Table of Contents

Preface, Organizing Committee and Sponsors

Chapter 1: High Strength High Performance Materials and New Structural System

Bidirectional Beam String Structure	
C.J. Ye and Z.L. Gao	3
A Friction Damper with Variable Post-Sliding Stiffness T. Wang, X. Chen and R. Teng	12
The Design of Public Facilities Based on Semiotics in Emergency Shelters F. Yu, F. Zhao, M. Ma and X.J. Liu	18
Elastave Bucking of Whole-Corrugate Web H-Beam Y. Chen and C.Y. Zhang	23
Study on the Bearing Capacity and Ductility of Steel Reinforced Concrete T-Shaped Columns	
Z. Li, S.J. Chen, C.P. Zhang and S. Zhang	28
Index Analysis for Specimens of Reinforced Concretes with Mechanical Parameters C.X. Liu, Z.H. Liu, L. Wang, H.Y. Tian and X.L. Zhang	33
Experimental Research on Seismic Behaviors of T-Shaped Concrete-Filled Steel Tubular Frame Joints	
C.X. Xu, Z.J. Wu and L. Zeng	38
Corrosion Behavior of Low Nickel Alloy High Strength Steel in Seawater Containing Sulfate-Reducing Bacteria F.S. Li, M.Z. An and D.X. Duan	42
Behavior of Grout Sleeve Connections under Eccentric Cyclic Load	42
R.L. Han, W.X. Shi and D. Wei	48
The Seismic Response Analysis of Damaged Slip Component of Sliding Isolated Structure Z.M. Xiong, G.M. Qin and Z.H. Zhang	53
Experiment Research on Mechanical Behavior for Latticed Concrete-Filled Steel Tubular Tower with Three Limbs	
B. Li, Z.Z. Han and C.Y. Gao	58
Calculation Model on Single Layer Lattice Shell Static and Dynamic Impact Analysis X.L. Wang and L. Jiang	62
Shear Bearing Capacity Forecast of Reinforced Concrete Frame Abnormal Node Based on the BP Neural Network Theory	
H. Li, S.L. Hao and D.F. Zhang	66
The Review about a New Type of Bridge Structure — Semi-Integral Abutment Jointless Bridge T.L. Wang, Q.N. Li and D.L. Hu	72
Stochastic Aerostatic StabilityAnalysis of Self-Anchored Cable-Stayed Suspension Bridges	12
Y. Ye, Z. Zhang and J. Zhao	76
Experimental Study on Torsion Behaviors of Angle Steel Reinforced Concrete Beams Z.P. Chen, M. Zhong, Y.L. Chen and X.G. Zhang	81
MODEL Test and Study of Vertical Loading Single Pile in Transversely Isotropy Clay Z.C. Zhu, F.H. Jiang and X.G. Wang	85
Overall Stability of Open Cold-Formed Thin-Walled Steel Members with Hat Sections and Batten Plates under Axial Loads D.F. Sun	89
Model Test for Fatigue Performance on New Type Solid Round Rigid Suspender for a High-Speed Railway Bridge J.G. Zhao, R.D. Zhao and Y.L. Zhan	94
Finite Element Analysis of Aluminum Beam with Longitudinal Weld	94
Y. Wu and Q.L. Zhang	100

Experimental Study and Theoretical Analysis on the Seismic Performance of the New Frame-Bent Structure	
L.X. Yin, G.L. Bai, H.X. Li and X.W. Li	104
Finite Element Analysis of Reinforced Concrete Beams with Transversely Prestressed Bars C. Liu, B. Wu and K.Y. Xu	108
Structure Design of Suspend-Dome Structure of Pingshan Basketball Gymnasium for Universiade 2011 Shenzhen B. Wu, M.L. Meng, X.Y. Fu, C. Sun and Y.W. Feng	114
An Effective Way to Improve Bidding Quality — Initial Analysis of Bidding S.J. Wang	120
The Research of Dynamic Properties on the Roof in Ancient Timber Buildings H.T. Zhao, F.L. Zhang and J.Y. Xue	124
Discussions on Several Parameters of Q460 High-Strength Single-Angle Equal-Leg Compression Members T.J. Li and J.P. Hao	130
Experimental Study on Dynamic Performance of Steel Frame with Reinforced Connection Y. Wang, L.Q. Chen, L.Y. Zhang and S. Tao	134
The Finite Element Analysis of Anti-Seismic Performance for the Plate - Column -Light Steel Structure	1.40
G.Q. Xing Research of Two-Series-Mass Dynamic Vibration Absorber and it's Application on Building Vibration Control	142
G.Y. Pan and Y. Zhang	146
Experimental Study of Steel Frames with Infill Prefabricated Reinforce-Concrete Shear Walls W. Zhao and L. Qian	150
The Study on Seismic Reliability of CS Panel Structure Y.B. Li, C.F. Xu and X.Y. Wang	154
Experimental Studies on Bearing Capacity of Post-Tensioned Unbonded Prestressed Concrete Hollowed Floors X.H. Yang, C.Y. Zhou, X.J. He and Z.Q. Yang	159
The Land Subsidence Characteristic Following the Termination of Groundwater Pumping to Different Aquifers	
F.S. Ma, A.H. Wei, D.M. Ding and J. Guo	164
Construction Technology of Steel Structure Roof in Terminal Building of a Civil Airport Y. Feng, H.M. Li, C. He and C. Feng	169
Nonlinear Earthquake Response Analysis of a New RC Frame Multi-Ribbed Composite Walls Structure	172
J. Tian, Z.C. Yan and Y.Y. Cao Effect of Geometry on Stress Distribution of Spew Fillet of Co-Cured Composite Single Lap	173
Joint G.H. Zhao, Q.L. Shu and B.S. Huang	179
Experimental Research on Seismic Behavior of Exterior Frame Joints with T-Shaped CFST	1/9
Column and Steel Beam G.F. Du, C. Ma and C.X. Xu	183
Tests on Seismic Behavior of Steel-Concrete Composite Fabricated Shear Wall Specimens L.H. Cai, W.F. Li, G.W. Zhang, Q.S. Miao and H. Wu	189
Effect of Asphalt Layer Modulus on the Mechanical Properties and Service Life of Heavy Load Semi-Rigid Asphalt Pavement X.H. Wang, J.S. Sun, T. Xiao and H.R. Pi	193
The Rigid Frame-Whole Bracing Model of Eco-Composotie Wall Structure C.H. Zhang, W. Huang and D. Zhao	197
Dynamic Response Analysis of Composition Foundation with CFG Piles Z. Liu, J.G. Zhu, Z.L. Zhang, G.J. Zhu and Y.T. Sun	201
Experiment on the Hysteretic Behaviors of Light-Weight Steel Portal Frame with Tapered Members	
Q.C. Li, Z.S. Wang, M.Z. Su, X.C. Shao and L. Shen	206

