Zhang, H.Z. Ji and M. Li	4823
A Study on Security Mechanism for Resource Identifiers in Ubiquitous Network M.L. Jiang, F. Cheng and P. Zhang	4827
Research of Wireless Sensor Network Intrusion Detection Based on Ant-Miner T. Liu, S.Y. Liu, D. Wei and J. Cui	4832
A Fuzzy Trust Model for Public Key Distribution in Body Area Networks G.W. Wu, Z.S. Liu and P. Pirozmand	4837
Exploration and Implementation of Electronic Lottery Distribution System Based on Struts Framework R.J. Zhang and Y. Xiao	4841
Topic-Oriented Information Retrieval L. Li, W.J. Li and Y.Y. Fan	4845
Representing and Preparing for Resources in EPM's Execution Model Q. Yu, T. Li, X. Zhang, Y. Lin, Y. Yu and N. Zhao	4851
Application of Gis in Environmental Impact Assessment D.Q. Chen	4855
Remote Maintenance System Based on Browser\Server and VIRTOOLS T. Yuan, C.D. Yang and B. Shen	4861
Improved XFBT: A Low-Power Topology of Network-on-Chip H.B. Chen and C. Li	4865
A Database Grid Service with a Novel Mutation Operator J. Cao, Y.B. Li and C. Yan	4869
Research on Algorithm to Improve Performance of Wireless-Optical Broadband Access Network J. Cao, Y.B. Li and C. Yan	4873
Research on Image Vectorization Based on Fuzzy Neural Network and Expert System S.S. Wan, J. Cao and Q.S. Zhu	4877
Research on Social Engineering in Network Security G. Chen, J. Yang and J.P. Cai	4881
Network Security Situation Awareness Based on Multi-Source Data Fusion G. Chen, J.P. Cai and J. Yang	4885
Research on Mobile E-Commerce in 3G Environment Y. Luo and B. Gui	4889
Research and Analysis Process of Android Communication Platform in AIDL Model A.M. Hu	4893
Push Technology Based on Analytic Hierarchy Process Z. Liu, X.C. Xia and Y. Li	4897

Information Management of Digital Libirary Based on Data Mining S.Y. Huang	4902
Research on E-Government Model Based on Big Data Y.Q. Lu	4905
Internet Public Opinion Recognition and Tracking Based on Web Mining H.L. Shen and F.X. Bao	4909
Data Redundancy Replication Strategy Based on Relevant Failure in Cloud Environment L. Liu, D. Li, C. Shen and W.B. Zhou	4913
Research and Implementation of Oracle Database Synchronization Timing J.F. Wang, Z.F. Shi, Z. Qu and S.S. Li	4917
User Behavior Prediction Analysis Based on Time Context W. Gu and L.J. Chen	4920
Research of the Minimum Vertex-Cover Solutions on the Tree and Lattice Structures Y.J. Zhang, W. Wei and T. Wang	4926
Research on Multi-Channel Network Information Interactive Technology X.H. Wang, J.Q. Zhang and C.C. Ou	4930
Collective Communication Optimization for Solving Linear Algebraic Equations X.G. Ren, W.H. Zhou and J. Chen	4934
Trusted Software Architecture Evolution Based on Graph Transformation Rule H.W. Jiang and R.L. Wang	4940
The Method Research of Environmental Noise 3D Graphic Expression Based on CityEngine X.L. Liu, X.Y. Yang and T. Zhu	4945
Study on CDIO Talents Training System Based on the Internet of Things and Cloud Computing in Big Data Era H. Yan and H.Y. Hu	4949
Research on Setting Strategy of Area Router Based on Scale-Free Internet J.Q. Song	4953
Information Construction of Chinese Local Government in the Era of Big Bata Y.H. Hua, Z.J. Wang, M.L. Geng and B.F. Liu	4957
Realization of RIP Module on GPON OLT System W.H. Kang, X.H. Huang, S.C. Zhang and X.Y. Zhang	4962
The Study of iPark Cloud Platform Construction and Application Modes T. Xu, Z.G. Zhang, Y. Wu, Q. Pan and S.H. Fan	4966
