Table of Contents

Preface and Conference Organization

Chapter 1: Geological Engineering and Geotechnical Construction

A Comprehensive Analysis of Soft Soil Foundation Pit Accident H. Hu, L.S. Tang, X.L. Lin and F. Kuang	3
Infiltration Time Effects of Compressibility of Cement Soil S.L. Chen, K.H. Dong, J.J. Shi, T. Yu and J. Huang	10
Effects of Multiple Aquifers on Calculating the Bearing Capacity of Foundation X.L. Wang, G.F. Li and W.J. Hao	15
Gas Tightness Evaluation of Structural Concrete Applied to Nuclear Containment Vessels Y. Wu, L. Shi and J.Z. Liu	19
Prediction Modeling of Maximum Dry Density of Coarse Grained Soil Using Improved Artificial Neural Networks	
X.B. Deng, Y.X. Lin, L.D. Bu, L.Z. Zhang and Z. Liu	24
Study and Application on the Kinetic Parameters of Elastic Wave for the Engineering Rockmass	
H.Y. Wang, W.X. Ding and T. Xu	30
The Failure Mode Analysis of Open Pit Slope Base on Finite Element Method H.D. Meng, Y. Xu and D.Y. Zang	35
Fatigue Behavior of CA Mortar in CRTS-I Ballastless Track under Train Load H.Y. Du, G. Liu and C.G. Su	40
Cause Analysis and Improvement Measures of Sloping Roof Leakage K.C. Jin, L.J. Chen and L.Y. Zhao	45
Long-Term Performance Study of High Moisture Content Cohesive Soil Subgrade in Seasonal Frozen Region	
S.C. Liu, G.L. Ding and G. Chen	49
Numerical Study on the Bearing Capacity of Composite Foundation with Pile-Soil Shear	
Modulus W.Z. Li	57
Experimental Study on Shear Strength Considering Initial Void Ratio and Plasticity Index X.C. Wang, R.Q. Xu and J.F. Zhu	63
Splash Erosion Properties of Compacted Cohesive Soil K. Sun and J.R. Zhang	68
Applications of Drainage Consolidation Techniques Reinforcing the Foundation of Hydraulic Mud Fill	
S.H. Yao, P.S. Chen and Z.L. Dong	74
Analytical Solution for One-Dimensional Consolidation of Soil Layer Induced by Time- Dependent Groundwater Drawdown	
J.F. Yao, K.H. Xie and D.Z. Huang	83
Meso-Mechanical Behavior of Sand under Shear Loading Test Research F.X. Chen, H.X. Zhang, L. Kong and J. Li	89
Testing and FEM Analysis of Geogrid-Reinforced Retaining Wall's Earth Pressure P. Lv, G.Q. Yang and J. Liu	96
Deflection Analysis of Anchored Retaining Wall in Dune Sand Y.D.J. Costa, J. Gurgel, C.M.L. Costa and O.F. Santos	101
Slope Stability Evaluation by the Improved AHP and Extenics Theory G.S. Liu, C.M. Qi, C.L. Nie and J. Hu	106
Research on Horizontal Bearing Behaviors of Circular Section Static Compaction Piles Q.G. Yang, F. Liu and L. Xiao	111
Time-Frequency Characteristic and Recognition Technology of Acoustic Emission Generated from Rock Brittle Fracture	
J.W. Liu, X.Z. Wu and X.X. Liu	116

An Analytical Solution for Consolidation of Soilbag with Semi-Pervious Boundary and the Comparison between Semi-Previous Boundary and Impervious Boundary B. Niu, X.W. Tang, C.J. Zhang and X.L. Chen	120
Research on Influence Mechanism Analysis of Poisson Ratio in Soil-Stone Mixture Y.H. Zhang and Q. Zhu	125
Time Series Analysis of Slope Displacement Using Neural Network Method Z.Q. Zhang, Y.L. Wen, G.J. Zhang and L.S. Chang	129
Numerical Analysis for Excess Pore Pressure Dissipation Process for Pressed Pile Installation	122
T.Q. Zhou, F. Tan and C. Li Multiple Compaction Tests on Laterite	133
R.Y. Wang, Q. Wang, Y. Gao, S.C. Bao, Z.W. Li, Y. Zhang and P. Xu	138
Stability Evaluation for Soft Clay Slope Based on 2-D and 3-D Finite Element Method Analysis	
Z.W. Yan and Y.Y. Zhang	142
Research on Engineering Geological Properties of Dredger Fill in Tianjin Qingfang Economic Region X.J. Li, Q. Wang, H. Yan, J.Q. Li and F.F. Wang	147
The Analysis of Vacuum-Surcharge Preloading Method with FLAC3D	14/
C.Y. Liu, S. Shen, J. Li and P.C. Zhang	151
Different Types of Materials Used for Stone Column M.A. Mohamad Ismail, L.K. Ng and H.M. Yee	155
The General Review of Permafrost Temperature Research Methods Z.H. Lin and Y.H. Zhang	158
Particle Flow Simulation of Slope Instability and Failure Y.Y. Fan, S.M. Zan, J. Wan, X.H. Xu and G.Z. Song	162
Finite Element Analysis for Pile Group Foundation Settlement in Soft Soil F. Tan, T.Q. Zhou and C. Li	168
Study of Viscoelasto-Plastic Model with Double Yield Surface Considering Coupled Deformation and Seepage B.F. Wang and Y.Q. Li	173
Study on Limit Height and its Stability of Open-Pit Dump Based on Basement Bearing Mechanism	155
C. Peng, D. Ji, L. Zhao and F.H. Ren Simulation Analysis on Tonsion and Deformation of Composite Sail Nailing	177
Simulation Analysis on Tension and Deformation of Composite Soil Nailing Y.L. Zhao, H.B. Zhang, Q.P. Zhu and D. Chen	182
Study on the Strength and Acid Alkali Erosion of Improved MSW L. Liu, P.F. Wu and J.D. Jiang	187
A Review of Field Occurrence of Crack Types and Crack Coalescence in Rocks L.N.Y. Wong	191
Research on Characters and Reinforcement of Silt on the Bottom of Stone Tongue Formed	191
by Reclamation Silt W. Li, M.H. Huang and M. Li	203
Research on Field Filling and Penetration Test of Highly Plastic Clay Z.L. Sui, X.P. Wang, Z.G. Li and H. Zhang	207
The Research and Development of the Constitutive Model of Soil Z.H. Xu, D.W. Sun and Q.C. Sun	211
Calculation Method of Soil-Column Area Replacement Ratio in the Composite Foundation J. Qin, W. Lu and Y. Zhao	216
A Preliminary Study of Rainfall Infiltration on the Slope Using a New Coupled Procedure of Overland Runoff and Unsaturated Water-Gas Two Phases Seepage Model J.X. Liu and Y.T. Liu	221
Numerical Analysis of Deformation and Stability of Reinforced High Retaining Wall Y.T. Liu and X. Huang	227
Basal Heave Stability Analysis of Deep Foundation Pit in Soft Soil D.S. Kong and Y.Q. Men	233

Derivation and Revision of the Theoretical Formula of Friction Stress between Pile and Soil on Space Axisymmetric Condition Considering Relative Slip R. Wang	237
Research on Liquefaction Characteristics of Saturated Undisturbed Loess under Different Level of Liquefaction Q. Wang, L.M. Wang, H.M. Liu, J. Wang and L. Dong	243
Experimental Study on Side Friction of Uplift Bored Piles in Soft Rock H.S. Hu, M.X. Tang and C.L. Zhang	248
Deepwater Pile Foundation Construction Technology of Xiaoyi Reservoir Bridge Z.M. Li	252
Stability Analysis of Slope under the Condition of Rainfall Infiltration G. Xiang, C.L. Wang, M.Z. Bai, Z.Y. Xu and J.J. Yan	256
The Application of Ground Granulated Blast Slag in Soft Soil Treatment L. Shao, L. Liu, Y.M. Tao and L.M. Lou	262
Study on Thawing Settlement under Dynamic Loading in 109th National Highway F. Shi, J.K. Liu and Y. Du	270
Elastic Solutions for a Saturated Isotropic Half Space Subjected to a Fluid Line Sink J.C.C. Lu	275
Undrained Shear Strength Characteristics of Natural Silty Clay J. Yin and Y.H. Miao	285
The Bearing Capacity of Footings near Slope Considering the Footing-Soil Interaction Y. Jiang, Y. Dong, W.B. Sun and B.H. Chen	290
Anti-Sliding Stability Analysis of Saturated Rock Slope W. Luo, J.Q. Chen, L.H. Zhao and P. Cheng	294
Analysis on Stability of the Expensive Soil Cutting Slope Based on ANSYS B. Tan, R. Zhang and Y.T. Lai	299
Model Tests on the Layout of Punning Position in Dynamic Compaction for Loess J. Cai, Y.Y. Wang and M.D. Luo	304
Study of Seepage Properties of Fractured Rock Mass Based on Improved K-Means Clustering Algorithm H.Q. Guo, B. Wen and X.F. Bai	310
Embankment Settlement Calculation Based on the Unsaturated Soils Theory H.Y. Hu and Y.C. Zhang	316
Research on Influence of Loose Coverage Rock Fragment Distribution G.J. Zhang, D.Z. Wang and Z.Q. Zhang	322
Influence of Dilation on the Axial Load of Bolt as Joint Subjected to Shearing W.Q. Chen, Z.X. Jia, Y.F. Zhao, J.J. Zhou and X.C. Lin	326
Failure Behavior for Cross-Anisotropic Sand X.F. Li and L. Kong	331
Groove Stability of Diaphragm Wall Excavation in High Confined Water Stratum Y.H. Liu and K. Xu	336
Numerical Analysis of Bridge Caisson Foundation due to Riverbed Erosion W.T. Liu, C.C. Chang, K.H. Cheng and C.W. Chi	342
Study on the Shear Strength Properties of the Silt in Hangzhou, China Z.Y. Zhang, D.Z. Wu and C. Wang	349
The Improved Shear Strength Calculation Method in Direct Shear Test Y. Dong, Y.C. Wang, L.G. Lu and W. Wang	353
Study on the Influence of Variable Water Temperature on Seepage in Single Fracture W.S. Xu	358
An Improved Iterative Method of Saturated-Unsaturated Unsteady Seepage Numerical Simulation Y. Liu and Z.G. Hu	363
Numerical Simulation of Damage and Deformation Characteristics of Rock Mass with Transfixion Joint	303
L. Wang, J. Yu and J.X. Han Study on Measures to Retain the Deep Foundation Pit for Soil-Rock Composition with	369
Weak Intercalated Layers J. Wang, F.M. Sun, J.Y. Chen and C.J. Xu	373

A New Parameter to Evaluate Liquefaction Resistance of Saturated Sand under Complex Dynamic Stress Paths	
B. Huang, X.Y. Chen, Q.J. Wang and D.S. Ling	378
Research and Application of New Tower Foundation Type above Goaf of Coal Mine Y.L. Zhang and Y.H. Zhang	386
3D Finite Element Analysis of Negative Skin Friction (NSF) Behaviors in Pile Groups with Cap	
L.N. Xia, H.T. Hu, Y.D. Miao and C.B. Liao	390
The Experimental Research of Slurry Improvement with Different Kinds of Vertical Drains under New Vacuum Conditions	
J. Chen, Q.L. Tang and S.J. Liu	396
Hydro-Mechanical Coupled Analysis of the Stability of Surrounding Rock Mass of Underground Water-Sealed Oil Storage Y.J. Zhang, T. Xu, Q. Xu and L. Bu	402
Analysis on the Effects of Goodman Contact Model's Parameters to the Shear Stress J.R. Xue, L.H. Dai and Y.Y. Zhang	406
Data Analysis on Safety Monitoring of Group Pile Foundation Based on Valuation Fusion Algorithm T. Xue and Y. Sun	411
Application of New Transmission Line Tower Foundation on Steep Slope in Mountains Areas	
Y.L. Zhang and Y.P. Ge	418
The Application of Ground Penetrating Radar Detector Technology in Breakwater of Nuclear Power Station C. Wei, G.L. Zhou and T.P. Li	422
Stress and Deformation Characteristics of Rock-Fill Dam with Asphalt Concrete Core Wall	722
Founded on Deep Overburden F.Y. Chu and J.G. Zhu	428
Analysis of Bearing Capacity of Ashes Foundation's Prospect X.Y. Xie and X.S. Yin	434
Model Testing for Two Sides Vertical Anchored High Road Dyke of Reinforced Backfilled Retailing Wall B. Dou, C.C. Xiao and H. Gao	437
The Application on Stress Relief Method in Deviation Correction of Buildings H.T. Yang and L. Zhou	441
Dynamic Interaction between the Raft-Superstructure and the Saturated Soil under Moving Load X.J. Chen and M.Q. Xu	445
Study on Stresses Distribution in Narrow Backfilled Stopes and the Effects of Parameters Based on Elastic-Plastic Model	
H.Y. Zhang, Q.Y. Yu and Q.S. Wang	450
Research of the Permafrost Dynamic Load Direct Shear Apparatus Y.H. Cui, J.K. Liu and P. Lv	454
Summary on Research Advances on the Reservoir Bank Instability Z.L. Zhang and Y. Huang	460
Application of Depth-Measurable Prefabricated Vertical Drains for Soft Ground Improvement Y.H. Cao and J. Yu	466
Soil Liquefaction Evaluation of Offshore Site Based on <i>In Situ</i> Shear Wave Velocity	100
Measurements S.J. Di, M.Y. Wang, Z.G. Shan and H.B. Jia	470
Preliminary Study on Performance of the Prestressed Concrete Hollow Retaining Pile in Lateral Force Resistance R. Zhang and P. Yan	474
Elasto-Plastic Constitutive Model Considering the Influences of Soil Structure and Anisotropy	
G.Q. Cui, Ž.R. Liu and C.G. Ma	478