Aseismic Test and Finite Element Analysis of Light-Weight Steel Portal Frame with Tapered Members	
Z.Ś. Wang, M.Z. Su, A.L. Song, Z. Pang and L. Shen	211
Study on Mechanics Behaviors of Composite and Isotropic Shells Y.P. Wu	215
Excavation Deformation Analysis of Deep-Cutting High Rock Slope L. Nie and D.P. Zhou	219
Ultimate Bearing Capacity of Composition Columns Reinforced with the Prefabricated SHSCUS Filled with Steel Tubes Subjected to Axial Load	
G.C. Chen, Z.S. Xu and Z.S. Yang	225
Mechanical Properties of Interface Between Soil-Macadam Aggregate and Concrete Pile S.J. Li, F.Z. Meng, J. Chen and H. Min	230
Stability Analyses of Western Slopes in Jointed Rock Masses for GuangYang Highway S.L. Wang, M.G. Mu, R. Wang and W.B. Cui	234
A Novel FRP-ERBG-Asphalt Concrete Pavement System for Steel Bridge Decks X.X. Zhang and C. Zhang	241
Study on the Behaviors of Steel Reinforced Concrete Cloumns B.S. Yang and Y.Y. Li	248
Stability Test on Aluminum Alloy Round Pipe for Structure Y.T. Gao, T. He and P.B. Fu	253
Characteristic Evaluation of UHPC Flexural Behavior with Mixed-Use Hooked and Straight Type Fiber	
G.S. Ryu, S.T. Kang, J.J. Park, S.H. Kim, K.T. Koh and S.W. Kim	258
The Applicable Span-Height Ratio of Steel Reinforced Concrete Cross Beam Based on Deflection Control	
J.S. Zhang, H.C. Wang, S.Z. Wu, Y. Mo, H. Huo and D.J. Wang	265
Research of Elastic Camber for Prefabricated PC Girder Q.S. Sun and T. Wu	272
Effects of Initial Geometric Imperfection on Stability of Single-Layer Reticulated Shell F.H. Zheng, J.S. Lei and W.Z. Yin	276
Synthesis of Polystyrene-G-Starch Copolymer Initiated by Potassium Diperiodatonickelate(IV)	200
L.B. Bai, X.Y. Qin, H.S. Zhang, H.C. Zhao and X.W. Ba	280
Study on Reasonable Mode Number of Composite Frame and Reinforced Concrete Core Hybrid Structures in High-Rise Buildings S.Y. Zhang, G.L. Bai and Z.G. Gao	285
The Force Impact Analysis of Steel Bridge Deck Pavement Layer Modulus and Pavement Thickness to Pavement System S.Q. Yang, P.W. Hao, L.Q. Tang and T. Liu	289
Incremental Launching Construction Analysis of Continuous Skewed Bridge with Uniform	_0,
Cross Section C.X. Li, Z.X. Luo, J.J. Li and J.R. Ou	293
Study on Mechanical Performances of Steel Truss Reinforced Concrete Transfer Beam Y. Wu, C. Yang, G.X. Li and C.M. Zhang	299
Buckling Analysis of the Copper Pipe Under the Action of Axial Impact Loading J.L. Wang	303
The Application Research of Reinforced Concrete Multi-Ribbed Hollow Composite Slab in the Road Slab Culvert	
D.Q. Zhao, Y.J. Tang, H. Li, G.F. Song and F.L. Guan	307
The Research of Earth Pressure behind the Abutment of Integral Abutment Bridge in Uniform Temperature Difference	
T.L. Yu, J.J. Wang, L.L. Tian and X.B. Hou	312
Pseudo Excitation Method Based on Multiple Degree of Freedom Modal Equation W. Guo and Z.W. Yu	317
Preparation and Characterization of Polylactic Acid Fiber Enhanced Hydroxyapatite/Chitosan Composites	
H.R. Yin, Q.X. Zu and Y. Wu	321
Fabrication and Microstructure of B ₄ C Matrix Composites by Hot-Pressing Sinter M. Zhang, W.K. Zhang, L.Z. Gao and Y.J. Zhang	326

Experimental Research on Tensile Strength of Specified Density Steel Fiber Concrete Y.K. Zhang, X.H. Li and P. Zhang	330
Uniaxial Compression Tests Research on C25 Glazed Hollow Bead Insulation Concrete Z.P. Zhang, D. Wu, F. Qiao and Z. Li	334
Out-of-Plane Quasi-Static Compression of Aluminum Hexagonal Honeycomb Cores - a Finite Element Analysis D.Q. Sun	339
Experimental Study on the Seismic Behavior of HSW Model with High Shear-Span Ratio G. Wang, Q.M. Wang and S.F. Xu	344
Lateral Performance of Light Wood Diaphragms with Different Structural Configurations under Monotonic Load M.J. He and Z. Li	349
Test Study on Seismic Behavior of New Hybrid SCCC Columns D. Wang, Y.J. Liu and Z.Y. Li	353
Experiment Study on the Frost Resistance of Steel Fiber Reinforced Concrete on the Microstructure	2.55
L. Jiang, D.T. Niu and M. Bai Effect of Freeze-Thaw on the Concrete Pore Structure Features	357
F. Qu and D.T. Niu	361
Static Performance of Reinforced Concrete U-Shaped Composite Beams Subjected to Positive Moment	
W.C. Xue, B. Zhang and Y. Wang	365
Experimental Study on Circular Hybrid SCCC Columns under Axial Compressive Load Z.Y. Li, Y.J. Liu and D. Wang	369
Fatigue Test and Research on Tubular Joints of Concrete-Filled Steel Tube Y. Diao	373
Feasibility Study on Forced Decoupling Method Analyzing Earthquake Response of Soil-Asymmetric Structure M.L. Wang, J.X. Lan, Y.H. Wang and L.Y. Zhang	377
Stability and Dynamic Analysis of the Spatial Helical Irregular Steel Sculpture Z.H. Chen, R.Z. Yan, X.Y. Yan and J.H. Yu	382
Back Analyzing Rock Parameters Based on Difference Evolution Arithmetic and Finite Element Method	
Z.P. Song, Z.C. Guo and S.B. Ren	386
Optimization Design Method of Sealing Concrete and Ballast M.L. Yang, Z.H. Zeng, F.P. Zhong and Z.H. Li	390
Numerical Simulation Research on Single Hole_unilateral Protecting Borehole Wall Blasting	
L. Niu, Z.C. Zhang, X.L. Liu, J.L. Tao and Y.G. Lu	395
The Application of New Materials in the Design F. Wu and W.P. Hu	399
Research Status of Design Theory and Application on Beam-Column Semi-Rigid Steel	
Structure Z.H. Zhang, X.P. Shu, Z.S. Yuan and Q.C. Duan	405
Experimental Study on Compressive Bearing Capacity of High Strength Concrete-Filled Steel Tube Composite Columns	410
H.Z. Kang, L. Yao, X.M. Song and Y.H. Ye Corrosion Products in Cement-Based Materials under Sulfate Partial Soaking Attack	410
K.L. Ma, W.L. Wang, G.C. Long and Y.J. Xie	415
Bridging Toughening and Fracture Energy of X-Type Fiber Reinforced Cementitious Composites	
S.Y. Zhang and M.H. Dong	419
Experimental Research on Mechanical Properties of ALC Wallboard Y.M. Yang and Y.R. Zhang	423
Corrosion of High Strength Steel Bolt Friction Type Connection Test of Performance Degradation	
S.H. Xu, X.C. Lin, B. Qiu and M. Zhang	428