Research on APT and its Secrutiy Protection G. Chen, C.L. Yang, J. Yang and J.P. Cai	4970
Data Mining Technology Applied in Network Security Z.Y. Wang, B.Z. Wang and Y.D. Wang	4974
The Optimized Evaluating Model and Method of Transaction Credit for E-Commerce X.K. Liang and L.M. Tao	4980
Research and Implement of Micro-Blog Social Network System Based on Users' Association Analysis H. Chen	4985
Chinese-Uyghur Sentences Alignment Using Multiple Clues S. Maimaitimin and M. Hou	4990
E-Commerce Personalized Recommendation Y. Zhang	4996
Research of the Issues Based on Trusted Cloud Security Y. Huang, X.Q. Ma, Y.Y. Liu and D.N. Li	5000
The Application Based on the Internet of Things and Cloud Computing Z.N. Liao and Y.R. Hu	5004
Research on the Security of the Digital Learning Resources Library Based on Cloud Storage H. Cao	5007
Coaches Ranking: A Time-Irrelevant Data Mining Solution with Flexibility and Objectivity Y.Y. Chen, M.J. Zhang, Z. Shen and J.X. Chen	5010
Ontology of Aircraft Carrier Geographic Information Z.L. Shi, D.Q. Tang, Z. Tan and G.F. Wang	5014

Chapter 9: Advanced Information and Innovative Technologies for Management, Logistics, Economics, Education, Assessment

Study on Utilizing Foreign Direct Investment in Underdeveloped Areas J.B. Hu	5023
Analysis of Reliability and Validity in Computer Assisted English Teaching Test X.W. Zou, X.L. Wang and Y. Wang	5029
Comparative Analysis of the Professional Situations and System of Television Basketball Commentator in China and America Y.W. Fan and X. Fan	5033
The Impact of RMB Appreciation on the Sporting Goods Industry and Countermeasures Y.W. Fan and X. Fan	5037
Analysis of Things Technology to Promote the Dynamic Alliance Virtual Performance Evaluation H.X. Zhang and Q. Zhang	5041
Research on Dynamic Relation Model of LOGINK Service Innovation T.T. Huang, S.W. Ji and L.S. Wang	5045
The Research on Visual Simulation Technology Applied in College English Teaching M. Zhao and W. Zhang	5049
The Application of Modern Information Technology in Competitive Sports B. Xiao	5053
Based on Project-Driven ASP.NET Teaching Research and Exploration W.D. Zhao and H.Y. Zhou	5057
Application Development of Student Score Analysis System for Secondary School Based on Standard Score W.D. Zhao and Y.D. Zhang	5062
Research of Current Situation and Risk of Bitcoin Y.Q. Lu	5066
Risk Analysis of a Large-Scale Construction Project W.J. Dai	5070
Internet Financial Credit Evaluation for the Small and Medium Enterprises Y.Q. Lu	5075
College Aerobics Curriculum System Construction in Perspective of Systems Theory Y. Zhang	5078
Development of Logistics Bases in China - A Case Study of Jiangxi Yinyan Logistics Base W. Xiong and M. Zhang	5082
Discussion of Chinese Industry Information Service Transformation S.J. Mao and L.Y. Zhang	5086
Distribution Research of Survival Road for Local Retail Businesses in Relatively Backward Areas - A Case Study on Luoyang Dazhang W. Xiong and M. Zhang	5090
Statistical Analysis on Primary and Secondary School Digital Disaster Education in China S.J. Mao	5094
Fashion Design Professional Basis Based on Design Process T. Guo	5098
Research on Development and Application of Computer Supplementary Software in PE Teaching of Higher Education Y.H. Qiu, Y.M. Wang and K. Hu	5102
Constructing Micro-Teaching Experimental Environment with Information Technology J.X. Wang and S.Q. Ma	5106
The Study of Risk Management of Government IT Service Outsourcing B. Liang, H.F. Liu, G.N. Geng and G. Yang	5112