Study on Dynamic Analysis Methods Verification of Earth-Rock Fill Dam Using Large- Scale Shaking Table Model Test	
Z.Q. Yang, X.S. Liu, X.G. Wang, J.M. Zhao and H.F. Zhang	483
Hydraulic Performance Optimization on Inlet-Outlet of Pumped Storage Plant Y.N. Gao, J.N. Yi, R.C. Zhao, L.F. Chen and X.M. Wu	491
Experimental Study on Backwater in Cavity of Aerator on Chute with Mild Slope L. Qiao, Y.M. Xu, Y. Rong, G.B. Ma and C.Y. Shen	495
Application of Limit Equilibrium Method to Stability Analysis of Jinping I High Arch Dam Abutment on 3d Multi-Grid Method	400
J.W. Li, C. Chen and W. Wei Madeling Design and Finite Florent Analysis of the Hydronlin Chadrel Transition	499
Modeling Design and Finite Element Analysis of the Hydraulic Gradual Transition T. Chen and H.S. Zhao	507
Performance of the Inducing Joints in <i>Xiaowan</i> Arch Dam with Reservoir Impounded to Normal Water Level Z.C. Lu, L.B. Li, F. Shang and Y.H. Jiang	511
The Application of Hydraulic Method to Geotechnical Compression Test D.P. Yang, C. Wang and Y.Z. Tong	521
Study on Creep and Fracturing of High Antidip Sandwich Rock Slope in High <i>In Situ</i> Stress Q. Wu and X.B. Deng	527
Three Dimensional Random Structural Model of Karst Rock and its Application L. Jin and X.J. Chen	535
A Mechanism for Loess Self-Load Collapsibility-Saturated Loess Liquefaction Caused by Earth Microtremors	333
J.D. Wang and T.F. Gu	541
The Tests on the Lime-Treated Expansive Soils Compaction Characteristics X.Z. Wang, R. Liu and S.J. Peng	548
Stability Analysis and Treatment Design of Meng Dumei Landslide Y.F. Ma, J.P. Chen, W. Zhang, H.Z. Niu, P. Xu, Y.Y. Li, J. Zhang and K. Yao	554
Formation Mechanism Analysis of Cataclastic Texture Rock Landslide Based on Discrete Element Method B. Zeng and H. Zhou	558
The Hydrogeological Feature and Geological Hazard Prevention of M Coal Mine in Xinjiang Fukang	5.62
C.H. Yao and Q.H. Yao The Research of Shear Strength and Micro-Structural Characteristics of Acid Pollution	562
Laterite Y. Huang, T.Z. Bo, K.S. Jin and Z.L. Zhang	566
Predicting of Permeability Coefficient for Compacted Clay D.Q. Ran and J.R. Zhang	571
Reliability Analysis Based on Multi Sliding Surface Method Y.H. Cao and C.Z. Huang	576
Study on Failure Mechanism and Stability of Loess Slope in Huangshui River Basin B. Zhou, Y.X. Zhang, Y. Sun and C.P. Gan	580
Study on Phreatic Line of Reservoir Slope under the Rainfall and Reservoir Level Fluctuation	
Y.P. Wu, G.Z. Ou, J.M. Liao and Z. Meng	587
Stability Analysis on Loess - Mudstone Landslide of the Fenghuang Mountains B. Li, W.H. Zhang, Q.G. Jing, X.H. Wang and R.T. Cao	595
Formation Mechanism and Stability Analysis of a Landslide in the Three Gorges Reservoir Area	602
T.F. Dai Application of Geophysical Exploration Results in Prospecting Prediction at Xiayingfang	602
Silver Polymetallic Deposit in Chengde, Hebei Province C.Z. Ni and D. Wang	607
The Wing Crack Growth Processes of Rock Induced by Hydraulic Pressure S.B. Tang, Z.Z. Liang, H. Li and C.N. Tang	611
Weight Analysis on Influencing Factors of Reservoir Basin Deformation E.F. Zhao and L.B. Zhang	617

Stability Analysis of Dangerous Rocks on the Slope of a Hydropower Station H.F. Li, G.X. Zhang, T. Huang and Q.J. Zhou	621
Chapter 2: Structural Engineering	
A Modified Pall-Typed Friction Damper for Vibration Control in Series Compensation Platform Structure	
W.H. Wei, L. Gan, M.F. Hu and J. Wang	633
Modelling the Geometric Structure of Concrete Work Item Processing J. Rajczyk	638
Elastic Distortional Buckling Stress of Steel Channel Column C.G. Wang, N.W. Zhang and P. Ma	644
A Simplified Formula for Calculating the Elastic Distortional Bucking Stress of Steel Channel Bending Members with Complex Edge Stiffeners and Intermediate Stiffeners in Elements C.G. Wang, D.Q. Zhao and X.Y. Yu	648
Modelling the Dynamic Load Process in the Building Technology Process J. Rajczyk	652
Seismic Behavior of Concrete Columns Confined by CFRP and GFRP Jackets Y.M. Teng, Y. Tian and J. Liu	657
Analysis of Cold-Formed Steel Lipped Channel Columns with Complex Edge Stiffeners and Web Holes	
C.G. Wang, Y.F. Cao, L.G. Jia and H. Liu	664
Experimental Study on Seismic Behavior of CFRP-Strengthened RC Beam-Colum Joints S. He, X.J. He, Q. Guo and X.K. Wu	668
Shear Test and Nonlinear Finite Element Analysis of Hybrid Fiber Reinforced HPC Deep Beams S.B. Liu, L.H. Xu, H.L. Lu and H. Tan	672
Reliability-Based Assessment of Flexural Strength of High-Speed Rail PC Box Beam in Marine Environment	(70
Z.H. Lu, H. Li and Y.G. Zhao The Damage of Gas Explosion on the Structure Q. Li	678 684
The Measurement of Temperature Stress Caused by Sunshine Action of Steel Truss W. Liu	688
Study on the Characteristics of Shock Wave Pressure Caused by Underwater Blasting M.S. Hao and H.L. Liu	692
Seismic Response Analysis of Dendritic Column in the Folded Plate Grid Frame Y. Shuai and T.Y. Li	696
Exact Solutions of Dynamic Characteristics for Curved Beams with Pinned-Pinned Ends X.F. Li, W.M. Yan and H.X. He	702
Experimental Study on Axially-Loaded Concrete Columns with Various Sizes Confined by CFRP	706
Y.L. Long and J. Zhu	706
Numerical Simulation of Pressure Distribution around the Reticulated Shell Structure with Large Span Z.H. Yuan, Y.C. Yuan and W. Sun	710
Finite Element Analysis of Holes on the Metal Lamp Pole Q. Zhao, J.S. Wang and S.M. Zheng	713
Numerical Simulation of Water-Air Two-Phase Flow in Stilling Basin during the Opening Processes of Radial Gates C. Qiu and S.B. Yue	717
The Flat Truss Dynamic Characteristics and Seismic Response Analysis	/1/
L. Li and T.Y. Li Experimental Studies on the Mechanical Performances of Corroded Reinforced Concrete	721
Columns Retrofitted with FRP Y.W. Zhou, L.Y. Wu, L.L. Sui and F. Xing	726

Reliability Assessments of Concrete Filled FRP Tube Columns Y.W. Zhou, F. Xing and L.L. Sui	731
Reliability Studies on Concrete Filled FRP Tube Columns Using Different Design Code Models	
Y.W. Zhou, L.L. Sui and F. Xing	735
Influence Factors of Compressive Performance of Composite Foam Sandwich Tube F. Li, K. Xu, Y.N. Wang and J.P. Wang	740
The Classification and Application of Interior Wall-Board in Steel Structure Building H.X. Zhang and P. Yang	744
Applications of Rayleigh Wave Detection Technique and Polymer Grouting Technology in Waterproof Construction J.Y. Chen, O. Ummin, T. Yu and Y.J. Qi	748
The Analysis Research of Structure on One and Multi-Stages Molding Method W.J. Yang and Y. Li	755
Large Deformation Analysis of Buried Pipeline R.Z. Wang, S.H. Chen, C.H. Huang, B.C. Lin and C.Y. Wang	759
Analysis of Wind-Induced Vibration Response on a Tower Consisted of Steel Tubes and	
Angel Steels Y.Z. Ju and X.L. Zhang	763
Nonlinear Finite Element Analysis for Wall-Beam Structure W. Tian, X.D. Guo and X.S. Yin	767
Finite Element Analysis and Reinforcement of Gravity Abutments Cracking W. Tian and X.D. Guo	771
Dynamic Analysis on the Light-Weight Portal Frame with Different Slopes Y. Peng, J. Huang, S.B. Dai and T. Yuan	775
Out-of-Plane Stability Analysis of I-Section Steel Arch K.T. Xi, J. Li, T.G. Zhou and T. Lin	781
Analysis on Ultimate Bearing Capacity of the UHV Transmission Tower with Large Width Angle Steel Q. Xiao, D.D. Tong and L.F. Song	786
Dynamic Interaction between the Pile Groups and Layered Poroelastic Half Space to	780
Harmonic Axial Loads X.J. Chen and M.Q. Xu	790
Shaking Table Test of RC Frame-Shear Wall Structures with Partial Columns Sliding at Upper Ends W.L. Lu and C.Y. Shen	795
Three-Dimensional Flow Simulation Research on Spur Dike H. Xu, M. Zhang and W.Q. Zhang	799
Experimental Study on Two-Side Constraint Steel Plate Shear Wall with Vertical Stiffeners Z.G. Mu, F.J. Zhang, Q.Y. Shang and L.M. Li	803
Modal Identification and Finite Element Model Updating by Adding Known Masses C. Deng, S.W. Hu and P.Y. Gu	808
Analysis on the Impact of the Status of the Fresh-Old Concrete Bonding Interface on Dam Safety	
T. Huang, G.X. Zhang, B. Yang and L. Zhang	816
Progress in the Research of Steel Structures Strengthened with CFRP X.Q. Zhang and J. Yao	824
Experimental Study of the Carbon FRP Retrofitted Reinforced Concrete Panels under Explosion	
W.B. Sun, Q.Q. Zhu and W.Z. He	831
Progressive Collapse Resistance of RC Structures with Tension Cables T.C. Wang, Z.P. Li and H.L. Zhao	835
Analysis the Bearing Force Characteristic of the New Cast-in-Place Concrete Pile with Half-Screwed	0.41
X.H. Li, W.M. Cong, C.X. Yue and Y.D. Chen Study on the Sensitivity Factors Affecting the Anti-Seismic Performances of Steel	841
Reinforced High-Strength Concrete Columns Y.Y. Li and B.S. Yang	845