Optimization Design for Mix Proportioning of High Strength and High Performance Concrete	
S.S. Zheng, X.F. Wang, H.J. Lou and Z.Q. Li	432
Tests on Mechanical Properties and Anti-Explosion Performance of Steel-Fiber Reactive Powder Concrete C.M. Song, M.Y. Wang and D.R. Wang	436
Finite Element Analysis of Earthquake Resistance Behaviors in L-Shaped Concrete-Filled Rectangular Composite Steel Tubular Columns J. Huang, S.B. Dai and J.X. Liu	441
A New Type of Cast <i>In Situ</i> Reinforced Concrete Biaxial Hollow Slab with Property of Thermal Insulation W.H. Xuan, Y. Wan, Y.Z. Chen and P.X. Wang	448
Research on Shear Properties of Top Story T-Joints in R.C. Frame Structure with Special-Shaped Columns under Low Cyclic Reversals L.L. Xiong and J.H. Wei	452
Analysis for Seismic Response of Compacted Soil-Cement Pile Composite Foundations H.H. Cui, L.Q. Zhang and H.L. Wang	456
Research on the Prefabricated Prestressed Cylinder Foundation of Wind Turbines in the Soft Soil Region	4.6.1
R.L. Ma and M.Y. Zhang The Settlement Analysis of Raft Foundation Using RFDG Program Based on ANSYS M. Li, L. Liang and X. Li	461 465
Application of FRP in Geotechnical Engineering X. Qin and L.H. Xu	469
Experimental Study on the Ultimate Bearing Capacity of Partially Overlapped CHS-to-SHS Welded N-Joints	
X.P. Shu, Z.S. Yuan, Z.R. Zhu and Y. Yao Sulfoaluminate Cement: An Alternative to Portland Cement	473
Y.J. Liu, Y.M. Xu and C.L. Geng	478
Evaluation of Multi-Layer Civil Building Structure System Based on Vague Set D. Chai and W.Z. Yan	485
The Finite Element Analysis on the Local Compression of the Concrete Filled Steel Tubular Column-Beam Joint X.L. Tang, J. Cai, Q.J. Chen, A. He and C. Yang	489
Model Test and Structural Behavior Analysis for Cable-Pylon Anchorage Zone of Cable-Stayed Bridge C.Y. Fang and Y.T. Zhang	495
Factors and Countermeasures Impacting Sound Insulation Performance of Light Steel Structure House Wall	
X.Z. Zhang and R.Y. Pang Experimental Study on Seismic Capacity of Steel Encased Concrete Composite Frames	501
D.R. Du, K. Dong, J.T. Jiang and S. Yang Experimental Study on Concrete-Filled Steel Tubular with External Octagon Steel Tube and Inner Circle PVC-U Pipe under Axial Compression	505
W.B. Yuan and S.L. Ma	511
Nonlinear Constitutive Model for Clay on K ₀ Consolidation Conditions T. Cheng	515
Experimental Research and Theoretical Analysis on Flexural Capacity of Prestressed Concrete Hollow Slabs Strengthened with CFRP R.H. Wang and J. Han	519
Study on Issues on Monitoring of the Construction of Tianjin Tower X.S. Duan, Y. Yang, Z.W. Li and Y.J. Gong	527
Support Vector Machine-Based Aqueduct Safety Assessment Q. Qu, M.Q. Chang, L. Xu, Y. Wang and S.H. Lu	531
A Simplified Method for Concrete-Filled Steel Tube Column Analysis D.G. Pan, Z. Li, J.P. Tan and H.C. Gao	537
The Finite Element Analysis of the Deep Foundation Pit Excavation and the Model Test C. Yan, R.S. Qin and H.Y. Sun	542

549
553
557
563
568
573
577
582
586
593
599
604
608
613
617
624
629
637
641
647
651
655

Theoretical Research on Base Sliding Collapse Performance of Chinese Ancient Timber Buildings	
X.C. Zhang, H.T. Zhao, F.L. Zhang and Y. Sui	660
Reliability Research of Building Fire Based on Numerical Simulation and Uniform Design S.F. Huang, Z.G. Song and B. Li	665
Seismic Research of Continuous Rigid Frame Bridge under Cantilever Construction	
Method X.Y. Tang, Q. Hu and Y.H. Yu	673
Elasto-Plastic Properties of Panel Zones and Effects on Story Drift of Steel Frames B. Guo and X.T. Peng	678
Nonlinear Dynamic Response Analysis of the Braced Steel Frame with Wedge Devices J.S. Lei, Y.S. Zou, Y.L. Wang and Q. Ma	685
Seismic Response Analysis of Long-Span Bridge under Uniform and Traveling-Wave Excitations	
K.Y. Xu, D.M. Wei and C. Liu The 3D Seigmic Pounding Effect of High Pieu Puidge Peged on OpenSees	690
The 3D Seismic Pounding Effect of High-Pier Bridge Based on OpenSees Q.L. Meng and X. Yin	695
Research of Prestressed Concrete Hollow Multi-Ribbed Composite Box Girder P. Hu, D.Q. Zhao, H. Li, G.F. Song and Y.J. Tang	705
Theoretical and Numerical Analysis on the Seismic Response of Underground Structures in Existence of Isolators	
J.C. Liu and Y. Huan	710
Temperature Field Simulation and Analysis of the Frame Column under Fire Based on	
ABAQUS F.B. Li, W.B. Hu and Y.P. Wu	715
Research on Interaction Mechanism between Segmented Lining Structure and Surrounding Loess under Activing Ground Fractures	720
F.T. She, S.J. Shao, J. Fang and N.F. Xu Desorption Experimental Analysis and Modeling of Drying Shrinkage and Relative	720
Humidity in Non-Saturated Concrete L.Y. Meng	725
Cellular Automata Modeling of Fire Spread Based on Post-Earthquake Fire Risk Assessment of Urban Area X.J. Meng and J.P. Zhao	732
The Fire Safety Analysis of Semi-Underground Public Building J.W. Yan and S.P. Zhang	739
A General Chain Equations of the Waterhammer in Liquid-Filled Piping Systems K. Yang	745
An Innovative Calculation Method of Trajectories of Rockfall	
Z.A. Wei, Y.L. Chen, B. Zhu and H.R. Liu	752
Modeling of the CFT Column under Cyclic Load Based on OpenSEES L. Li and S.S. Zheng	761
Structural Vulnerability Analysis Based on Beta Distribution Q.Y. Wu, H.P. Zhu and J. Fan	765
Study on Safety of the Fastener Tubular Steel Scaffolding C.M. Hu, F.F. Song and X.Z. Fan	771
The Time History Analysis of the Frame Structure with Special-Shaped Columns Considering Torsional Component of the Earthquake D.Q. Xu and P. Li	777
Searching Method of Potential Sliding Surfaces in the Rock Slope by Crack Network	
Simulation Y. Zhang, D.X. Nie and J.D. He	781
Creative Design on Portable Emergent Building after Earthquake H. Peng, N. Bu, L. Gu and Z. Xu	785
Behaviors of Long-Term Exposure Concrete to Sulfate Solution S.B. Zhao, T.C.K. Molyneaux, D.W. Law, Y. Li and L.Y. Pan	790
Application of Prestressed Concrete Box Girder with Steel Plate and Concrete Composite	
Strengthening Z.Y. Yuan, X.W. Shi, W. Feng, L.L. Ke and L. Chen	795