A Spectrum of Findings: Mechanisms for Third-Party Evaluation of the Quality on the Application-Oriented Undergraduate Teaching L. Lei and J. Peng	5116

Research on Design & Application of Multimedia CAI Courseware for Technique Teaching in Physical Education Courses Y.H. Qiu, G.Z. Ou and J. Huang	5120
Economic Analysis and Governance Countermeasure of Overload and Out-of-Gauge on the Highway L.J. Zhou	5124
Governance Mechanism of Rural Population Hollowing under the Background of Balancing Urban and Rural Development F.J. Song, D.Q. Wang and S.Q. Tian	5128
The Application of Factor Analysis in the Study on Cultural Industry Competitiveness Evaluation Index System P. Sun	5132
Research on Rapid Bidding of Forgings F. Gu	5136
Study on Evaluation Index System and Methods of Vendor Selection C.J. Rao and J.H. Dong	5140
Analyze the Combination of National Symbols and Design Aesthetics Y.Y. Chen	5144
Application of Game Theory in Mode Selection of Combined Training of the Postgraduate T.Y. Guo, J.J. Li, B. Ma, J.X. Pian, H.C. Wang and F.Y. Han	5148
The Revelation from MOOCs on our Country's Remote Education J.F. Wang	5152
The Coupling Relationship between Information Technology Level and Public Transportation: A Case Study of Cities in Guangdong M.X. Zhao, Q. Gu, Y. Duan and J.Y. Liang	5157
The Research of Building CAI Table Tennis Teaching System B.W. Zhang	5165
Construction the Bottleneck and Countermeasures of BIM High-End Talent Cultivation in Colleges and Universities B.K. Qi and H. Xue	5169
Purchase Cost Control in Electronics Manufacturing Service (EMS) Corporations D.X. Lin, Z.Y. Lu and L. Ma	5173
The Application of the Multimedia Technology in College Physical Teaching Reform J.H. Shi	5178
Prediction of Cigarette Sales Amount and Average Price Based on Lunar Calendar X. Yang	5182
The Study of SWOT Analysis and Countermeasures on Developing Tourism Resources in Xinxiang City X.X. Li	5186
Marxist Philosophy in Object-Oriented Practical Education M. Zhang	5189
The Application of Basketball Zone Defense Tactics B. Gao, Z.L. Zhao and M.M. Zhang	5193
The Study of Interactive Relationship between Urban Construction Area and Road Area S.S. Zhang and Z.Z. Yuan	5197
Rethinking on Social Responsibility Accounting Information Disclosure of Public Hospitals in China W. Tan and Q.L. Yang	5201
Research on Corporate Social Responsibility to Employees Voluntarily Assume Y.H. Li and Y. Wang	5205
The Research of the Second Class Credit in the Credit System S.L. Yao and S.T. Wang	5209
Research on the Multidimensional Teaching Goal Setting and Implementation of Exhibition Lighting and Illumination Design Q. Gong	5213
A Discussion about Economic Theory Used in Safety Investment of Petrochemical Enterprises X. Dong and S. Hu	5217

Analysis of Digital Electronic Teaching in Higher Vocational Colleges - Cultivating and Stimulating Learning Motivation Y.H. Li	5221
The Application of Project Driven Teaching Method in Win Server 2008 C.B. Yin, D.L. Lin and P. Ren	5224
Application of the Multi-Level Fuzzy Comprehensive Evaluation Method to Software Companies' Choice of Competitive Strategies W.D. Zhang, Z.X. Jiang, Y.Z. Li and S. Zhang	5228
Analysis of Low Carbon Development Path for Coal Industry of Multiagent Network Structure under Carbon Tax Background L.H. Wang, X. Li, Y.J. Yuan and Q.X. Cai	5232