Concrete Creep and Shrinkage Effect Analysis Program Development F.X. Li, J. Guo, H.Q. Huang and Q. Liu	850
Optimization of Top Steel-Tube Truss Construction Platform of Silo and Fitting of Curve Equation	
H.L. Zhao, W.X. Wang, T.C. Wang and Q.S. Li	856
Force Behavior of Outer Annular-Stiffener Type Steel Castellated Beam-Concrete Filled Steel Tuber	
M. Li, Y. Liu and H. Yuan	861
The Effect of Alternative Reinforcement Details in Reinforced Concrete Coupling Beams W.S. Park, Y.S. Chun, H.D. Yun, S.Y. Seo, J.G. Song and H.H. Lee	865
Study of Bracing Force Acting at Mid-Span of Beam of Single-Span Portal Frame W.W. Jia and D.F. Wang	869
The Application of Digital Cameras in Monitoring Dynamic Deformation of Steel Shelf C.X. Yu, X.H. Ding, M.Z. Chen and P. Xiao	873
Finite Element Analysis on Mechanical Behavior of Laminated Slab M. Li, Z.Z. Sun and W.J. Zhao	878
Study on Dynamic Response of Jacket Structure during Floating Transportation B. Jiang and X.J. Huang	882
Design of the Shear Reinforcement of RC Beams with Opening S.B. Yang, H.W. Kuang and W. Pan	886
Chapter 2: Structural Engineering	
Effect of Slenderness Ratio on Inelastic Buckling and Residual Strength of H-Section Steel Column Member	
D.Y. Abebe, J.W. Kim, J.H. Jang and J.H. Choi	895
Analysis on Mechanical Properties of the Integral Jacking-Up of an Ancient Building T.C. Wang, Y.H. He and H.L. Zhao	900
Reliability Evaluation of Double-Layer Spherical Lattice Shell H.J. Li and Z.Z. Wang	905
Simple Computing Method for Tension Cable in Monolayer Cable Net Curtain Wall Q.N. Yang and F.Z. Wang	909
Pre-Tension Control Technology of Monolayer Cable Net Fixed by Elastic Structure Anchor Y.Z. Sima and Z.C. Tan	913
The Building Protruding Ministry Wind Stimulated Effect	713
Z.N. Tong and Y. Huang	917
Finite Element Analysis on Integral Structure of Light Steel Temporary Buildings X.F. Cai, Z. Zhang, Y.C. Ma and J.Z. Zhou	921
Analysis of Effect of Crack in Composite Beam on Slip of Shear Connectors W.H. He, Q.H. Gu, Y.C. Ma, X.H. Ni and X.F. Meng	925
Space Rigid Frame Damage Identification Based on Finite Element Method and Experiment	
H.Y. Jia, P.F. Yue and Z.H. Fang	929
Study on Earthquake Resistant Performance of a Large Span Structure Strengthened with HADAS	933
D.G. Chen, Y. Yao, Y.J. Deng and H.J. Wang A Study on the Formulas of Effective Slenderness Ratio of Three-Leg Laced Lattice	933
Column	940
S.J. Dai, L. Yang and Y.H. Jia Calculation and Analysis of Temperature Stress for Large-Span Steel Structure	
S.J. Dai, C. Lv and Q. Chen Ontimization Design of Section for Pisymmetric Puilt Un Steel H. Shaped Poems	944
Optimization Design of Section for Bisymmetric Built-Up Steel H-Shaped Beams S.J. Dai and Y.C. Meng	948
Experimental Study of Short Column with Welded H-Sharped Steel Reinforced Concrete under Axial Compression	
Y.Z. Yin, Y. Zhang and G.T. Zhao	952

Research on Bearing Capacity of Axiallycompressed Short Columns Y.Z. Yin, Y. Zhang and G.T. Zhao	958
The Analysis of Bending Performance on the Nodes of Concrete Filled Steel Tubular Column and Girderless Floor under Horizontal Load	
Y.L. Wang, L.J. Ma and J.M. Zhao	964
Mechanical Study on Short Timber Columns Reinforced by Different Methods of FRP under Axial Compression	
W. Liang, J.F. Dong and Q.Y. Wang	968
New Simulation Method of Reinforcement Simulation in FEA W.X. Huang and L.Y. Tan	972
Research on Initial Stiffness of Top-and-Seat Angle Connections in Semi-Rigid Steel Frames G.H. Li, C.Z. Qi and J. Luo	976
Strength, Stiffness and Energy Dissipated Characteristics of Reinforced Concrete Coupling Beams with Diagonal Headed-Bars W.S. Park, Y.S. Chun, H.D. Yun, S.Y. Seo, J.G. Song and H.H. Lee	981
Research on Longitudinal Reinforcement Ratio of Reinforced Concrete Rectangular Section	701
Single-Reinforced Beam P. Liu and Z.G. Gu	985
Tensioned Membrane Structures in the Form of Egg Shape M.S. Mohd Noor, H.M. Yee, A.H. Haslinda and O. Chong Yong	989
Analysis of Bending Strength of the Rectangular Hole Honeycomb Beam S.J. Dai, B.C. Zhu and Q. Chen	993
Finite Element Analysis of Stamped Tees Stress in Directly Buried Heating Pipeline G.Q. Yu, F. Wang and G. Du	997
Analysis on Factors Affecting the Local Stability of Web of Castellated Beams F. Xu, B. Shao, W.Q. Yin and S.F. Jiang	1002
Tensioned Fabric Structures in Oval Form H.M. Yee, J.Y. Kim and M.S. Mohd Noor	1008
Analysis of Oxytropis Tower Structure with Model Method K. Qin, Z.G. Xu and C.G. Deng	1012
Experimental Study and Finite Element Analysis of Concrete Simple Supported Beams Strengthened with Externally Prestressed CFRP Tendons F. Xu and L. Huang	1017
Study on a Large-Span Steel Truss Roof Isolation Bearings for Wind Load Effect Isolation Effect Z.F. Fang, Z.Q. Zhang and F. Liu	1022
Testing Research on Application of Rapid-Hardening Sulphoaluminate Concrete in Rapid	1022
Repair Engineering for Airport Pavement Z.G. Luo, X.P. Lei, Z.F. Zhou, Y. Liu and Y. Lai	1028
Crack and Condensation Problem Countermeasures of External Thermal Insulation Composite Wall	
P. Pang	1032
Wind Resistance Research and Wind Tunnel Test of Large-Span Roof Based on Yancheng Financial Center	1026
F. Liu, Z.Q. Zhang and Z.F. Fang Simplified Model to Predict Load-Bearing Capacity of Concrete-Filled Steel Tubular Laced	1036
Column L.Q. Zheng, S.L. Guo and J.Z. Zhou	1041
Nonlinear Seismic Response Analysis of RAC Space Frame Structure	
C.Q. Wang Crook Identification in Plates Using Fractal Dimension Analysis	1046
Crack Identification in Plates Using Fractal Dimension Analysis R.B. Bai, Z.M. Xu and X.M. Qiu	1051
The Passive Control Seismic Strengthen about RC Frame Infilled Wall Structure Q.L. Meng, J. Chen and C.Y. Chu	1056
Feasibility of Substructure Pseudo Dynamic Test on the Tanks in Seismic Research L.J. Zhou, B. Gao, Y.G. Fan and X.Y. Wang	1063
Research Progress on Mechanical Properties of Chinese Ancient Mortise-Tenon Joints X.S. Song, J.Y. Su and X.D. Guo	1067

Stress State of Hemispherical Shell in the Frontal Movement of the Radiation Field V.I. Andreev and I.A. Dubrovskiy	1073
Field Testing of a Wind Turbine Tubular Tower and Structural Design of a Space Frame Steel Tower	
X.Y. Wang, K.S. Dai and Y.C. Huang	1077
A Study on Fracture Characteristics of Widened Beam Flange Joints J.L. Dong and Y. Wang	1085
Experimental Study on the Development Regularity of Slab Concrete Cracks under Fatigue Loads	1001
X.X. Tang, J.B. Liang, X.Z. Tang and Y. Xu The Application of Coblete Approximent and Stability on Prestnessed Coble Room	1091
The Application of Cable's Arrangement and Stability on Prestressed Cable-Beam Structure X.Y. Xie and X.S. Yin	1096
Transfer Matrix Method for Natural Vibration Period of Shear Wall Structures with Large Space at Lower Part S.Y. Zhang and X.X. Zhao	1100
Finite Element Analysis of Concrete-Filled Double Skin Steel Tubes with Simply Supported under Lateral Impact	
X.H. Li, J.P. Lei and R. Wang	1106
Comparison and Study on Seismic Performance of the Special-Shaped Column and Rectangular Column Frame Structure Q. Peng, Y.T. Huang and Y.K. Luo	1110
Application of Acoustic Emission Tomography Technique in Concrete Y. Cheng, P. Hagan and R. Mitra	1115
Dynamic Analysis of Tall Building Structure Based on Ansys W.Q. Zhou and S.P. Ouyang	1121
A Power Spectral Analysis Method for Wind-Induced Response of Flexible Structures J. Li and X. Wang	1125
Research on Performance Effect Factors of Flexural Member for Concrete Filled	
Rectangular Steel Tube J.Q. Song	1130
The Finite Element Analysis of Tower Crane Safety Performance C. Chen, T. Lu, H.Y. Chen and L.C. Tian	1135
Finite Element Analysis for the Mega Columns for XRL West Kowloon Terminus W. Su, Y. Sun, S.Q. Huang and R.H. Liu	1139
Economic Effect Research of HRB500 High-Strength Reinforced Bars in the Engineering Application	1144
J. Wang, P. Liu and J. Feng Experimental Study on Hysteretic Performance of Steel Frame with Improved Node	1144
S.S. Yang and Y. Wang	1148
Study on Magnetorheological Fluid Damper X.L. Wang, W.J. Hao and G.F. Li	1153
The Characteristics and Development Status of the Push-Extend Multi-under-Reamed Concrete Pour Pile	
Y.M. Qian, R.Z. Wang and H. Yu	1157
Solution for the Shear Lag Problem of U-Shaped Beam by Three Bar Stimulation Method Y.W. An, Q.Z. Zheng and Y.M. Bao	1161
Numerical Study about Damping Effect of Liquid Damper on Tall Buildings F. Zhu, G. Ying, W.H. Zhu and Z. Lu	1166
Fuzzy Hierarchy Analysis of Gravel Pile Stability J. Zhang, Z.C. Shangguan, C. Sun and S. Jia	1170
Nonlinear Analysis on Ultimate Flexural Bearing Capacity of the N-Shaped Steel Tubular Joints	
X. Liao, J. Yong and Z.Q. Wang	1177
Focus on Sustainable Bearing Structures F. Deng and Z. Hong	1182
Calculation and Application of Steel-Concrete Composite Beams Stiffness Amplified Coefficient	
Z.G. Mu, J. Cheng and Z. Fan	1187

Nonlinear numerical analysis of SRC Frame Joint J. Kong, Y. Zou, Z.W. Wan and C. Li	1191
Experimental and Numerical Study of RC Thin-Walled Channel Beam under Torsion S. Hu, Y.H. Ye, S.G. Chen and G.Z. Song	1196
Experimental Study on Bearing Capacity of Cross-Sections of Carbon Fiber-Reinforced Concrete Beam under Salt Damage	
X.K. Yan, L. Qin, C. Du and P. Chen	1200
Mechanical Performance of the Different Structure Based on Shrinkage and Creep W.J. Yang and Y. Li	1204
Causes Analysis and Control Measures of Leakage of Light Steel Roof Q.M. Gao and H. Liu	1208
Research on the Concrete Structure Deformation Properties of Xiangjiaba Ship Lift Tower S.H. Li, G.X. Zhang and Y. Liu	1212
Crack Mechanism, Temperature Control, and Anti-Cracking Measures of Sluice Z.H. Wang, G.X. Zhang and S.P. Yu	1217
Local Stress Analysis and Corner Radius Optimization of PPSCB W.X. Huang and L.Y. Tan	1221
Chapter 3: Tunnel, Subway and Underground Facilities	
Back Analysis on Tunnel Rheological Parameters Q. Huang	1227
A Brief Discussion on Investment Control of Subway Construction Projects - Taking the	
Hangzhou Subway Project as the Example Q.Q. Zhang, Y. Lao and L. Huang	1231
Cumulative Damage Monitoring of Shotcrete in Large-Span Tunnel under Multiple-	
Blastings F.P. Zhong, L.F. Li and F.Q. Gong	1235
3D Numerical Simulation Analysis and Pre-Estimation New Technology of Ground Collapse	
Caused by Subway Shield Construction Y.L. Liu	1239
Construction Technology of Super-Deep Diaphragm Wall under Complicated Geological	
and Hydraulic Conditions B.Z. Yang and S.C. Zhang	1247
Supporting System and Monitoring Analysis of the Cut-Cover Tunnel in Shouyi Square of	
Wuhan X.W. Chi, T. Fu, Z.L. He and C. Lin	1252
Study on Stability of Loess Tunnel Based on Three-Dimensional Numerical Simulation in	
Different Excavation Length of Invert Z.J. Sun, J.M. Shen, X.H. Xue and Z.M. Su	1259
Numerical Simulation of Subway-Induced Environment Vibration P.Z. Li, Z.H. Pan, X.Q. Li and J.Y. Yue	1264
Study on Design of Working Shaft for Oil and Natural Gas Pipe in Cross River Slurry	
Shield Tunnel X.J. Zhou, H.R. Yu, X.F. Wang and H.Y. Hu	1268
Analyze Smoke Extraction Efficiency on Point Exhaust System of Side Direction for	
Immersed Tunnel Impact Shape of Smoke Dampers X.J. Yang, Y.Y. Xing and Z.G. Shi	1273
Finite Element Analysis for the Stress Field and Seepage Field Interaction within Qingdao	
Submarine Tunnel Rockmass C. Li, T.Q. Zhou, S.S. Jiang and J. Kong	1278
Research of Safe Distance between Concealed Karst Cave and Tunnel Y.B. Lai, C.S. Qiao and C.G. Bai	1283
The Special Geological Conditions of Mountain Tunnel Scheme Selection L.X. Sun, Q.B. Wang and D.P. Wang	1288
Numerical Analysis on Influence of Cross Section Shape on Earthquake Resistant	
Capability of Shallow-Buried Tunnel H.T. Xie	1292