Effect of Filled-Concrete Height on Ultimate Strength and Ductility of Steel Tubular Bridge Pier with Partial Filled-Concrete	
Z.F. Wang, Q. Wu and W.N. Sui	803
Analysis of Base-Isolation Building System G.W. Ni, D.L. Jiang, J.R. Qi and J.N. Chen	807
Engineering Geological Characteristics of one High Cut Slope in Chongqing Wanzhou H.Y. Liu, D.W. Lv, Y.J. Cui, H.G. Zhao and S. Han	814
Experimental Study on Stiffness of Dougong in Chinese Ancient Buildings Y. Sui, H.T. Zhao, J.Y. Xue and X.C. Zhang	819
Study on the Optimum Moisture of Cement-Solidified Sea Silt Road Embankment Adding Phosphate Tailing X.Q. Zhao, Y.D. Sun and Y.H. Zhang	823
Comprehensive Mathematical Evaluation on Risk of Debris Flow F.W. Liao, X. Liu and P. Liu	829
Experiments Study on Freezing Injury of Railway Subgrade Regulated Using Injecting Salt Method	
T.S. Ni Analysis on Load Bearing Capacity of Column with Different Diameters of Steel Tube	834
under Horizontal Displacement Y.F. Xu, L. Zhang and J. Song	838
Seismic Damage Analysis of Factory Buildings in 2008 Wenchuan Earthquake W. Wang and H.T. Guan	842
The Seismic Dynamic Response on the Steel Spatial Arch Truss with 60 m Span and 0.4 Rise-Span Ratio	
H.W. Li, J.J. Guo and J. Liu	850
Green Building Economic Model and Empirical Evaluation M.Z. Gao, H.M. Li, H. Tang and Q.N. Cao	854
Construction Simulation Analysis for Suspend-Dome Structure of Pingshan Basketball Gymnasium for Universiade 2011 Shenzhen M.L. Meng, B. Wu, X.Y. Fu and C. Sun	859
The Seismic Design of Staircase in Frame Structure P.C. Zhang and Q. Yuan	865
Meso-Level Analysis on Bending Properties of Steel-Polypropylene Hybrid Fiber Concrete Y.F. Zhang, H. Liu and L. Li	869
Study on Settlement of High Fill Embankments on Rock Slope under Complicated Stress Conditions	
S.C. Liu	874
Seismic Behavior Study on Improving Beam-Column Connections in Portal Frames Y.P. Chu, Y. Yao and D.B. Li	881
The Reliability Research of Steel Plate Shear Wall Based on APDL H.R. Huang, Y.J. Zhu, J.Y. Guo and X.Y. Feng	885
Numerical Simulation of Shield Tunnel Crossing Masonry Structure Building with Various Degrees	
G. Wei Evaluation of the Impact Formulae for Rigid Projectile Striking on Concrete Target	889
H. Wu and Q. Fang	894
Basic on Ansys to Study Frame Beam Supported one on Beam and the other on Column F. Song and S.J. Wang	901
Experimental Study of Post-Fire Bearing Capacity of a Profiled Sheet-Lightweight Aggregate Concrete Composite Floor P.X. Sun, X.T. Wang and H.L. Sun	906
Research on Fire Behaviour of a Lightweight Aggregate Concrete Composite Floor H.L. Sun, X.T. Wang and P.X. Sun	911
Random Earthquake Response Analysis of Eccentric Structure with Base Isolation A.P. Wang, P. Chang and P. Zhang	915
Ground Motion Analysis in Nonlinear Soil Site with Random Media	
Y. Chen and J. Li	920

Transverse Vibration Analysis of Buried Pipeline under Earthquake Interaction T.Y. Hao	926
Analysis of Deformation for PC Thin-Wall Box Girders Exposed to Fire W. Hou, S.H. He, C.J. Wang and G. Zhang	930
Analyze of the Seismic Behavior of Wind Energy Building X.J. Guan, G.P. Chen and Y. Yang	934
Comparative Study of SDOF Response between Viscous Damping and Complex Damping Model	
R.X. Chen, L.Y. Peng and W.M. Yan	938
Calculation on Crack Resistance Capacity of Abnormal Interior Joints in Reinforced Concrete Frame Structures D.Y. Lv, N. Li and R.Z. Zhai	942
Basic Principal and Design Methodology of Progressive Storey Collapse Resistance in a New Type RC Twin-Frame Structure H.H. Jia and D.M. Wei	946
Formation Mechanism and Stability Analysis of Bei'an-Heihe Expressway Expansion Project K178 Landslide H. Jiang and W. Shan	953
Study on the Testing Auxiliary System of a Large Scale Centrifugal Shaker	933
Y.Z. Wang, X.M. Yuan and R. Sun	959
Analyses of Nonlinear Models under Low-Cyclic Loading of SRHSHPC Frames S.S. Zheng, X.Y. Shang, W. Wang and L. Li	963
Analyses of Performance-Based of Reinforced Concrete Beam H.T. Wan and H. Yuan	967
Influence of Soil-Pile Interaction on Seismic Mitigation Effectiveness with FPB for Curved	
Girder Bridge X.J. Qi and S.G. Chen	971
On the Load of Reinforced Concrete Column by Seawater Corrosion Y.Z. Lin	975
The Solute Redistribution during Solidification of Al-Si-Mg Alloys Z. He, H.B. Zhou, Z.Y. Zhang and L.Y. Li	979
Seismic Response Analysis of Large Liquid Storage Tank Considering Fluid-Structure Interaction	
L.X. Zhang, X.J. Tan, J.P. Liu and J.R. Zhong	983
Study on Dynamic Characteristics of Long Span Continuous Bridge from Construction to Completion Constructed by Cantilever Method Based on Perspective of Earthquake Resistance	
Y.G. Zheng and W.C. Yuan	988
Probability Model of Beijing Residentials' Fire Load Y.C. Liu, D.D. Liu, J.P. Wang, W.H. Chen and B. Zhao	993
Numerical Study on Concrete Filled GFRP-Steel Tube under Cyclic Loading C.Y. Zhu, Y.H. Zhao and D.S. Wang	1003
Finite Element Analysis of Vertical Stress's Effect on Seismic Performance of Autoclaved Aerated Concrete Block Masonry Walls	
H.G. Wu, J. Zhao and J. Gu	1010
Simulation Study of the Oil Tank under Seismic Loads J.L. Wang	1014
Studies on Design Plan Optimized Evaluation Method of Old Industrial Building Regeneration Utilization Project R.Q. Yan, H.M. Li, X. Chen and W. Tian	1018
Fuzzy Control on Large-Span Spatial Structure Dynamical Response X. Zhao, S.L. Wang, X.C. Zhao and J.B. Dai	1023
Comparison of Blind Detection of Liquefaction by Suzuki and SY Methods R. Sun, F.H. Tang and L.W. Chen	1030
Free Vibration of Elastic Timoshenko Beam on Fractional Derivative Winkler Viscoelastic	
Foundation Q.F. Yan and Z.P. Su	1034
Research on Debonding Formula Model of RC Beams Strengthened with CFRP Sheets A.H. Bao, Z.Y. Qiu and P. Wang	1038