The Enterprise Oriented Computer Graphic Design Courses Construction of Practice Teaching System E.J. Bai and D.L. Lin	5237
Quasiconvex Cash Subadditivity Risk Measure for Portfolios H.W. Liu and C.B. Xiao	5241
An Analysis of Characteristics and Purchase Predisposition of Consumer of Urban Community Commercial Service Q.F. Geng	5245
An Evaluation Index System of Physical Education Quality Based on Analytic Hierarchy Process Model (AHP) W.Y. Chen and J.B. Hu	5250
Experience and Enlightenment of American Internet Finance Supervision J.B. Hu	5254
Influential Factors of College Students' Mobile Phone Recycling Behaviors Y.Y. Wang and B.Q. Ma	5258
Application of Cooperative Project Teaching Method in the Program Design Teaching S.Q. Sun, C.B. Yin and Y.M. Su	5263
A Discussion on the Construction of Information Integration Based on the Integrated Development and Management of International River S.Z. Guo, Q.P. Wang and M.M. Hou	5267
The Research on Site Selection of Urban Infrastructure towards the Major Function Zoning S.P. Zhang and H.R. Li	5273
Comparative Study of R&D Spillover Effect for High Technology Industry and Traditional Industry F.J. Meng	5278
A Study on Web-Based EVP Teaching Platform W.J. Zhang	5282
Research on Evaluation Index System of Risk Management Capacities of Private Banks in China L. Yang and F.P. Wu	5286
The Research and Practice of Network Teaching Pattern L.L. Zhao, Q.Y. Sun, X.X. Liu and Q.H. Gao	5290
Technical Risk Assessment of Large-Scale Construction Project Based on Triangle Whitening Weight Function W. Ma	5294
Design of Expressway Construction Safety Evaluation System Based on AHP H.L. Guo, Z.N. Wang, L.X. Zhang and L. Xiao	5300
Design and Implementation of Teacher-Student Interactive Platforms in the Campus Network Based on UML Y.L. Cheng and Y.H. Zhang	5304
Research on Distribution Issues of Book Chain Taking Xinhua Bookstore as an Example W. Xiong and M. Zhang	5311
Research on Methods of Distribution Center Facility Siting W. Xiong and L.Y. Zhang	5315
Study on Classification of Body Shape and Size Grading on Young Women of Quanzhou District C.Y. Huang	5319

City Waterfront Landscape Post Assessment Based on System Dynamics L. Zhao and C. Gui	5323
The Modeling of Buildings Cost Assessment Expert System with Differences H.W. Yin	5327
Research on the Organization Operation Mode of the Hong Kong-Zhuhai-Macao Bridge Based on VSM G. Sheng and J.Q. Yu	5331
Physiological Mandarin Speech Corpus for the International Preparatory Students in China: Design and Initial Application X.P. Du, W.P. Zhang, Y.F. Hou and J.G. Wei	5336
Construction and Implementation of the Network Teaching System of Mechanical Design Basic Course Based on Web M.C. Ran and M. Xia	5341
The Application of Multimedia Technology in Medical Information Management J. Niu and Q. Guo	5345
Cultivating College Students' Information Literacy under Network Environment A. Wang and X.Q. Zhang	5349
Application of Virtual Technology in Medical College L.R. Shen	5353
Research on Cloud Computing-Based Virtual Logistics Enterprise Performance Management H.X. Zhang and X.D. Zhang	5357
Design and Implementation of Real Estate Sales System Based on B/S X.Y. Zhu	5361
The Design of Finance Assistant Management System for the Modern Enterprise Management by Using Computer G. Liu and H.B. Zhang	5364
Design and Realization of Computer Teaching Room Based on VMware Visualization Technology H.C. Shao	5369