Study on Harbin Metro Shield Tunnel Segment and the Deformation of Tunnel Rock Y. Yang and X.G. Chen	1297
Development of Computer Decision Support System for Underwater Positioning in Submarine Immersed Tube Tunnel Construction	
L. Peng	1301
Study on Construction Risk Assessment Method of Deep Buried Tunnels X. Kuang, D.Q. Yi and C.L. Wang	1305
Application Analysis of Comprehensive Advanced Geological Prediction in Karst Tunnel C.L. Wang, M.Z. Bai, Y.Q. Du and X. Kuang	1309
Metro Emergency Management Capacity Assessment Research Based on AHP-FCE Model Q.X. Shi, L.X. Li, S.L. Jia, Y.B. Zhang and S. Zhang	1314
Extending Section of Underground Cavities and Analysis of the Stability for Surrounding	
Rock Y. Lai and Z.R. Lin	1318
Application of "Rigid-Soft Combination" Principle in Waterproof of Tunnel Z.R. Lin and Y. Lai	1322
Surface Settlement Time Lag Induced by Shield Tunneling in Urban Sandy-Pebble Stratum S. Man	1326
The Comparison of Tunnel Engineering Construction Methods for Renhechang Tunnel Crossing Underneath Existing Tunnel on Lanzhou-Chongqing Railway C.Y. Sui, X.D. Zhou and L.H. Wang	1330
Model Test of the Impact of Active Ground Fissures on Metro Tunnel Y. Yuan, Q.B. Huang, J. Han and M.L. Li	1334
Comparative Study on Calculation Model of Hydraulic Tunnel Lining Structure between	1334
Beam Element and Solid Element J.J. Zhang, J. Deng, K. Zhang and C. Huang	1340
Study on Subway Safety Measures and Emergency Rescue's Countermeasures in Shenyang X. Meng, M.L. Li and S. Yu	1346
Numerical Simulation for Surface Displacement of Shield Tunnel Construction under Building Load H.T. Zhan, H. Yuan, J.Y. Wu and Y.S. Yuan	1350
The Construction Monitoring and Data Analysis of the Zhang JiaQu Tunnel H.X. Ao and Y. Zhang	1355
Application Research of Rock Coupling Testing System for Underground Engineering in Sanshandao Gold Mine D. Ji, C. Peng, L. Zhao and F.H. Ren	1360
Experimental Study on Mutual Effects of Rock Tunneling Positions with High	1500
Underground Pressures Q.C. Gao, C.X. Lei, M. Liang and H.S. Zhao	1367
Study on the Stability of Large Cross-River Shield Tunnel Face with Seepage X.L. Lu and F.D. Li	1371
Study on Failure Mode of Underground Diaphragm Wall in Soft Soil Area	
S.M. Zhang, X. Li, D.H. Li, Z. Ding and G. Wei	1375
Chapter 4: Coastal Engineering	
Study on Characteristics of Flow and Sediment for Xiaomiaohong Tide Inlet in Radial Sand Ridges	
K.F. Chen	1385
Study of Wave Structure Interaction Based on the SPH and FCBI Algorithm L.H. Yuan, F. Zhu, Y. Geng and B. Fang	1390
Calculation on the Settlement of Two Sands T. Li, G.M. Gao, H.B. Ma and W.L. Fan Li	1394
Determination of Correlation Parameters of Near-Bed Sediment Flux F. Luo, L.L. Ge and D.Y. Kong	1398
Method to Determine the Navigable Depth by Rheological Properties Q. Ying, Z.B. Jiao, J. Wan and S.Y. Yuan	1402

From the Viewpoint of Water-Sediment Characters to Approach the General Criteria for Waterway Regulating with Complex Shoals	
Z.C. Liu, W.J. Fan, Y.C. Qin and W.Y. Yan	1407
Influence of Water Exchange in Tide and Wave for Large Harbor with One Entrance J. He and W.J. Xin	1411
Reliability of the Offshore Jacket Platform Based on Load Combination Z.W. Shen, W.L. Jin and X.H. Wang	1415
Wave Forces on the Composite Bucket Foundation of Offshore Wind Turbines G.W. Liu, Q.H. Zhang and J.F. Zhang	1420
Numerical Calculation of Soil Pressure inside the Lattice Type Steel Sheet Pile Wharf	
Structure J.S. Gui, Y. Fu and E.K. Bi	1427
Research of the Artificial Island Construction Impact on Marine Deposit Dynamic Environment Y. Wang, X. Li and M.C. Li	1431
Hydrodynamic and Sediment Transport in the Headland of Caofeidian after Reclamation of	1431
the Industrial Zone J. Li, Y.N. An and H.C. Sui	1437
Influence of Bulk Density on Cohesive Deposits Incipient Motion X.Z. Zhang, X.S. Xu, X.D. Zhao and X.M. Wang	1441
Seafloor Slope Stability under Adverse Conditions Using Energy Approach T.K. Nian, B. Liu and P. Yin	1445
Application of a Nonlinear Elliptic Mild Slope Equation in Rizhao Harbor J. Zheng, R.J. Li and S.H. Jiang	1449
Influence of Rotational Stiffness on the Distribution of Horizontal Forces on All-Vertical-	1117
Pile-Supported Wharf Structures G.L. Tao and S.Y. Dong	1453
Experimental Study on Flow Conditions of Jiaogang Ship Lock during Sluice Gate Hoist T. Wu and J. Ding	1458
Numerical Simulation of Wave Overtopping Based on DualSPHysics X.Y. Ni and W.B. Feng	1463
Numerical Simulation of Tidal Waves Variation in the North Branch of the Changjiang Estuary	
J. Gu, D.Q. Ma, X. Qin, X.L. Wang, J.Z. Yang, T. Hu and Y. Wang	1472
Review on the Specific Characteristics of the Sediment Movement in Estuary Sandbar Area: With the Yangtze Estuary as an Example	
J. Gu, X.L. Wang, X. Qin, D.Q. Ma, J.Z. Yang, T. Hu and Y. Wang	1476
Chapter 5: Bridge Engineering	
Influence of Main Structural Dimension on the Shear Lag Effect of Box Girder Used in	
Cable-Stayed Bridge Y.P. Zhang and C.X. Li	1483
Central Buckle Influence Research on Dynamical Characteristics of Suspension Bridge D. Wang, C.M. Chen and Y. Liu	1489
Aerodynamic Stability of a Three-Tower Suspension Bridge during Erection via Aeroelastic Model Test W.M. Zhang and Y.J. Ge	1494
Z.J. Sun and Y.Q. Liu	1500
Experimental Study of the Changes of Morphodynamic Process Caused by the Hong Kong- Zhuhai-Macao Bridge	
R.Y. Ji, Q. Xu and S.P. Mo	1504
Research of Base Form for Detached and Re-Installed Concrete Bridge Barrier S.M. Yan, Y.P. Liang, X.Y. Chen and Y.C. Wang	1508
Study on External Prestressing Connection Mode of the Simply-Supported and Continued Structure System	
X.J. Jiang, R.D. Li, J.Y. Wu and J.X. Liu	1513

Design and Testing of Shock Transmission Device for Bridge Protection J. Liang	1517
Research on High Crashworthiness Level Bridge Barrier with Limited Working Width S.M. Yan, N. Jia, X. Wang, L. Ma, X. Zhang, D.H. Li and Y.P. Liang	1521
Orthogonal Test Analysis on Influencing Factors of Prestressed Concrete Small Box Beam Camber Y. Zhang	1527
Transverse Analysis of Box-Girder for Continuous Beam Arch Composite Railway Bridge X.D. Yu and Z.H. Wu	1531
An Alignment Control Method of Continuous Beam Bridge Z.F. Liu, Y.X. Liu and Y. Xia	1538
Dynamic Characteristics of Pylon of Cable-Stayed Bridge with Inclined and Arched Tower during Construction Z.L. Li and J. Xue	1547
Risk Identification in Bridge Construction Stage Based on Fuzzy Hierarchy Analysis X.F. Liang, Y.X. Liu and Y. Xu	1552
Optimization Study on Paving Structure of Steel Bridge Deck Suitable for the Chinese 2th Climate Zone	
C.X. Yan, Z.G. Li and B. Su	1556
Study on Rapid Evaluation of Bearing Capacity of Arch Bridge Structure J.J. Yan, C.J. Wang, Q.H. Cui, X. Jin, M. Fan and M. Fan	1562
Research of Flow Mechanism and Numerical Simulation on the Post-Prestressed Duct Grouting	
G. Xu, R.J. Yan, C.L. She, L.Z. Xu, L. Xu and F. Li	1567
Study on Running Performance of Train and Limit Value of Traffic Safety on Hubian	
Bridge B. Jang, Z.H. Zhou, G. Liu and Q.Y. Zeng	1574
Influence of Moving Vehicles on Vertical Vibration of Simply Supported Bridge	
Y. Han, X.D. Wang and C.Q. Li	1578
Cable Tension Measurement of Cable Stayed Bridge Based on Frequency Method Z.H. Sun and P. Yang	1587
Calculation and Analysis of Continuous Welded Rail on Continuous Rigid Frame Bridge L. Yan, Y. Wang, P. Wang and L. Hao	1593
Fatigue Tests of Assembly Joints of Truss Main Girders of Temporary Footbridge for Pedestrians and Cyclists	1.500
M. Karmazínová The Propries of Consuma Filled Steel Tuke Pierra to Pridaya A. Poviera	1598
The Practice of Concrete Filled Steel Tube Piers to Bridges: A Review Z.J. Ou	1602
A Survey on Formation Multi Unequal Span Masonry Bridges with Curve Shaped Deck: A Case Study on Khan Bridge in Iran	1606
Z. Zahiri and D. Heydari Beni "Cold Bridge" Reconstruction to Ontimine Manufacture Floring Theory of Climate	1606
"Cold Bridge" Reconstruction to Optimize Megalopolis' Self-Regulative Thermal Climate Environment X.Y. Gu	1611
Analysis and Test on Mechanical Properties of a Flexible Suspension Bridge	1011
G.H. Cao, J.X. Hu, K. Zhang and M. He	1616
Structural Design of Newly Developed Temporary Footbridge M. Karmazínová	1623
Success-Degree Comprehensive Evaluation Method for Effectiveness of Bridge Preservation	
and Replacement M.L. Ren, L.S. Li, Y.S. Liu, H.C. Wei, C.H. Lou and P. Liang	1627
Progresses and Perspectives of Damage Identification in Bridge Structure	- J - /
X.N. Wu and X.G. Wang	1632
Study on the Load Test of Continuous Beam Bridge Z.Q. Lu, T. Zhang and Q.Y. Zhao	1637
Study on the Static and Dynamic Load Test of Continuous Girder Bridge S.H. Yu, T. Zhang and Q.Y. Zhao	1641

Finite Element Model Updating of a Prestressed Concrete Continuous Bridge Based on Dynamic Monitoring	
G. Xue, W.Y. Bai and X. Wang	1645
Research on Modal Identification Method of Pre-Stressed Concrete Bridge H. Jiang, G.W. Meng and H.K. Zhang	1651
Reliability Analysis of Bridge under Multi Adverse Factors H.B. Xie, Y.F. Wang and M.H. Liu	1655
Modal Parameters Identification of Bridge Structure Based on Excitation of Wind Load H. Jiang, G.W. Meng and B.W. Xiong	1660
Mechanical Properties and Design Consideration of Skewed Simple Supported Bridge N. Wang and B. Wu	1664
Research on the Effect of Width-Span Ratio on the Bridge Impact Coefficient C.X. Qi, Y.H. Gao and Q.Z. An	1670
Probabilistic Peak Displacement Analysis of Bridge Structures with P-Δ Effect B. Yu, D. Liu and L.F. Yang	1674
Dynamic P-Δ Effect on Probabilistic Residual Displacement of Bridge Structures B. Yu, D. Liu and L.F. Yang	1678
Sequence of Urban Bridge Maintenance and Repair Based on Multiple Factors F. Huang and Z. Chen	1682
Reliability Assessment of Existing Reinforced Concrete Arch Bridge W. Peng, W.Y. Ye, J. Jia, Z.H. Lu and H.T. Hou	1687
Discussion on Design of Double-Deck Traffic Concrete Box Girder for City Bridge M.Q. Zhu, F.J. Wei, X.L. Hu and J.Q. Wang	1691
Cable Force Optimization Method in Two Stages for Spatial Cables H.X. Huang, Y. Zhang, S.S. Cheng and F. Li	1695
Application of Exact Element-Method on Calculation of Form-Finding and Unstressed Length of Cable Z. Li, Y.C. Wei, R.H. Wang, J.L. Li and P. Zhang	1699
The Research on Cable Force Measurement Based on Degenerated Element with Frequency Method	
X. Cui, Y. Jiang, L.W. Fu and J.F. Wang Relationship of Cohla Tansian and Tanananatura Resed on Lang Tanan Manitaring Rate on	1709
Relationship of Cable Tension and Temperature Based on Long-Term Monitoring Data on the Cable-Stayed Bridge X.Y. Wang, M.S. Chen, H.X. Sun and Q. Yang	1716
Chapter 6: Road and Railway Engineering	
Technological Study on Interlayer Bonding of Double-Layer Porous Asphalt Pavement G.Q. Tang, D.W. Cao, K. Zhong and X.Q. Yang	1725
Study on Test of the Influence of Moisture Content on Creep Property of Sandy Slate Coarse-Grained Soil	
Q. Liu, X. Wang and X.D. Song The Design and Implementation of Roadworks Management System Based on GIS	1733
Y.H. Zhang and B.B. Su	1739
Chapter 6: Road and Railway Engineering	
Dynamic Response of Asphalt Pavement on Semi-Rigid Base due to Heavy Load L.J. Zhang	1745
Influence of Rubber Powder Content on High-Temperature Performance of TOR Rubber Asphalt	1550
Y.M. Guo and W. Chen Numerical Analysis of Porous Concrete Base in Asphalt Pavement Based on Traffic Load	1753
L.J. Suo Mechanism Analysis of Emulsified Asphalt Cold Recycled Mixture	1757
H. Jiang	1761