The Survey and Prevention of Bridges and Culverts Flood Hazard in the Eastern Mountainous Areas of Jilin Province	
W.H. Wang and W.D. Zhao	1042
The Anti-Seismic Analysis of the Lock-up Device on the Arch Bridge L.J. Kong, Y.B. Chen, P. Li and Q.B. Jiang	1047
Landslide Hazard Zoning for Highway in China Base on Remote Sensing and GIS F.C. Wang, M.J. Dou and W. Wei	1051
Seismic Response Analysis of a High-Rise Tower with Complex Structure L.Y. Bao, S.Q. Su, J.F. Hou and H. Guo	1058
3D Numerical Simulation for Reinforcement of Jijiata Tunnel, Liulin County, Shanxi Province	
C.L. Zhang, S.J. Huang, J.T. Guo and T.L. Li	1064
Model and Analysis of Dynamic Characteristic on Cable-Stayed Bridge with FEM L.F. Liu, X.X. Niu, W. Yu and X.M. Liu	1069
Research on Rust Bilge Cracking of Reinforced Concrete Pier in Marine Environment X.F. Luo and G.H. Xing	1073
Research on Supporting Techniques of Deep and Large-Section Coal Roadway Blow Thin Fractured Bedrocks	1050
K.S. Ma, M. Song and H.L. Fu	1078
State of the Art on Seismic Design and Research of LNG Tanks M. Zhao, L. Liu and S.Z. Li	1084
Simplified Design Approach for Large-Space Grid Structure Considering Fire Conditions H.Y. Yang, Y. Bai, Y.J. Shi and Y.Q. Wang	1092
Study on Displacement Ductility Coefficient of Steel Reinforced High-Strength Concrete Column	1007
S.S. Zheng, H.J. Lou, X.F. Wang and Z.Q. Li	1097
The Construction Process Simulation of a Large-Span Rhombic Space Truss Using FEM Analysis X. Yan, T.Y. Li and Y.J. Nie	1101
Influence of Tie Beams of Pier on the Seismic Performance of a Continuous Rigid Frame Bridge with Twin-Legged Piers	
Y.J. Nie, X. Yan and T.Y. Li	1105
Research on Structural Composition and Seismic of Gypsum - Adobe Wall Dwellings T.G. Zhou, C. Ma and Y. Xu	1111
The Anti-Seismic Performance of the Viscous Damper and E Shaped Steel Bearing L.J. Kong, Y.B. Chen, X.L. Ning and Q.B. Jiang	1117
The Influence of Size Effect on High-Volume Fly-Ash Concrete's Carbonation Resistance Performance	
L.F. Liu, X.X. Niu, W. Yu and X.M. Liu Finite Element Analysis of the Greenhouse Canopy Effect with Seismic Load	1121
C.J. Liu and J.L. Wang	1125
Pullout Test Study on Flexible Joint of Ductile Iron Buried Pipelines F. Gu, J.H. Zhou, H. Hai and Y.S. Song	1130
Complex with Dangerous Rock Engineering Geological Characteristics and their Reinforcement Technology Research J. Xiao	1134
Research of Impact Compaction Technology on Foundation and Subgrade in Yellow River	1134
Flooded Area K. Zhang, Z.Y. Yao, Q.S. Shang and X.G. Song	1142
The Dynamic Testing Method for Damage Diagnosis of Multi-Story Masonry Buildings F.G. Li and H. Yu	1148
Experimental Comparison of Control Algorithms for Semi-Active Control with Magnetorheological Dampers	1152
Finite Element Analysis of a Sliding Isolation Steel Structure X.Z. Zhang and L.J. Miao	1156
The Tensile Strength of Fresh Concrete after Simulated Earthquake at Magnitude of 6-8 G.H. Li, K. Wang, J.D. Wei, G.J. He, P.Z. Li and L. Sun	1160

Experimental Study on the Influences of Deffctive Concrete on Chloridion Penetration Resistance	
Y. Liu and C. Yi	1165
The Performance-Based Fire Protection Study on Fire Spread of Logistics Centers Z. Wang and S.P. Zhang	1171
The Live-Action Fire Hazard and Computer Fire Simulation Research of Large Store S.P. Zhang and W.J. Wei	1175
Fire Smoke Simulation Analysis of the Flow Characteristics in Huge Building C.J. Xu, S.P. Zhang and J.J. Zhang	1182
Influence of the Isolated Layer Damping Distribution of the Lateral-Torsional Coupling Isolated System on Earthquake Response X.Z. Li, Y.F. Xie and B. Li	1186
Numerical Investigation into Rockburst Prevention Technology in Deep-Buried Tunnels with Circular Cross-Section X.Y. Wang, Z.S. Shao and Y.M. Cui	1192
Research on Decreasing Temperature Technology of Emergency Rescue in Metro Fire Y. Li and L.X. Dong	1192
The Arch Sky Belly Arch and Arch Culvert Crack Disease Analysis of Arch Bridge L.X. Bao and X.X. Tang	1201
The Experimental Study and CFD Analysis of Vortex-Excited Vibration of the Central- Open Box Section Cable Bridge	
H.X. He and J.L. Zhou	1208
Reliability Analysis on Stability of Retaining Wall Q.G. Li	1213
Modeling and Parametric Study of Cover Plate Strengthen-Beam Flange Weaken Beam-to-	1213
Column Connection for Steel Moment Frame Y.X. Zhang, Y.P. Li, L.Y. Wang and F. Yang	1217
Research on Dynamic Performance of Concrete-Filled Steel Tubular Trussed Arch Bridge	
under Earthquake X.L. Yan, Q.N. Li, C. Gao and L.Y. Wang	1222
Elastic Performances of Short Pier Shear Wall Subjected to Lateral Loading S.M. Liu and D.S. Huang	1227
Duration Characteristics of Ground Motion Based on Wenchuan Earthquake S.N. Lu, C.H. Zhai and L.L. Xie	1231
Analysis of Collision Parameter about Collision-Prevention Device of Bridge Pier and Optimum Structural Design	1225
H. Zhang, S. Fang and H.T. Yin Influence Analysis of Reservoirs on River Health	1235
X.L. Sun, C.H. Hu and J.Q. Xie	1241
The Study of Axial Compression Ratio Impact on Steel Reinforced Concrete Pressure Twist Component	
J.M. Liu, X.Y. Xing and Z.W. Liu	1245
The Application of Equivalent Flow Model in Groundwater Resources Loss Estimate of Fractured Rock Tunnel Z.C. Liu, Q. Yang and M.L. Sun	1249
A Spectral Representation Model for Simulation of Multivariate Random Processes J.J. Luo, C. Su and D.J. Han	1253
Prediction of the Ground Settlements Induced by Shallow-Buried Subway Tunneling in the	
Loess Region D. Han, S.Q. Su and Y. Yang	1259
Bonding Mechanism of Horizontal Construction Joints C.M. Wei, H. Su, Q. Zhao and C.L. Bi	1264
Research Review of Dynamic Characteristics of Saturated Sand Pebble Soil S.Y. Wu and L. Zhu	1268
Construction Safety Evaluation Based on Extension Theory M.S. Yang and L. Liu	1273
Research on Organization Structure Adaptability of Real Estate Enterprise Based on	
Analytical Hierarchy Process and Grey System Theory Q. Li, R.Q. Chen and R. Bai	1278

Analysis and Assessment of Lishan Potential Landslide of China Y. Hong	1284
Performances Analysis of Tall Concrete Frames on the Ground Fissure Field G.Y. Fu, F.S. Zeng, M. Tian and Y.Y. Zhou	1288
Strategy Research of Landscape Construction of Green Village Settlement — Take Ansai as an Example W.H. Cui, Q.Y. Chen and Y. Li	1296
Research on Controlling Mechanism of Temperature Crack of High Performance Concrete on Freezing Shaft Lining in Special Thick Alluvium X.P. Jiang, S.L. Wang and Y.L. Yong	1300
Chapter 3: Security and Life Cycle Engineering Design of Civil Engineering	
Research on Sustainable Development of Sports Builings H.M. Li, L.X. Jia and W. Yan	1309
Inheriting the Cultural Context and Constructing the System of Urban Characteristics: A Case Study of Nanjing L. Ji and J. Huang	1313
Damage Analysis and Numerical Simulation for Failure Process of Extra-Long Pre-Stressed Concrete Beams	
J. Yuan, W.G. Zhu and M. Chen On the Real Estate Project Cost Management S.R. Liu and M.J. Li	1318 1323
Finite Element Analysis of Utility Pipe Tunnel Affected by Adjacent Deep Excavation W.M. Qiu, H.L. Zhang and G. Wang	1327
Free Vibration Analysis for Elastic Plate Resting on Two-Parameter Foundation by Coupling FEM and BEM H.Y. Xie, H. Yang and J.Q. Yin	1332
Spatial Effect Analysis on Shaking Table Tests of Subway Station Structure in Soft Ground X. Zuo, G.X. Chen, Z.H. Wang and X.L. Du	1338
The Study on Mechanical Impedance and Piezoelectric Impedance for Cantilever Beam Based on FEA Method J. Zhang, Q. Gao, J.Z. Wu and J. Tao	1346
The Optimization and Application of Riprap Concrete Technology Z.G. Yin and H.M. Li	1351
Vortex Induced Vibration Numerical Simulation of a Spring-Mounted Cylinder in Current S.M. Ai, L.P. Sun and J. Chen	1355
New High Floating Concrete Mortar Material Develop L.X. Bao and F.Y. Wang Structural Reliability and Human Error of Reinforced-Concrete Building during	1359
Construction X.X. Yuan and W.L. Jin	1365
Study on Tower's Stability and Construction Control of Basket Handle Arch Bridge when Vertically Rotating X.G. Wu and J.F. Gu	1370
Combination of Coal and Rock Uniaxial Compression Test Image Processing of CT D.M. Guo, Y. Zhang and G.H. Li	1374
Relational Study between Human Capital and Competition Ability of Construction Enterprises Y. Zhou and W. Liao	1379
Loading Analysis of Edge Members in SPSW with Opening T. Lan, J.P. Hao and H.J. Xu	1384
Crack Control Technology of Massive Concrete with Thick Foundation Floor D.H. Li	1388
Development of Foil Thrust Bearings with Simple Structure for Micro Turbines Q. Zhou, Y. Hou and R.G. Chen	1392