Construction of Evaluation Index System for Finnish Design Policy C.J. Chen, H. Fang and D.J. Yu	5373
Process and Technology Research on Information Management of Agricultural Disaster Prevention and Reduction Y.H. Wu and W.L. Liu	5378
Research on Information Management Frameworks of Agricultural Disaster Prevention and Reduction R.R. Deng and Y.H. Wu	5382
Internet Financial Innovation Based on Enterprise Growth Cycle for the Small and Medium Enterprises Y.Q. Lu	5386
Impact of Digital Technology on Architectural Design Teaching F.D. Yu	5390
Study on the Landscape Pattern Change of Haikou City Based on GIS F.X. Wang and W.H. Liu	5394
Design of Information Disclosure Platform in Engineering Based on Reliability Model Q.F. Meng, Z.Q. Feng, Z. Li and S.G. Hao	5398
The Research on Statistical Characteristics of China Civil Aviation Network H.G. Yao	5403
Application of Digital Media Technology in Exhibition Design for the Geological Museum K.F. Zhou and J.S. Wang	5407
Application of Information Visualization in Museums' Display and Design J.M. Hu	5411
Based on Computer Network Security in Financial Informationization Construction of Colleges and Universities S.Z. Wu	5415
Study on Application of Database Synchronization Technology in the CDIO Teaching System Based on Android H.Y. Hu and H. Yan	5419

A Comprehensive Experimental Practice for Ship Bridge Resource Management Training Based on Ship Handling Simulator Y.F. YANG and M.K. Feng	5423
Research on the Platform of 3D Information Management for the Ordnance Maintenance Equipment Z.Y. Cheng, R.Y. Xie, L. Qiu, X. Zhou and C.F. Yu	5427
Study on Fire Safety of Building External Thermal Insulation Materials L. Yang	5431
Analysis and Control of the Pollution Problem in the Process of Wheat Anther Culture X. Yang, D. Wang, L.Q. Zhang, H.P. Chang, C.L. Liu, H.P. Han, W.H. Xing and S.J. Wang	5435
The Research of Wisdom Campus Construction and Development Based on Internet of Things Y.P. Wang	5439
Review of the Integrated Researches on Internet of Things and GIS in Fire Emergency Plan L.J. Yu, H. Wei, Z.Z. Zheng, Y.L. Liu, T.H. Chi and L. Peng	5444
Analyses of the Model Design of Urban Emergency Management System X.M. Wang and Y. Lv	5448
Inventory Information Management of Logistics Supply Chain Z.J. Zhuang	5453
The Design of Transaction Condition Expert Evaluation System for the Logistics Online Retailers J.H. Geng	5457
Application of Visual Correction on Physical Training Q. Zhai	5461
Monitoring System of High-Power Project Control Network Data Storm under Non-Uniform Format J. Liu, Y. Dai and J.J. Chen	5464
The Research on the Six Sigma Management Integrated System Design Based on Minitab/DDE T.H. Huang, S.H. Fan and L.J. Dong	5468
Research on the Specialization and Theory of Building Engineering Z.J. Zhang	5472
The Construction of the Agricultural Products Traceability Code System Based on a Type of Barcode Technology Y. Zhao and G. Zheng	5476
Research on Designing the Information Management Platform of Physical Education Based on B/S Model G.Y. Wang	5481
Study on the Construction of Linguistics Examination Database Based on Computer Network Technology Y. Zhang	5486
Research and Implementation of Groundwater Management Information System Based on J2EE D.M. Ma, H.P. Zhang, H.D. Xue and T. Zhang	5491
Research of the Multimodal English Teaching in the Cloud Computing Environment S. Han and X.D. Zhang	5495