A Study on the Spiral Line Development Applied in the High-Grade Highways Design R.W. You and Y.J. Xu	1767
Existing Railway Horizontal Alignment Reconstruction Algorithm Based on Line Segments Identification	1550
W. Liu, J.H. Wang, Y. Li and W. Li	1772
Laboratory and Field Studies on Construction Opportunity of Porous Concrete Overlay in Tunnel Q. Yang and X. Li	1777
Research on anti-fatigue ability of Sisal Fiber Asphalt Mixture Pavement Z.Y. He and F.X. Liu	1782
Experimental Study on the Crack Resistance of Waste Asphalt Concrete Fiber Cement Stabilized Macadam H.B. Li, Z.J. Liu and H. Shen	1786
Continuous Evaluation of the Road Skid Resistance with ViaFriction D.W. Wang, A. Schacht, S. Schmidt, M. Oeser, B. Steinauer and X.H. Chen	1791
Study of Pier Top Longitudinal Horizontal Rigidity on Rigid Frame Bridge Continuous Welded Rail	
Z.P. Hu, W. Ping, K.Z. Xie and T.L. Liu	1795
Experimental Study on Hydrodynamic Pressure Generated by Sleeper Loose C.G. Su, K. Hong, Y.D. Li and R.S. Yang	1801
Compaction Temperature's Influence on the Pavement Performance of Warm Asphalt Mix with Different Matrix G.S. Zhu and L. Yu	1806
Deformation Monitoring of Railway Bridge Group Influenced by Construction of Metro	
Tunnel L.H. Shi, C.B. Feng, T.G. Zhang, S.D. Sha, Y.W. Su, S.W. Du and G. Zhu	1810
Experimental Study on Earth Pressure of Corrugated Steel Culvert under High Fill	
Embankment W.S. Yu, Z.L. Li, X.R. Xie and L.Y. Guo	1815
Decision-Making Method of Maintenance Scheme for Highway Asphalt Pavement S.P. Gao, P.G. Wu and J. Feng	1820
Wide Juncture Cracking Effect on the CRTS II Slab Track S.F. Zhang, J.J. Ren and J. Wang	1824
Analysis of the Sensitivity of Impact Factors on the Stability of Expansion Freeway Slope G.C. Luo, Z.M. He and $X.T.\ Zhao$	1830
Analysis of Cement Emulsified Asphalt Mortar Gap on CRTSII Slab Track under Train Loading	
H. Xu, W. Ping and J.M. Xu	1834
Experiment Study of High-Temperature Stability of SMA F.Z. Shi, M.Y. Nie, X.C. Wang and R. Guo	1839
Study on Volcanic Rock Chemical Composition and Physical Properties in Hainan Province Y.S. Yao, J.L. Zheng, B.M. Tang and H.Z. Zhu	1844
Dynamic Analysis of Railway Vehicle Moving through Bridge with Varying Velocity H.L. Zhu, X. Wang and L.F. Yu	1852
Study Method for Determination Airport Runway Orientation Based on Cross Wind X.L. Chong, W.T. Cai and C. Zhang	1857
Subway Station Fire Prevention System Safety Analysis R.J. Wang, B. Jiang and Y.Y. Xu	1861
Evaluation of Impact Factors of Deformity Intersection Capacity in Mountain Cities J.R. Gao	1865
Research of Asphalt Mixtures High Temperature Stability G.C. Luo	1871
Effect of Wind Load on the Track Structure of Bridge with High Pier and Large Span L. Hao, W. Ping, L. Yan, W. Luo and R. Chen	1875
Research on the Laws of the Environmental Vibration Induced by Elevated Rail Transit L. Wei, W. Ping, Y. Le, L. Hao and C. Rong	1881
The Development of Road Detection Technology D. Xiao	1887

Study of <i>In Situ</i> Mechanical Response of Asphalt Concrete Pavement with Granular Base P. Shen	1891
Research on New Type of Cracking Resistant Water-Proof Layer as a Treatment Method of Pavement Crack	
L. Xie, B.L. Zhu, L. Bian and T. Wang	1896
Dynamic Load Coefficient of Tyre Forces from Truck Axles R. Buhari, M.M. Rohani and M.E. Abdullah	1900
The Mechanical Response Characteristics Analysis of Emulsified Asphalt Mixing Plant Cold Recycled Materials	
Y.H. Yang, J.X. Gao, X.X. Gao, Y. Shen and Y. Yang	1912
Damage Equivalent of the Flexible Pavement Variation with Load Applied R. Buhari and S. Puteh	1917
Research of Influencing Factor on the Bending Property of Asphalt Mixture Based on Grey Correlation Entropy	1022
Y.S. Dong, Q.Q. Liu and D.W. Cao	1923
Research on Proportioning Design of Tourmaline Modified Asphalt Mixture X.Q. Wang, B. Dong, C.H. Wang and X.H. Wang	1928
Chapter 7: Seismic Engineering	
Structural Type Selection of Middle and Small Span Bridges in Seismic Area X.C. Zhang, S.P. Ji, G.L. Guo and X.L. Wang	1935
Dynamic Response Analysis of Docking Chamber Structure Considering Viscoelastic Boundary Condition	
G.L. Tao and L. Zhang	1939
Permanent Deformation Characteristics of Concrete Face Rockfill Dams on Alluvium Deposit Subjected to Different Strong Seismic Excitations W.J. Cen, T. Zhou and K. Xiong	1945
Influence on Seismic Response of Dam by Different Dynamic Boundaries W.J. Cen, K. Xiong, L.N. Yuan and S. Wang	1949
Seismic Rotations and Rotational Seismic Input for Building Design Y.W. Liu and Y. Zhou	1953
Experimental Study on Dynamic Shear Modulus and Damping Ratio of Soft Soils in Binhu New District of Hefei X.L. Wan and D.L. Yang	1957
Seismic Analysis of a Masonry Residential Building in Wenchuan Earthquake Q. Zhou and B.T. Sun	1961
Study on the Earthquake Resistant Capability of Brick-Timber Structure Q. Zhou and B.T. Sun	1965
Application of Frictional Energy Dissipation Brace in Seismic Strengthening S.B. Yang, J.X. Song and W. Pan	1969
Experimental Research on Seismic Capacity of the Frame Sandwich Boundary Joint T.F. Zhao, Z.B. Meng and Y.S. Zhao	1974
Fluid Modeling for Seismic Analyses of Aqueduct Bridges Y.C. Li and C.Y. Chang	1978
Several Issues on Structural Dynamics of Aqueduct Bridges Y.C. Li and H. Zhang	1982
Model Reduction and Seismic Active Control of an Multi-Spanned Highway Bridge J. Ning	1986
Nonlinear Seismic Response Analysis Model and Experimental Verification for Pile Foundation of Bridge Structure X.C. Chen, C.F. Wang and Z.W. Liu	1993
Discussion on Seismic Reinforcement Methods of Current Bridges C.Y. Jiao and Z. Sun	2000
The Seismic Frequency Response Function Calculation of Multi-Span Simply Supported Girder Bridge Q.Q. Ma and H.R. Zhang	2006

Experimental Study of LRB Energy Dissipation Walls and its Engineering Example Study C.L. Zhou, W. Chen and J.K. Sun	2010
3D Vs. 2D Modeling of Concrete Gravity Dam Subjected to Mining Tremor J.M. Dulinska and A. Galuszka	2015
Dynamic Response Analysis of Reinforced Concrete Suspension Bridge under Seismic Action L.M. Wu	2020
The Uncertainty in Shape Parameter Predictions of Seismic Design Spectra for Nuclear Power Plant	2025
L.J. Xu and H.Z. Zhang Analysis of the Reinforced Masonry on Displacement Response	2025
Y. Yu, X.J. Zhuang, Y.F. Zhang and J.D. Zhang	2030
Study on Seismic Response Characteristics of Hinge-Type Slope H. Su, Y.S. Sun and J. Yan	2034
Coupled Elastoplastic Analysis of Dam Seismic Stability K. Fei, F. Tian and Q. Zheng	2040
Study on Seismic Dissipation Energy Based Nonlinear Single-Degree-of-Freedom Model W.B. Bao, G.Y. Xu and Y.C. Li	2049
Numerical Verification of Brittle Material Failure Model Test J.Y. Chen, L.Q. Ji, Q. Xu and J. Li	2053
Chapter 8: Hydrology and Irrigation	
A Groundwater Runoff Model Applied to Computing Stratified Runoff Yield J.F. Feng	2059
Influences of Topographical Change of Qiantang River on Design Flood of Puyang River T. Ding and L.M. Liu	2064
The Regulation Strategy for Wandering Reach of Zhang River X.Y. Yi	2068
Effect of the Bed Sand Wave on Cross-Section Discharge Measurement and Calculation in Physical Model Q. Wan and Y.T. Cao	2072
Analysis of Multi-Year Drought in Guizhou Province and Research of Drought Resistance Measures	
H.X. Zhang, D.C. Chi, Y.T. Wang and L. Liu Variational Inequality Formulation Method for Unconfined Seepage in 3D Fracture	2077
Network W.S. Xu	2084
Recent Changes of Water Discharge and Sediment Load in the Buyuan River Basin, China R.H. Zhong, X.B. He and K.D. Fu	2089
Application of Roughening with the Grass Cushions in the Hydraulic Model of Comprehensive Harness of Qian'an Reach of Luan River H.J. Zhao, Y.D. Jin and J. Liu	2096
Some Characteristics of Peak Flow in the Richelieu River, Quebec S.S. Li	2100
Advances and Prospects of Reservoir Sedimentation Problem on Sediment-Laden River G.M. Gao, T. Li, Z. Liu and X.J. Li	2104
Overview of Research on the Influence of Permeable Structures Q.Q. Shang, H. Xu and G.B. Li	2115
Hydraulic Conductivity and Scale Effects Investigation in Basalt in the Dam Area of Xiluodu Hydroelectric Station, Jinshajiang River, China Y.Y. Li, R.L. Sun and R.Q. Chen	2123
Photosynthetic Performance of Potato (Solanum tuberosum) Subject to Water Deficit Regulated with Mulched Drip Irrigation H.J. Zhang and J. Li	2130
Effects of Subsurface Drainage Treatments on Chlorine Content in Mudflat Soil Y.M. Yan and X. Wang	2134