Study on Improvement for Seismic Behavior of Reinforced Concrete Shear Walls M.J. Chu, P. Feng and L.P. Ye	1396
Analysis on Contact Pressure Distribution and Design Model of Foundation Reinforcement E.J. Wu and W. Jiang	1402
Cellular Automata-Based Chloride Ion Diffusion Modelling of Concrete Bridge under Multifactor Coupling Action J.S. Zhu and L.K. He	1407
Research of Fractal Theory to AC-20 Asphalt Mixture Gradation W.Z. Dong and H.Z. Huo	1411
Mix Design of Compaction-Free Porous Concrete Permeable Base Y.P. Sheng, H.B. Li and B.W. Guan	1416
Analysis of Extreme Temperatures in Bridge Deck Pavements H.B. Li and Q. Wang	1420
Analysis of Boundary Layer Wind Field Statistical Characteristics and Reference Wind Pressure in Wenzhou District J.J. Wu and W.H. Shi	1424
Experimental Method of Axial Compressive Existing Concrete Columns Strengthened with Externally Bonded FRP H.Z. Kang, W.H. Ma, X.Q. Wang and Y.H. Ye	1431
Numerical Derivation of Pressure-Impulse Diagrams for Unreinforced Brick Masonry Walls	
X.Y. Wei, T. Huang and N. Li	1435
Research on the Construction of the Underground Street Passage with FLAC 3D X.B. Li, L.Y. Pan, X.B. Zhang and J. Wei	1440
Analysis of Wall Rock Settlement on Section of Super Shallow Four-Arch Tunnel R.K. Huo, Y.Z. Yao and Q.X. Yue	1446
On Innovation of the Construction Technique and Spatial Form of Large Self-Compacting Concrete Engineering — with the Science Center in WOLFSBURG, GERMANY as an Example	
B. Gao, L. Huang and M. Li	1450
Numerical Simulation for Smoke Flow of the Underground Railway Tunnel Fire L.X. Li and L.Y. Zhao	1454
Influence Analysis of Anchor Parameters on Stability of Surrounding Rock of Roadway with Rock Burst Hazard	1.450
B.Z. Yao Passarah on Space Simulation Mathods for High Bion Long Span Bus Stressed Continuous	1458
Research on Space Simulation Methods for High-Pier Long-Span Pre-Stressed Continuous Rigid Frame Bridges J.X. Zhao, W. Feng and D. Lei	1463
A Survey on Project Application of External Prestressing Technology	1.460
M.Y. Huang Pohoviors of Masonry Puilding with From Structure in Forthqueles	1469
Behaviors of Masonry Building with Frame Structure in Earthquake X.Y. Liu, X.T. Xu and Z.C. Zhao	1473
The Research of Corroded Stell-Structured Surface Characteristic S.H. Xu, B. Shi and X.L. Yang	1477
Stability of No 7 Landslide Located at Ciha Gorge under the Condition of Reservoir Water Level Rise	
Y.H. Song, Y. Wang and M.Q. Huang	1482
Steel Structure Building Market Demand and Applied Talents on Teaching Reform for the Course of Steel Structure Y.P. Chu, Y. Yao and L.L. Zhou	1487
Caisson Foundation Design for Offshore Anchorage Q. Wang, Y.G. Tan and T.S. Geng	1491
The Elastic Analysis of Finite Element to the Shell of Blast Furnace under Thermal -	1 1/1
Structural Coupling S.H. Xu, X.L. Yang, J. Li, B. Shi and B. Qiu	1495
The Shear and Durability of CFRP Reinforced Concrete Beams R.D. Ge, Z.Z. Yin and J.H. Zhang	1500
Vibration Reducing Study of Viscous Damper on Space Truss Structure R.G. Shi, J.G. Wei and C.Y. Jiang	1505

Studies on the Criteria of Post-Earthquake Building Safety Evaluation Based on Principle "Repairable Level under Moderate Earthquake"	
J.R. Ma	1509
Parameters Survey and Experiment on Steel Scaffold Components C.L. Chang and J.X. Song	1513
Experimental Study of Aerodynamic Interference Effects on Double Thin-Walled Hollow Pier in Tandem Arrangement J. Wang, J.Y. Zhao and J.X. Liu	1517
Mechanical Performance of Bridge Structures under the Random Dense Vehicle Loads B.X. Hu, J.R. Zhang, X.F. Yin and H. Peng	1521
Seismic Vulnerability Analysis of Reinforced Concrete Frames with Mild Steel Dampers J. Zhu and P. Tan	1526
Research and Statistic Analysis on Construction Loads of Multistory Frame R.C Buildings N. Zhao, C.M. Hu and W. Yan	1531
Resistance Analysis of Reinforced Concrete Structures in Construction N. Zhao and W. Yan	1535
Study on Seismic Behavior of T-Shaped Concrete-Filled Steel Tube Compound Column under Different Axial Compression Ratios	1520
Y.F. Xu, J. Song and P.J. Sun Numerical Analysis of Interlaminan Stress Distributions around Hole in Therman leatic	1539
Numerical Analysis of Interlaminar Stress Distributions around Hole in Thermoplastic Laminate G.H. Zhao, Q.L. Shu and B.S. Huang	1543
Research on Constitutive Law of UHPFRC Used in Numerical Simulation Y.H. Guo and Z.Q. Wang	1547
Research on Industrial Restructuring — Based on Low-Carbon Economy Perspective S.R. Liu and H.J. Li	1551
Experimental Study on Anti-Frozen Durability of Concrete in Saline Soil Region W.F. Jin, Y.H. Wang, G. Zhou and K. Fan	1555
Experimental Research on High Performance Concrete under Drying-Wetting Cycles in Saline-Lake Environment	15(1
W. Kong, Y.H. Wang, G. Zhou and T.H. Li A New Method of Determining the Pile-Soil Parameters G.Q. Cui, Z.R. Liu and C.G. Ma	1561 1566
Experimental Research on Earth Pressure of Double-Sided Reinforced Earth Retaining	1300
Wall J. Su and H.G. Chen	1572
Non-Dimensional Vibration of Timoshenko Beams with Axial Loads Y. Zhang, L. Chen, G.L. Cheng and Q.H. Li	1577
Shape Classification Using Multiple Classifiers with Different Feature Sets J.Y. Chen, J. Chen and Z.X. Feng	1583
Finite Element Modeling of Drying Shrinkage in Concrete Blending with Mineral	
Admixtures T.C. Wang and Q.M. Peng	1588
The Finite Element Analysis on Axial Tensile Bearing Capacity of Round Steel-Tubes Reinforced with CFRP Sheets X.L. Wang and J.J. Li	1595
Use of Fuzzy QFD in Construction Project Developing Y.H. Feng	1600
Numerical Simulation of Two-Phase Liquid-liquid Flow in a New Static Mixer Structure H.Y. Zhang and H.H. Dong	1604
System Reliability Study Based on Bearing Capacity Update and Deformation Iteration H.L. Zhu and W.B. Sun	1608
Safety Analysis on the Variable Constraint Space Reticulated Shell Structures X.L. Wang, E.P. Jin and Y.P. Zhu	1613
Experimental Study on Mechanical Behavior of Serving Prestressed Concrete Poles K.Q. Xia, X.G. Zhang, Z.P. Chen and J.M. Wang	1617