Research of Public Service Platform Based on Cloud Computing for Middle Size Enterprises C.X. Wang, Y. Guo and X.G. Guo	5498
Design and Implementation of Agricultural Logistics Distribution Vehicle Scheduling System Based on LBS R. Ma, G.Z. Xie and C. Zhang	5504
Spatial Characteristic Indicator of Pedestrian Facilities for Evacuation M. Li, H. Yue, B.Y. Zhang and X.Y. Mi	5508
Frame Research of the Building Information Model in Project Management Information System X.S. He, X.N. Yu and X.Z. Ma	5512

Study on Architecture of Power Marketing Management Information System Based on Web Service Q. Zhang	5516
Analysis and Design of Supply Chain Inventory Management System under Internet of Things Environment Z.P. Peng	5520
A Study on the Data Design of Residents Electronic Health Records System N. Liu	5524
Research on Emotional Interaction Design of Mobile Terminal Application X.M. Mao	5528
Intelligent Classroom Attendance Checking System Based on RFID and GSM H. Chen	5532
Inflation Forecast Based on BP Neural Network Model Y.C. Wen, L.N. Tan and H.L. Wu	5536
Research on Related Model for Urban Public Crisis Handle Mechanism Y.C. Ren	5540
Study on the Effectiveness Evaluation of Missile and Artillery Air Defense Group P.C. Zhang, Y.Z. Cheng, W. Mei and B.Q. Cao	5544
Optimal Design for the Manufacturing/Remanufacturing Integrated Logistics Network under Fuzzy Environment L.G. Sun and Z. Zhang	5547
Application Research of Growth Management Model of Crop J.F. Liang, Y.Q. Wang, L.L. An and X.N. Liu	5551
Fuzzy Mathematics Theory in Logistics Center Address Selection of Application H. Yu and K. Zhang	5555
Merging Unit Performance Evaluation of Intelligent Substation Based on the Triangular Fuzzy Number H.T. Liu, M.Y. Huang and Y.H. Zhang	5559
Research on Travel Time Prediction under the Condition of Urban Rainstorm in Overpass Area S. Bi, Z.C. Zhao, G. Wang, L. Kong, Q. Diao, C.W. Han and D.H. Sun	5565
Application of Information Technology in Engineering Thermodynamics J. Li and J. Wei	5571
Wastewater Management in Shanghai J.C. Kang, H. Lin, J. Zhu and G.D. Yan	5575
The Implementation of Network Teaching Resources Sharing Center Based on Google Cloud H.E. Chen	5580
Study on the Environment Tax Realize Ecological Compensation in China L.Y. Xu	5584
Analysis and Design on Sports Meeting Information System L.H. Chen and T.Z. Niu	5588
Green Management of Tourist Attractions Region under the Background of Circular Economy F.L. Liu	5592
Research on Health Risk Assessment Methodologies of Municipal Solid Waste Landfill H.J. Zhang, X.H. Liu, S.J. Wang, L. Fang and L.H. Zhang	5596
Effect of Hg in Jiaozhou Bay Waters - The Vertical Variation of the Hg Content D.F. Yang, S.X. Zhu, F.Y. Wang, X.Q. Yang and Y.J. Wu	5601
Design and Implementation Based on Java EE Student Attendance System Z.H. Zhao and Y.B. Chen	5605
Research on Design of Modern Warship Networked Fighting Simulation System Y.H. Wang, J.Z. Mao and Z.H. Xiu	5609
Application of Reusable Framework Technology on the Workflow System C.Y. Xue	5614
Research on the SWIM System and its Development X.H. Zhang, J. Huang and J. Xu	5619

The Study of Bus Transit Network Design Methods for Different Sized Cities W.Y. Tu, J.H. Ma, W. Guan and X.J. Chen	5624
Research of Agricultural Information Management and Retrieval J.F. Liang, C. Jin, L. Zhang and X.N. Liu	5630
Term Structure of Interest Rates with B-Spline Model during the Money-Shortage-Event in China P. Zheng, L.Q. Yang and Z.N. Dai	5634