River Regulation of a Phosphate Mine Area in the Three Gorges Reservoir Area X. Li, A.G. Zhou, Y.G. Du and Y. Huang	2138
Trend Analysis of China Flood Disaster and Challenges in the Future J.F. Liu, X.N. Zhang and H.M. Wang	2144
Discussion on Ground Motion Parameters of JiYin Hydraulic Project L.H. Tang, S.Y. Li and J.B. Chen	2151
Impounding in Advance for Three Gorges Reservoir by Considering the Downstream Drought Resistance	21.55
Y.H. Li, T. Peng, J. Liu and X.H. Dong Decision Support System for the Management of Water Resource System in Ningxia	2157
K.P. Feng and J.C. Tian	2161
Impact of Climate Change on Water Resources in the Shiyang River Basin and the Adaptive Measures for Energy Conservation and Emission Reduction Z. Li, X.Y. Li and J. Sun	2167
Ground Water Contamination of the Coal Gangue Leachate of Sandy Base Field in Erdos - On the Case of the Coal Waste Field of Daliu Tower Mine Area J.Y. Lu, S.G. Dong, W. Zhang and D.D. Wu	2172
Research on Mathematical Model of Flow and Sediment Erosion Evolution at Wassit Power	
Station in Iraq M.J. Zhang, H.Q. Zhang and H.Q. Zhang	2177
Fractal Dimensional Analysis of Runoff in Jinsha River Basin, China Y.X. Xie, S.C. Zeng and W.S. Wang	2181
Automatic Calibration of Conceptual Rainfall-Runoff Models	
C. Zhang and Y.Y. Sun Simulation of the Changes of Flow Fields by Ecological Islands in Wohushan Reservoir	2185
M.H. Niu, Z.H. Xu and K. Kong	2190
The Optimal Selection of Irrigation Systems Based on the Evidence Theory Z.L. Liao, Y.H. Long, Y.F. Wei and Z.X. Guo	2194
A Zonal Watershed Hydrological Model Considering Land use and Land Cover Change and its Application X.N. Li, P. Xie and Y. Zhu	2201
Preliminary Study on the Reasonable Allocation of Flood Drainage Right for Midstream of Huaihe River F.C. Yu, Y.Z. Wang and X.J. Yuan	2208
Compressed Structured Storage for Saving Hydrological Model Results	2208
X.H. Xiang, X.L. Wu and S. Niu	2213
Obtaining Recharge Coefficient Using Flow Data of Karst Spring F. Jiang, J.W. Wan and K. Huang	2217
Development of a Stepped Calibration Approach for XAJ Hydrological Model Q. Li, W.M. Bao and J.L. Qian	2222
Flow and Sediment Conditions for the Yellow River Estuary Balance	
S.B. Yu, K.R. Wang and W.Z. Wang Optimum Combination Scheme of Water-Fertilizer under Condition of Level-Border and	2226
Plastic Film Hole Irrigation for Corn H. Shen and J.C. Tian	2231
Influence of the Sea-Land Interface Moisture Flux on Reference Evapotranspiration in Liaohe Delta, Northeast China	
B.L. Wang and G.S. Li Passayah on Characteristics of New Water in Vishang Wuhan Booch often Impoundment of	2238
Research on Characteristics of New Water in Yichang-Wuhan Reach after Impoundment of the Three Gorges Y.H. Yang, X.Q. Liu and H.Q. Zhang	2245
Research on Characteristics of Sediment in Yichang-Wuhan Reach after Impoundment of the Three Gorges	
Y.H. Yang, X.Q. Liu and H.Q. Zhang	2250
Applicability Analysis on the Improved One-Dimension Steady-State River Water Quality Model	
L. Zhu, J.X. Song, L.H. Liang, H. Li, A.L. Wei and B. Zhang	2254
Study of Structure Formation on Riverbed and its Relationship with Geomorphology H.X. Liu and Y.J. Lu	2260

Experimental Study on River Channel's Formation and Change Process of on the Surface of Delta Deposition	
F. Liu and X.F. Zhang	2264
Water Consumption of Potato (<i>Solanum Tuberosum</i>) Grown under Water Deficit Regulated with Mulched Drip Irrigation H.J. Zhang and J. Li	2273
Three Dimensional Bursting Phenomena in Open Channel Bends Y. Wu and Y.C. Bai	2277
Irrigation Coefficient Analysis and its Research Progress F.L. Zuo, W.H. Zhang, X.L. Bai, J.H. Nong, H.Q. Zhao and M.Q. Zhong	2283
Calculation Method about Vertical Distribution of Saturated Sediment Concentration Based on Exchange Equilibrium X.X. Feng and P.J. Yue	2287
Flow Patterns and Bed Deformation in a Meandering Channel with Different Flow Conditions	2207
D.D. Jia, P.F. Hei, X.J. Shao and X.B. Zhang	2292
Chapter 9: Disaster Prevention and Mitigation	
An Analysis of the Calculation of the Temperature Field of the Reinforced Concrete Beam under the High Temperature of Fire	2200
M.L. Ou, W.J. Cao and F.C. Liu The Fire Resistance Performance of Double-Layer Square Pyramid Silo-Shell Structure	2299
under Fire L.F. Gong, Y. Bai and J.L. Zhai	2305
Forecasting Refugee of Debris Flow Using Multiple Regression Analysis M.D. Yang, C.H. Shao and Y.P. Chen	2311
The Evaluation Research about Building Comprehensive Capabilities of Disaster Prevention X.Y. Bi, J.Y. Zhang and J. Wang	2316
The Sediment Disaster Risk Evaluation on the Occurrence of Debris Flow at Taimali Watershed in Taitung County, Taiwan	
K.T. Chen, K.J. Tsai, C.L. Shieh and C.M. Chen Study on Designs of Emergency Lodging Field in Emergency Shelter J.Y. Chu, Y.P. Su and L.L. Chen	2320 2325
Cause Analysis and Stability Estimation about Taziping Landslide	2323
Y.Y. Dai Study on Post-Earthquake Corrective Repair of the Stone Archway and Stone Screen in	2330
Tiantai Mountain Y.X. Nie, Z.Y. Wang, H.Z. Liu and C.H. Zhu	2334
Evaluation of Seismic Landslide Runout Distance Based on the Fuzzy Mathematics and Range Analysis Y.X. Zeng and X.Y. Fan	2341
Regression and Fitting Analysis of Flyrock Prediction Formulae for Loosening Blasting J.J. Shi, H.M. An and C.P. Wu	2346
Engineering Application of New Wall Materials Anti-Cracking and Anti-Leakage Performance Summary of Several Experiments and Analysis J. Fu, T.T. Fan and X.S. Wang	2351
Hazard Assessment of Debris Flow Based on the TFSE: A Case along Jinsha River close to the Jinsha Dam Site in China	
B. Shan, Q. Wang, J.P. Chen and H. Xiong Slope Cracks in the Safety Assessment of the Rainfall Period	2358
T.H. Chang, C.L. Lin and F.K. Huang Emergency Evacuation Path Choice Based on Space Network in Public Building	2364
M. Fan, G. Liu, P.G. Li and G.F. Zhu	2370
The Hazard Assessment of Karst Surface Collapse Risk Zoning Based on BP Neural Network in Wuhan City Z.G. Li, S.D. Xiao, Y.H. Pan and S.W. Lu	2376
2.0. DI, D.D. MICO, 1.11. I CHI CHIC D. W. LU	45/0

Fire Test on Two-way Simply Supported Concrete Slab Z.N. Yang and Y.L. Dong	2380
Slope Stability Forecast of LS-SVM Based on Chaos Genetic Algorithm Optimization Z.L. Cai, Y.D. Meng, R.Y. Wang and W.P. Lu	2384
The Research of Rockburst Hazards of Linglong Gold Mine Base on the Relationship of Impact Energy and Confining Pressure Z.J. Zhang, H.G. Ji, W.B. Wu, Y.Z. Zhang and S.B. Jiang	2391
Numerical Model of Three-Dimensional Motion of Plate-Type Wind-Borne Debris Based on Quaternions and its Improvement in Unsteady Flow A.M. Fu, P. Huang and M. Gu	2399
Research Progress in Oil Spill Damage Assessment C.F. Niu, M.H. Zhu and D. Zhou	2409
Study on the Catastrophic Consequence and Countermeasure of Urban Civil Engineering Q.X. Lv and T.Y. Li	2414
Emergency Countermeasure and Rescue Plan of Subway Fire Y.X. Liu, X.W. Han and M.L. Li	2419
Seismic Upgrading Strategy for Near-Fault School Buildings in Taiwan F.P. Hsiao, H.H. Lo, W.Y. Chien and S.J. Hwang	2423
Disaster Prediction and Preventive Measures of Constructing a Waste Dump on an Abandoned Tailing Pond L.S. Chang, T.Y. Yang and H.J. Deng	2427
Development and Application of Monitoring and early Warning System for Geological Disasters in Highway High Slope T. Lei, Z.Y. Tan and C.X. Lin	2431
Study on Spread of Fire Overflow on Building Facades with Insulation Materials Y.F. Li, C.C. Xu, X.F. Xing, J. Zhang and C. Hu	2438
A MRACO Algorithm for Structural Multi-Damage Detection J.C. Lin and L. Yu	2443
Deformation Analysis and Prediction Based on Fuzzy Time Series W. Chen	2448
Present Situation Analysis for Reinforcement of Dangerous Reservoirs in China Z.W. Yan, Y.Y. Zhang and G.D. Zhang	2452
The Economic Loss Estimate of Dam Break Based on 2D Dam Break-Wave Numerical Simulation Z.W. Shen, C.H. Pan, S.G. Ye, H.Y. Lu and L.H. Wang	2457
Prediction of and early Warning for Deformation and Stress in the Xiaowan Arch Dam during the First Impounding Stage Q.J. Zhou, G.X. Zhang and Y. Liu	2463
Research Status Summary on Dam Security Monitoring X. Wang and Y.M. Yan	2473
Design of a Safety Monitoring and early Warning System for Cascade Reservoirs Based on Web-GIS Platform L.B. Li, Y.H. Jiang, Z.C. Lu and F. Shang	2477
Chapter 10: Traditional Construction Materials	
Research Progress in High Velocity Penetration into Concrete Theory C.C. Shi, X. Fan, S.G. Zou and M.S. Li	2487
The Effect of Negative Temperatures of Frozen Clay on Dynamic Strain Amplitude F. Luo, C. Cai, Z.Y. Zhu and L.Z. Cui	2492
Damage Identification for Masonry Materials Based on Bayesian Inference X.P. Fu, B. Peng and Z. Ji	2498
Characterization and Application of Shear Thickening Fluids Z.G. Wang, Z.W. Yu, Y.Y. Sun and Q.Y. Li	2503
Effect of the Hydration Heat on Creep R. Rao, Y.H. Huang and A.R. Liu	2507

Experimental Research on Ductility and Bearing Capacity of Prestressed High Strength Concrete Pipe Piles	
X. Rong, J.X. Zhang, Y.Y. Li and Y.F. Chen	2511
Digital Image Correlation Test System with Automatic Transmission for Quasi-Brittle Material	
H.L. Yue, C.H. Zhang and Y. Wang	2515
Experimental Study on the Corrosion Law of Chloride in Concrete under Artificial Climate Y. Wan, Z.W. Yu, P. Liu and Y.Y. Sun	2520
Study on the Characteristics of Traditional Local Building Materials in Southern Hunan Areas	
J.H. Xu and J.M. He	2524
Analytical Study on Bond Characterization of Hybrid-Bonded FRP to Concrete Interfaces K. Liu	2528
Expansion of Cement Mortar Mixing Expansive Agent under Different Curing Conditions and Compressive Strength in Constrained Conditions Y.Y. Wu, Y. Peng, Y.D. Liu and L.L. Jia	2534
Experimental Study on the Shear Behavior of Recycled Concrete with Artificial Sand W.W. Lan, Z.P. Yao, Y. An and L. Chen	2538
Buckling Behaviors of Steel-Concrete Composite Plate F.X. Li, Q. Liu and H.Q. Huang	2544
Influence of Casting Temperature and Solar Radiation on the Thermal Field in Roller Compacted Concrete during Construction S. Jiang, S.L. Zhan and N. Xiao	2550
Internal Force Calculation and Analysis of Precast Reinforced Concrete Composite	
Thermal Insulation of External Wall Y. Wang	2555
Calcinations Regulation Effect on Activity and Hydration of MgO from Magnesite Tailings H.R. Shen, Y. Jiang and W.Z. He	2559
Mineral Waste Coupled with Boron Oxide for Producing Active Belite Cement Clinker Y.J. Liu and Y.C. Zheng	2564
Finite Element Simulation on Mechanical Behaviors near Crack-Tip in Shape Memory Alloy	
B. Zhou, J. Lv and D.X. Wang	2576
Analysis of Repair Material Performance for Continuously Prefabricated Slab K. Xu, J.J. Ren, L.Z. Zhang and Y.X. Hao	2580
Researches on Cement Cold-Recycled Base T. Wang, W. Wang and T. Liu	2586
Influences of Fly Ash Level on Cementitious System Performance of Concrete Based on the Quantization Parameter Analysis L. Shi, Y. Wu and J.Z. Liu	2591
Cause Analysis on the Cracks in Concrete Plate of Canal Lining	2391
J.H. Cui, Z.Q. Xie and H.J. Xiao	2596
Site Rolling Test on Gravel Materials of Yutan Reservoir Y.Y. Zhang, X.H. Wang and Q.W. Liu	2600
The Early-Age Drying Shrinkage of Cement-Based Materials with the same Workability after Temperature Compensation L.F. Zhang, J.Y. Lai, X.Q. Qian and C. Shen	2604
Influence of Curing Age and Water-Binder Ratio on Chloride Permeability under Freeze-	2004
Thaw and Load L. Hong and R.M. Duo	2610
Researches on the Coal Fly Ash Applied to Saline Soil Improvement in Rural Roads Z.D. Guo, X.J. Zhang and Y.R. Liu	2616
Experimental Study on Improving Concrete Sulfate Attack Resistance Ability with Silane Impregnation Z.D. Huang	2621
Study the Relationship between the Concrete Strength Added Water Reducer and Water-Cement Ratio P. Gao and C.Y. Jiang	2625
1. Out and C.1. Jung	2023