Shear Plane Found in the Interior of Soil/Rock near a Tunnel Damaged in 2004 Niigata-Ken Chuetsu Earthquake	1721
Y. Zhao, Y. Tomiyasu and K. Konagai Pseudo-Plate Method of High-Strength Steel Fiber Concrete Multi-Ribbed Slab	1621
J.S. Qiu and G.H. Xiong	1626
A Research on the Planning Strategy of Eco-Demonstration Zones in High Altitude Areas — a Case Study of Tanggula Town J. Wang, D.G. Duan and J. Shen	1632
Experiment Research on Vertical Poles Height Differences Effect of their Force Distribution in Formwork Support X.F. Cai, J.P. Zhuang and J.L. Wu	1638
Study on Stability of High Embankments on Rock Slope under Complicated Stress Conditions G.L. Ding	1642
Sustainable Urban and Space Planning Strategy Z.H. Zhang and P. Zhang	1649
Optimal Sensor Placement for High-Rise Building via Genetic Algorithms and Improved Information Matrix Criterion S.L. Zhan, F. Huang and J.Y. Lai	1653
Support Size Adjustment Algorithm for Reproducing Kernel Particle Method with Semi- Lagrangian Formulation	1660
H.Z. Luo, X.W. Liu and X.C. Huang Application of Phased Array Antenna Technique in Structural Damage Detection Y. Zhang, L. Yu, Y.J. Yan and Y. Guo	1660 1667
Detection of Early Structural Damage Using Stochastic Resonance Z.Y. Xi, Y.J. Yan, Y. Zhang and L. Liu	1672
Damage Localization of Offshore Platform Based on the Virtual Impulse Response Function Y.S. Diao, Q.L. Zhang and D.M. Meng	1676
Minimum Thickness of Welding Patches to Recover Structural Performance of Steel Pipe Piles under Compression	
X. Chen and Y. Itoh	1681
X. Chen and Y. Itoh Chapter 4: Innovation of Regional Urban and Town Planning System	1681
X. Chen and Y. Itoh	1681 1689
X. Chen and Y. Itoh Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong	
X. Chen and Y. Itoh Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province	1689
X. Chen and Y. Itoh Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province C. Wang, M.H. Huang and C.Y. Hao Reconstruct of Our Urban Community Planning System and New Study on the Realization Approach under the Low Carbon Vision	1689 1693 1697
Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province C. Wang, M.H. Huang and C.Y. Hao Reconstruct of Our Urban Community Planning System and New Study on the Realization	1689 1693
Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province C. Wang, M.H. Huang and C.Y. Hao Reconstruct of Our Urban Community Planning System and New Study on the Realization Approach under the Low Carbon Vision K.H. Yu, H. Cai and P. Zhang To Be or Not to Be — Reflection on the Full Coverage of the Regulatory Detailed Planning	1689 1693 1697 1703
Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province C. Wang, M.H. Huang and C.Y. Hao Reconstruct of Our Urban Community Planning System and New Study on the Realization Approach under the Low Carbon Vision K.H. Yu, H. Cai and P. Zhang To Be or Not to Be — Reflection on the Full Coverage of the Regulatory Detailed Planning X.W. Zheng, M.H. Huang, Y. Wang and H.Q. Cao Study on the Equalization and Differentiation Configuration of County Infrastructure — Taking the Urban-Rural Integration Planning in Xunyi County as an Example X.H. Wu and G.H. Miao The Optimization and Reconstruction of the Urban and Rural Settlements under Community Vision: A Study on Yan Chang County of Yan'an City	1689 1693 1697 1703 1710
X. Chen and Y. Itoh Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province C. Wang, M.H. Huang and C.Y. Hao Reconstruct of Our Urban Community Planning System and New Study on the Realization Approach under the Low Carbon Vision K.H. Yu, H. Cai and P. Zhang To Be or Not to Be — Reflection on the Full Coverage of the Regulatory Detailed Planning X.W. Zheng, M.H. Huang, Y. Wang and H.Q. Cao Study on the Equalization and Differentiation Configuration of County Infrastructure — Taking the Urban-Rural Integration Planning in Xunyi County as an Example X.H. Wu and G.H. Miao The Optimization and Reconstruction of the Urban and Rural Settlements under	1689 1693 1697 1703 1710
Chapter 4: Innovation of Regional Urban and Town Planning System A New Framework of Urban and Rural Planning System in Guangdong D.J. Qi and J.Y. Zhou Tentative Proposal on System Construction of the Urban Cultural Heritage in Xi'an X.W. Wang, K.C. Liu and T. You Researching the Education Facilities Planning of Central County Cities in Northwest China — a Case of Chengcheng, Shaanxi Province C. Wang, M.H. Huang and C.Y. Hao Reconstruct of Our Urban Community Planning System and New Study on the Realization Approach under the Low Carbon Vision K.H. Yu, H. Cai and P. Zhang To Be or Not to Be — Reflection on the Full Coverage of the Regulatory Detailed Planning X.W. Zheng, M.H. Huang, Y. Wang and H.Q. Cao Study on the Equalization and Differentiation Configuration of County Infrastructure — Taking the Urban-Rural Integration Planning in Xunyi County as an Example X.H. Wu and G.H. Miao The Optimization and Reconstruction of the Urban and Rural Settlements under Community Vision: A Study on Yan Chang County of Yan'an City D. Liu, Z.M. Li and X. Wang The Reconstitution of Landscape Pattern at Master Planning Level in Ankang City	1689 1693 1697 1703 1710 1714 1719

The Study on Settlement Landscape Based on Sustainable View N. Wei, J.P. Liu and L.B. Chen	1742
Traditional Living Space of Organic Update along the River of Xiangtan City N. Zou	1746
Research on the Development of Sichuan Traditional Rural Fair's Landscape under the Guidance of Tourism Development Y.Y. Jia	1750
Fuzzy Ideal Points Method In Project Construction Sequence of the Downstream of Yellow River	
Z.M. Zhou The Theoretical Study of Urban-Rural Integration of Nowaday China X. Wu and P. Zhang	1754 1759
A Game Research on the Integration between Xi'an and Xian Yang J. Zhu, P. Zhang and H.J. Sun	1763
The New Integrated Planning Concept: Planning Thinking for Wusu in City Region Perspective	1,00
X.J. Chen and C. Qin	1767
The Invalidity Analyse on Feasibility of Urban Color Planning X. Wang and L. Huang	1772
Study on Transformation Path and Planning Countermeasure of Resource-Based City Guided by New Development View H.J. Sun, P. Zhang and J. Zhu	1776
Research of Yan'an Red Base Area Architecture from 30 Years to 40 Years in 20 Century W.M. He and J. Wang	1780
Analysis of the Environmental Factors in Sustainable Residential Area Planning in China Z.N. Zhou and T. Zou	1783
Study on Urban Green Space System Planning Based on Ecological Suitability Evaluation: A Case of Luancheng City in China S.G. Shen, H. Wang, J.F. Wen, S.H. Wang and C.J. Fan	1788
GIS-Based Quantitative Classification of Neighborhood Types for Zhongshan City, China Y. Li and Y. Zhang	1794
The Application of GIS-SCENARIO Decision Method in Spatial Planning Y.Z. Wu and L.L. Wu	1798
Thoughts and Measures for the Development of the New Countryside in the Ecological Belts of Hangzhou	1802
Y. Wang and Y. Zhang Changes, Developments and Permanence — The Planning and Design of Yitang Industrial Cluster in Pizhou City	1802
W.L. Zhu	1806
A Synergy Analysis on Industry Structure and the Science & Technology Progress in Shanxi Province S.R. Liu and X.W. Wang	1810
Innovation Request and Technical Method of Urban Geography in the New Period W.H. Zheng	1815
Approach to Amalgamation of Green Spaces and Emergency Shelters — Thinking after Wenchuan Earthquake	
D.X. Hu and J. Tang The Spirit Myth of Conceptual Buildings	1819
L.J. Zhu and W.P. Hu Study on Applying Ideas of Lyben Management in Lyben Design	1823
Study on Applying Ideas of Urban Management in Urban Design L.J. Hao and Z.T. Xiao Luban Faelegies Planning Opposite Bushlem Innovation Research Person on the	1827
Urban Ecological Planning Opposite Problem Innovation Research Based on the Transforming Bridge Strategy M. Sun and J. Dong	1831
Coordinative and Harmonious Promotion of the Urban Redevelopment of Western	
Shandong M.C. Xue	1835