Experimental Study of Slag Powder Fineness Effect on Concrete Performance B. Li, M.Y. Hang and S.F. Dong	2631
Effect of Moisture on Shear Bond Properties of FRP-Concrete Interface	2635
Testing for the Influence of the Degree of Water Saturation of Concrete upon Chloride Diffusivity	
V.T. Le, Y.L. Zheng and S.X. Deng	2639
Experimental Study on the Capillary Absorption of Cement-Based Materials and Analysis of Influencing Factors X. Li, N.G. Jin, Y. Tian and X.Y. Jin	2644
Study on Qingdao Bay Bridge Pier Concrete Anti Cl ⁻ Permeability Change Law and Structural Durability Analysis	
Z.D. Huang	2649
Chapter 10: Traditional Construction Materials	
The Research of Anti-Cracking Performance of Ceramists Concrete Beams J.Y. Yang, Z.L. Mo, W.J. Yang and W. Tan	2655
An Experimental Study on the Contribution of Fire Retardant Coating to the Fire Protection of Concrete	
W.J. Cao, M.L. Ou and F.C. Liu	2660
Fly-Ash Concretes of 50% of the Replacement Ratio to Reduce the Cracking in Concrete Structures M.J. Mao, Q.N. Yang, W.B. Zhang and I. Yoshitake	2665
Transient Diffusion Behavior of Chloride Ions in Concrete with a Macro Crack S. Mu, G. De Schutter and J.Z. Liu	2671
Experimental Research and ANSYS Analysis of Temperature Field of Concrete Specimens Reinforced by Paste Method in the Fire Y.B. Li, J.Z. Liu and S.J. Fu	2677
Study on Preparation of High Strength Gypsum by Flue Gas Desulfurization Gypsum J.X. Zhang, P.X. Duan and Y. Zhang	2681
Physical Nonlinearity and Anisotropic Features of Materials in Structure Analysis N.S. Blokhina	2686
Mechanical Properties Contrast Between Fiber Reinforced Composite Poles and Traditional Poles J. Gong, D.X. Ren, C. Zhou and G.Q. Ma	2690
The Green Materials Fabrication and Advanced Molds Design C.C. Chen, W.D. Jheng, K.J. Huang and J.S. Lin	2694
Mechanical Evaluation of Concrete Containing Lightweight Aggregates A.F. Angelin, L.C.L.J. Ribeiro, M.S.G. Pires, A.E.P.G.A. Jacintho, R.C.C. Lintz and L.A. Gachet-Barbosa	2699
Study on Chloride Ion Penetration for Concrete Structures in Zhunhai Area Y. Wan, Z.W. Yu and P. Liu	2703
Freeze-Thawing Damage Model of New-to-Old Concrete with Different Rough Interfaces C. Yi, S.L. Lai, H.G. Zhu, S.H. Yan, J.X. Liu and X. Dong	2707
Influence of Freeze-Thaw Cycles on Multiaxial Strength of Concrete L.K. Qin, L.X. Gao and H.W. Song	2715
Experimental Investigations on Expansion Performance of Alkali-Aggregate Reaction of Mortar	2710
F. Ouyang, D. Chen, Y.D. Liao and C.H. Jiang The Simulation Experiment and the Similarity of Chloride Ion Erosion in Concrete under	2719
the Tidal Zone in the Marine Environment Y.Y. Pan, J. Huang, J.Z. Zhang, H.Y. Jin and X.M. Zhou	2724
Existing Form and Causes of Bay Facies Organic Sand J. Yi and H. Wei	2730
Progress and Review of Research on Durability of Hydraulic Concrete under Alternate Freeze-Thaw and Carbonation Effected by Wet-Dry Cycles	
X.M. Shen, H.Q. Yang, X. Li and M.X. Li	2734

Temperature Control and Anti-Cracking Measures for a High-Performance Concrete	
Aqueduct Z.H. Wang, S.P. Yu and Y. Liu	2739
Chapter 11: Advanced Construction Materials	
Study on Preparation Experimental about High-Permeability Layer-Penetration Oil Q.W. Du, Y. Fang, B. Yu and X. Wu	2745
Broadening Design and Preparation of MDF Absorber for Electromagnetic Pollution Control in S-Band W.J. Hao, M.M. Wang, Y.F. Zhang, F. Wu, D.W. Chen, H.C. Zhao, Y.F. Dong and Y.Y. Yi	2754
The Role of Fly Ash in the Granulated Blast Furnace Slag-Based Geopolymer C.X. Wu and H.J. Zeng	2760
An Experimental Study on Mechanical Properties of Basalt Fiber Reinforced Concrete F. Chen	2767
A Study of Effect Factors on Sodium Silicate Based Expanded Perlite Insulation Board Strength Y.L. Tian, X.L. Guo, D.L. Wu and S.B. Sun	2771
Synthesis, Cement Paste Fluidities and Molecular Weight Measurements of Polycarboxylate Superplasticizer by Bulk Polymerization	2//1
X. Liu, Z.M. Wang, X. Liang, J. Zhu and J. Zhao	2778
Research on the Mixture Ratio Design of Ultra-High Strength Concrete L.B. Xu, N.Q. Feng and K.H. Tew	2782
Experimental Research on Tensile Strength Reduction of Concrete Caused by Microwave Irradiation J. Dai and D. Cao	2789
Experimental Research on Temperature-Stress of Inorganic Polymer Concrete C.Z. You, X.C. Fan, D. Wu and L.P. Pu	2795
Research on Static Compressive Experiment of Concrete Mixed with Limestone Power and Fly Ash	2801
J.F. Liang, L. Lv and F. Wang Mineral Lightweight Renders of Modified Composition for Final Facade Surface Treatment T. Melichar and J. Bydžovský	2806
Dynamic Response and Damage Mechanism of Two-Core Composite Sandwich Panels under Low-Velocity Impact	2010
C.L. Li, D.Z. Jiang, J.C. Zeng and S.L. Xing Study on Polymer-Modified Concrete for Improving Flexural Toughness Q.Y. Cao, T.Y. Hao and W. Sun	2810 2815
Size Effect of High Performance Concrete with Blast Furnace Slag on Compressive Strength and Modulus of Elasticity	
W.S. Park, J.E. Kim, N.Y. Eom, D.G. Kim, M.S. Cho and H.D. Yun	2820
Microscopic Analysis on Modified Rubber Mortar Performance S.F. Dong and R.X. Hao	2824
Research on the Grading Effect of Polycarboxylate Superplasticizer Z.K. Li and J.H. Peng	2828
Adsorption Behavior of Polycarboxylate Superplasticizer on Cement Particles Z.K. Li and J.H. Peng	2834
Development of Self-Cleaning Luminous PVC Flexible Composite Building Materials M. Qi, L.P. Shen, Y.M. Wang and X.R. Zhou	2839
Influence of Different Curing Days on Mechanical Properties of Concrete with Admixtures of Fly Ash, Blast Furnace Slag and Silica Fume J.E. Kim, W.S. Park, S.W. Kim, D.G. Kim, M.S. Cho and H.D. Yun	2843
Factorial Design Approach of Ultra-High Performance Concrete W.J. Long, W.L. Wang, Q.L. Luo and B.Q. Dong	2847
Properties of Sand Grout with Iron Ore Tailings as Fine Aggregate X.G. Li, Y.L. Bao, S.S. Jing and Y.P. Ma	2851

Research on Esterification Technology of Polycarboxylate Superplasticizer and its Cement Paste Fluidities	
J. Zhu, Z.M. Wang, X. Liu, X. Liang and H.Q. Li	2857
Exploration into Anticorrosive Property of Antirust Compound-Admixture X.C. Yang, S.L. Zhan and J.Y. Lai	2861
Mechanical Property Study of Brine Corroded High Performance Concrete (HPC) P. Gao and H. Yu	2865
Research on the Properties of Sea Sand Mortar Y. Fan, R.H. Zhang and Z.B. Chen	2871
Influence of Mineral Admixtures on Chloride Diffusion Coefficient of Self-Compacting Concrete J.B. Xiong, P.P. Li and S.N. Wang	2876
A Review: Application of Nanomaterials in Concrete Z.Q. Zhao, R.J. Sun, G.F. Xin, S.S. Wei and D.W. Huang	2881
Effect of Fly Ash and nanoCaCO ₃ on the Setting Time of Cement Paste Z.Q. Zhao, Z. Ge, R.J. Sun, G.F. Xin and D.W. Huang	2885
Mechanical Properties and Applications of Engineered Cementitious Composites (ECC) Z.Q. Zhao, R.J. Sun, Z.Q. Feng, S.S. Wei and D.W. Huang	2889
Performance and Economic Comparative Study of Interlocking Block and Clay Brick Buildings N. Chaimoon, C. Lertsatitthanakorn and K. Chaimoon	2893
Research on the Properties of Sea Sand Concrete	2893
C.J. Hong, Y. Fan, R.H. Zhang and H.T. Wu	2899
Research and Application of Geopolymer Cementitious Material Progress and Review Z.W. Ou, S.Y. Zhou, C.X. Xu, Y. Zhang, J.C. Yang and Y.X. Li	2903
Evaluation on Viscosity Reducing Effect of Road Commonly Warm Mix Agents Q.L. Du, C.H. Wang, L. Yang and Y.W. Li	2912
Influence of Hydration Heat of Fly Ash Concrete on Size Effect X.X. He and D.B. Zhao	2916
Early-Age Free Deformation of Cellular Ceramisite Concrete at Ambient Temperature K. Ni, J.C. Geng, S.Q. Fang, Y.X. Shi, Z.N. Song, Y.N. Ding and Y.G. Zhang	2923
Properties of Reactive Powder Concrete Using Densified Silica Fume K. Prasertlar and K. Chaimoon	2928
The Effect of Sand/Cement Ratio and Cement Grade on the Compressive Strength of Foam Concrete J.C. Geng, K. Ni, S.Q. Fang, Y.X. Shi, Y.N. Ding and Y.G. Zhang	2933
Predicting the Shear Strength of High-Strength Steel Fiber Reinforced Concrete Beams without Stirrups	2933
Z.G. Wang, Y.Y. Sun and J.F. Mao	2938
Possibilities of Dry Shell Construction in the Area Family and Residential Houses B. Kovářová	2943
Study on the Preparation of Flexible Graphite Composites X.M. Lin, B. Zhang and H.R. Deng	2947
Chapter 12: Heating, Gas Supply, Ventilation and Air Conditioning	
Energy Saving Analysis on the Recovery Fresh Air Heat Pump Units of a Public Building A.X. Chen and H.L. Liu	2955
Influence of Workstation Screen for Indoor Mechanical Ventilation Y.J. Li and Y.A. Yang	2959
A New Air-Conditioning System with Chilled Water Storage H. Lin, X.H. Li, P.S. Cheng and B.G. Xu	2964
The Study of Soil Temputerature Change of GSHP System in Winter Conditions G.M. Shen, Y. Xu, J.Y. Zhou, P.F. Hu and H. Xiao	2969
Exergy Analysis of a Compressor Assisted Triple-Effect Absorption Refrigerating Cycle C.J. Geng and Y.F. Liu	2975

Numerical Simulation Analysis of Composite Air Purifying Device J.L. Liu, H.P. Zhang, H.Q. Wang and Y.H. Chu	2980
Research on City Gas Load Forecasting Method T.T. Wang and H.Y. Tan	2986
The Study of the Ventilation Influence to Gas-Based Direct Reduction Shaft Furnace Flow Field	
M.H. Bai, J.L. Ge, Y.M. Piao, J. Wang, Y.X. Fu and K. Xu	2990
Basic Research of Solar Seasonal Thermal Storage Capacity Increase to Existing Heating System	
S. Ma and Y. Yao	2994
Chapter 13: Surveying Engineering and Measurement	
Research on the SVM Classification of Active and Passive Remote Sensing Data Based on the Feature Per-Parcel	2001
S.T. Wang, C.L. Wang, W.B. Du, L.L. Tong and F. Wang The Application of Natural PTV Technology in Panel Construction Suggests	3001
The Application of Network RTK Technology in Road Construction Survey Y.L. Qian	3007
Richt Equation Arithmetic Used on Mixed Filter of Monitored Slope Deformation Data Y.C. Mao, C.M. Sha and X.L. Liu	3011
Based on Inclinometer to Measure Dynamic Deflection of High-Speed Railway Bridge $X.L.$ He and $L.Z.$ Zhao	3019
Analysis and Research of Single Base Station CORS Precision Y.H. Zhao and H.F. Gao	3027
Design of Light-Small Mobile 3D Laser Measurement System Y.B. Sun, X.Q. Zheng, Z.R. Jia and G. Ai	3032
The Determination of Sc, Se and Re in Uranium Ore with ICP-AES J.H. Yang, S.L. Dai, L. Liu, J.S. Wang and H.Y. Liu	3037
Internal Wave Real Time Measurement System P.N. Zheng, X.T. Li and J.J. Miao	3041
Accuracy Analysis of Highway Engineering Structure Point Position Surveyed with Total Station	
H. Sun	3045
Chapter 14: Cartography and Geographic Information System	
A New Organization and Indexing Method of Multibeam Point Cloud Data in 3D Marine GIS	
L. Peng	3053
Research and Application of WebGIS System Based on 2D&3D Integration F.H. Wu and Y.N. Zhang	3057
Analysis of the Evolution of Xiaomiaohong Based on Remote Sensing Axis Line Method Y. Gu, H. Li and M.J. Gong	3061
Study of Geographic Information System Applications in the Oil Field Z.H. Wang and Y. Tian	3065
A Semantic Similarity Algorithm for Geographic Information Service Matching S.Y. Wang, H.B. Yu and X. Su	3070
GIS Technology Applied to Numerical Model of Tidal Current J. He and X.S. Zhao	3075
Chapter 15: Construction Technology	
Concrete Crack Control in Monolithic Concrete Bed Construction of High-Speed Railway in Northwest Area of China	
X.X. Tang, Y.P. Zhu, X.Z. Tang and W. Guo	3081

Integral Hoisting Technology of Arch Rib of Concrete Filled Steel Tube Arch Bridge W.J. Zeng and S.Q. Yang	3086
Soil Nailing and Template for the Basement Exterior Wall Waterproof Construction	2000
Technology P. Pang	3090
A Study on Node Connection Technology of Wood Structure Z.H. Bian, T.C. Wang, S.Y. Zhao and X.G. Li	3094
Bare Concrete Formwork Striding Shearing Force and Deflection Boundary Design H.Y. Ding and Y. Liu	3099
Application of Modularized Low-Position Jacking Formwork System in Core-Tube Building	
J.Z. Zhou, Q. Lin, M.P. Liao, J.P. Zhuang and X.F. Cai	3103
Site Measurement of Modularized Low-Position Hydraulic Jacking Formwork System J.Z. Zhou, M.P. Liao, J.P. Zhuang, Q. Lin and X.F. Cai	3108
Construction of Qiansimen Birdge - Partial Cable-Stayed Bridge with Steel Truss Girder Y.T. Zhang, S. Du, X.P. You and C.M. Peng	3113
Management of Gypsum in Construction Site - Case Study E.T. Viana, L.C.L.J. Ribeiro, R.C.C. Lintz, L.A. Gachet-Barbosa and M.S.G. Pires	3119
Key Technologies of Construction Control for Arch Rib of Unique Arch Bridge H.X. Huang, Y. Zhang, S.S. Cheng and Q. Yuan	3123
Roller Compacted Concrete Dam Compacted Thickness Increased Analytical Quality	
Assurance C. Hu	3127
Rammed Earth Construction: A Sustainable Architecture X.T. Lu and Y.P. Liu	3131
Chapter 16: Computational Mechanics	
Nodal Collocation for the <i>P</i> -Convergent Scheme in Boundary Element Technique K.S. Woo, W.S. Jang, Y.M. Kwon and J.H. Jo	3139
Simulation of Inspecting Stress Concentration with Thermoelastic Stress Analysis L.L. Zou	3143
The Collapse Load of Plates by Hierarchical C ⁰ -Plate Element K.S. Woo, Y.H. Yeo, D.W. Lee and S.H. Yang	3147
A New Maximal Theorem in Product GFC-Spaces with Application to Systems of Generalized Mixed Vector Quasiequilibrium Problems K.T. Wen	3151
Subsoil Vibration Characteristics in the Anchor Holding Process	
Y.J. Wang and X.M. Fan Energy Decay of Global Solutions for a System of Petrovsky Equations	3155
Y.J. Ye Wavelet-Based Multilevel Discrete-Continual Finite Element Method for Local Deep Beam	3160
Analysis P.A. Akimov and M.L. Mozgaleva	3165
Parallelization Development Method and Realization for a FEM Simulation Program L. Zhang, G.X. Zhang, Y. Liu and H.L. Pan	3169
Moving Grid Method for Simulating Crack Propagation S.F. Xu, H.F. Ma and Y.F. Zhou	3173
Comparison of Instantaneous Power from Variable Shock Loads in Time Based on the	
Dissipation Model M. Rajczyk	3178
Elastic-Plastic Equilibrium of a Hollow Cylinder from Inhomogeneous Perfectly Plastic Material V.I. Andreev	3182
Numerical Analysis of the Influence of Bolt Pretension on Rigid Flange Joint Rigidity in	3182
Substation Steel Structures Y. Wang, Z.T. Cheng, Y.L. Peng, X. Gu and T. Zhang	3186

Numerical Analysis of the Influence of Bolt Pretension on Flexible Flange Joint Rigidity in Substation Steel Structures	
J.S. Song, H.T. Liu, C.H. Du, D.P. Hong and T. Zhang	3192
Advances of Research on Mode Localization in Mistuned Cyclically Periodic Structures Z.H. Liu, W. Liu, W.C. Gao and X. Cheng	3198
Single Vortex Simulation around a Square Cylinder Z. Liu, P. Lin, Q. Zhou and D.X. Li	3204
A Study of Multi-Step Overfall Flows by Computational Fluid Dynamics J.H. Tang, M.K. Sun and Y. Chen	3208
The Analysis of Vibration for Ballastless Track-Bridge Base on a Hybrid FE-SEA Method W.J. Luo, X.Y. Lei and S.L. Lian	3213
Refined Theory of Transversely Isotropic Elastic Beam Posting inside Winklers Foundation X. Cao and H.X. Zhang	3218
Parametric Modeling of Underground Powerhouse for Finite Element Analysis R.G. Yin, Z.G. Li, H.X. She and J.H. Zhang	3222
Chapter 17: Construction Machinery and Equipment	
Experimental Research on Performance of Aircraft Tanker Truck with Different Oil Pump	
in the Plateau J. Li, W.M. Zhang, X.J. Yang and J.J. Wu	3231
Rate of Regeneration of Construction Machinery J. Rajczyk	3235
Structure Design of Hand-Held Excavator Z.H. Luan, W.P. Gao and C. Wang	3239
Three-Dimensional FEM Simulation of the Ship-Bridge Collision W. Su, Y. Sun, S.Q. Huang and R.H. Liu	3243
Research on Efficiency Test of Mixed-Flow Pump with Different Blade Angles S.S. Sun and B.F. Xu	3248
Some Boiler Tubes Crack Reason Analysis L. Pan, X.J. Xie, J. Shen, Z. Li, R. Wang, Y. Yang and K.R. Peng	3253
Numerical Simulation of Cross-Flow around Four Cylinders in a Square Configuration Using Lattice Boltzmann Method W. Zhang, H.H. Ye and J.H. Tao	3259
The Model of Pump Head Data Mining Based on SVM K. Ding, J.H. Zhang and X.X. Zhu	3263
Hydraulic Characteristic Analysis of 3-Arcs Blades Surface in the Centrifugal Pump Y. Lin, H. Li and S.R. Han	3269
Stability Analysis of the Overhang Steel Liner of Circumfluence Hole in Surge Chamber of Jinping II Hydropower Station	
G.S. Xu, J.Q. Guo and X.X. Li	3275
Dynamic Analysis of Cartridge Style Pilot Relief Valves J.P. Leng, K.L. Xing and P.P. Zhang	3279
Use of Fiber Optics for Bubble Studies Y.U. Ryu and T.H. Jung	3284
Applied Research of Grey Relational Analysis in the Energy Efficiency Assessment of Pump Station	2200
M.J. Shi, K. Shi, G.J. Xu, M.Y. Hu and R.M. Tong Kinematics Analysis of Working Edge Point for Inner Disc Cutter in Cutterhead of	3288
Tunneling Machine Q.X. Wu and H.W. Ma	3293
The Application of Fault Tree Analysis in the Safety Performance of Cutter Suction	
Dredger Y.G. Zhou and H.M. Xu	3298
Effect of Novel Grinding Wheels on Grinding Performance M.Y. Tsai, S.X. Jian and J.H. Chiang	3302

Numerical Vs. Experimental Simulation of a Suspended Water Tank Considering Dynamic Sloshing Effects	
V. Pasquino and E. Ricciardi	3307
Research of Coupling Single-Mode Fiber-Optic Vibration Sensor and Experimental Test B. Ma	3318
The Prediction of Wellhead Pressure of Hydraulic Fracturing F. Shen, Z. Wu, N. Wang and Y.M. Li	3323
Chapter 18: Project Management, Project Construction Cost and Engineering Management	
Research on Evolution Mechanism of PROT Project Financing Entropy about Operating Public Infrastructure - Take Small and Medium Hydroelectric Energy Projects for Example	
Y.W. Wang, S.J. Wang and Y. Huang	3331
The Effect of Different Groupings of Building Elements on Cost Significant Elements and their Cost Contributions to the Total Building Cost of a Block of Medium Cost Apartments in Malaysia	
C.S. Lim, T.C. Toh, W.P. Lee, S.S. Ng, C.K. Yong and K.C. Goh	3335
Application of ARMA Regression Model of Housing Prices Influence Factors of Xi'an H. Zhi and Y.F. Wang	3340
Staging, Formalization and Typing of Project Procedures and Processes of the Industrial Production	
V.G. Kulikov, P.B. Kagan and L.V. Sukneva	3343
Chooseing Suitable BIM Software for Engineering Projects Based on the Fuzzy Neural Network Evaluation Model J. Feng, J.P. Zhang and S.P. Gao	3348
Queuing Systems in Management of Construction	3346
A. Ginzburg	3352
Discussion about the Construction Project Management Mode Based on the Contract Text Y.X. Jiang	3356
Project Proposals Decision Model Based on Sustainable Development with Triangular Fuzzy Numbers Y.M. Wu	3362
Study on Unbalanced Bidding of Contractor Based on Engineering Change L. Yan and C.C. Zhao	3367
History and Topics of the Project Management H. Xie	3372
Types and Stages of the Construction Management H. Xie and Z.J. Zhang	3376
Research on Standardization of Whole Process Cost Consultation Business - A Case of	
Davis Langdon and Seah L. Yan and J.P. Li	3380
The Developer Agent-Construction Mode in Affordable Housing Construction and Management	2206
X.L. Chen, J. Zhu and P. Mao	3386
Influence Factors of Chinese Real Estate X.L. Wang and S. Hua	3391
Research on BIM Technology Application in the Construction of a Subway Station Y.F. Li, H.C. Wang, X.F. Zhao and J. Zhang	3396
Study of Project Duration Risk in the Network Diagram Based on Matrix Algorithm T. Li, W.G. Qiu, L.C. Wang and S. Man	3401
BIM Technology Application in the Construction Industry in China Current Situation and Developmental Disabilities Research	
J. Li	3406
Establishment of Quality Cost Control Balance System Forconstruction Enterprise Y. Zhang and J.S. Mu	3410

Analysis on Investment Risk of Hydropower Project Y.F. Xue	3414
	3414
The Potential of Augmented Reality Technology for Pre-Construction C.M.L. Khalid, Z. Mohamed, M.S. Fathi, M.Z. Zakiyudin, N. Rawai and M. Abedi	3419
Prediction of Construction Schedule Based on BP Neural Network Z.L. Li and G.Z. Zhang	3423
The Establishment of EPC General Contractor Risk Evaluation Model Based on Extension Matter-Element Theory W.K. Chen, Q.W. Ge and P. Yu	3429
The Research on Selection of Estimate Methods of Artificial Man-Days Unit Price of Power Construction Project H. Ke, C. Wang and G.F. Luo	3437
The Engineering Insurance Mode Selection under the EPC Contract Conditions W.K. Chen and C. Wang	3442
Discussion on Function Analysis Stage of Value Management in Construction Industry Y. Zhang and J.S. Mu	3447
Construction Project Bid Evaluation of Group Decision-Making Model Based on Triangular Fuzzy Number	2.451
M.X. Zhang and D.L. Zhang Application of Fuzzy Analytic Hierarchy Process Method Based on SWOT Theory in	3451
Project Risk Evaluation W. Xu and G.Y. Wang	3455
The Analysis of the Engineering Change Impact on Project Cost Based on the Quantities Bill Valuation J. Li and Z.R. Xu	3459
Research on Project Variation for Contractor to Create Profits under Standard Construction Bidding Document L. Yan and L. Chen	3463
Research on Design Management of Large-Scale Tobacco Construction Project M.D. Shan	3468
Rent-Seeking Game Analysis and Countermeasure Study of Contractors in Various Stages of Construction Projects C.Z. Li and F. Peng	3473
Early Quality Implementation Capacity Evaluation C.Y. Zheng and C.J. Yi	3477
Identification of Influencing Factors on CO₂ Emission of Bridge Projects in Taiwan R.Y. Huang, T.Y. Tsai and C.H. Chen	3482
Introduction to the Construction Management of Architectural Decoration G.Q. Zhang	3486
Study on Improvement of the Safety Management in the Construction Industry D.L. Liang, Z.W. Shi, C. Li and J. Zhou	3490
Standard Bridge Engineering Supply Chain Behavior Analysis Using Computer Simulation Technology	
N.H. Pan and M.L. Lee Digital Model of Road and Bridge Construction Enterprise Purchasing and its Applied	3495
Research	3499
X.X. Huang and X.M. Wang The Potential of Context Aware Computing for Puilding Maintenance Management	3499
The Potential of Context-Aware Computing for Building Maintenance Management Systems M.Z. Zakiyudin, M.S. Fathi, S. Rambat, S.U. Mohd Tobi, N. Kasim and A.A. Latiffi	3505