Burning Coal — The Value and Protection of a Living Industrial Heritage Site: Anyuan Modern Coal Mine	1020
Q. Cai and T. Yao	1839
Study on the City Integrity from the Prospect of Spatial Planning of the Marginal Areas in Harbin B.X. Xue, Z.Q. Zhao and S.J. Liu	1843
Innovation Research on Eco-Planning of Heilongjiang Coal-Exhausted Town Subsidence	
Area	1040
M. Sun, J. Li and X. Qin	1849
Research on the Residential Model of Providing for the Aged and the Habitation Environment in Xi'an on the Background of Population Aging N. Bai and S. Wu	1854
Planning Vegetation on Rural-Urban Fringes for the Green Space System of Extended Built-up Area: Strategies and Measures Z.X. Gong and Y. Deng	1858
The Evaluation on the Suitability of Public Place in Contemporary Urban Design	1030
B.X. Xue and B.S. Bi	1862
The Theoretical Value and Realistic Significance of Government Governmental Responsibility Research in Urban Planning Management	
J.F. Zhou	1867
Urban Agricultural Landscape Development Ideas on the Background of Urban and Rural Economic and Social Development	
D.R. Fu and Y.Z. Huang	1872
Application and Analysis of Archetype Coupling in Urban Design — Taking the Special Planning for the Space Layout of Xishui City, Guizhou Province for Example	1077
H.Y. Wei and W.T. Ding Link on Structure Moundalogy Opionted by Biron System. Everynla of Norming	1877
Urban Structure Morphology Oriented by River System — Example of Nanning Watertown Practice H.H. Rao and Y.Z. Huang	1885
Ecological Integration of New Ideas for Urban Tourism Space Resources — Nanning Watertown Tourism Space Resources Integration	
Y.Z. Huang and C.J. Chen	1889
Dynamic Integrated Planning System Based on Landscape Urbanism: An Approach of Sustainable Urban Landscape Planning Y. Deng, L. Cai and X.L. Li	1895
Analysis of Roles about Participating Subjects of Regulatory Detailed Planning's	
Formulation	1002
J.B. Zhao and J. Tian Pessayah on Karsan Nationality's Pural Landscane	1902
Research on Korean Nationality's Rural Landscape W. Mo and X.L. Wang	1906
Development Consultation: the Flexibility Approach Deal with the Complexity of Urban	
Development W. Dong and V. Dong	1011
W. Dong and Y. Dong New Pouts for Spatial Identity - Postavation Strategies of Landscape to Climate Change	1911
New Route for Spatial Identity — Restoration Strategies of Landscape to Climate Change Y. Wu and K. Fu	1915
Analysis of Risk of Commercial Real Estate Based on Multiple Attribute Group Decision- Making	
Y.C. Liu, W.B. Liu and M.X. Sun	1920
The Research of the Tendency of Architectural Morphological Formation of Large-Scale Sports Stadiums in Contemporary China	
S.L. Lu and K. Xing	1926
Chapter 5: Monitoring, Evaluation and Reinforcement Technique of Civil Engineering	
The Application of FBG-Based Overweight Vehicle Recognition for Existing Bridge B. Chen and S. Li	1935
Study on Numerical Inversion of Concrete Temperature Field with Cooling Pipe	
S.K. Chen and W.W. Zhang	1939

Experimental Study on Seismic Behavior of Meshwork Cold-Formed Thin-Wall Steel RC Shear Wall	
L. Chen and Z.F. Chen	1943
Buildings on the Slope Considering Effects of Uneven Settlement of Single Pile on the Structure Research L.M. Wu and Z.J. Wang	1949
Performance of Soil Pressure on the Culvert under High-Backfill Reinforced with Geosynthetics	1055
H.W. Wei, X.L. Yang and Z.H. Yu	1955
Analysis for the 3-Dimensional Time History Response of a Base-Isolated Building Structure J.X. Kang	1961
Seismic Landslides and the Environmental Impact in the Middle Reach of Daduhe River Y.S. Wang, J.F. Wu, Y.H. Luo, M. Xiao, L. Shun and Q. Qing	1965
The Relation between Structural Stress and Cladding Ice Thickness of Transmission Tower on the Condition of Vibrate J.Z. Xue, X.C. Zhi and Y.Z. Chi	1971
The Optimization Calculation Method Study on Longitudinal Lattice Girder of the Spray	
Anchor Bracing System W. Shi, X. Zhang and C. Shen	1975
Comparative Study on the Earthquake Behavior of Frame-Shear Wall Structure of Concrete Filled Steel Tubular under Conventional Earthquake X.T. Xu and X. Hu	1981
Choice of Optimum Scheme for Bridge Strengthening by Using Analytic Hierarchy Process P. Zhang and G.Y. Weng	1985
<i>In Situ</i> Inspection of Ultra Durable Concrete Using Electrical Resistivity Technique T.Y.D. Lim, B. Sabet Divsholi and S. Teng	1989
Restoration Design and Calculation of Shaft Joint in Complex Stratum X. Han, Y.L. Ren and Y. Xia	1993
Monitor and Control on Effective Prestress of Typical Tendons for Long-Span Continuous Rigid Frame Bridge Q. Guo, S.H. He and Q.N. Li	1997
Static and Fatigue Experimental Research on Reinforced Concrete Beams Strengthened with Pre-Stress CFRP Rods L.H. Xu, H. Zeng, F. Xu and W.K. Qin	2001
Prestressed Concrete Bridge Bearing Capacity Evaluation Based on Analytic Hierarchy Process and Fuzzy Evaluation Method Y.W. Li, Z.W. Sun and W.W. Song	2006
Comparative Analysis of Dynamic/Static Load Tests on Simple Supported Beam Bridge Based on Load Efficiency	
X.M. Zhang and X.H. Guo Use Performance Analysis on the Reinforced Concrete Simply Supported Beam in-Service	2011
by CFRP Reinforcing Y.C. Zhou, L.L. Li and T.J. Sun	2016
The Cause of Instability and Reinforcement of the Complicated High Slope Drawing near a Deep-Founding Pit Q.Y. Wang, J.S. Zhang and J. Xu	2022
Empirical Analysis on Sustainable Development of Xi'an X.G. Wang, T. Zhou and S.H. Gao	2027
Finite Element Analysis for Effect of Initial Load on Dynamic Characteristic of Beams J.W. Zhang, Z.G. Yang, Y.P. Wu, S.J. Zhou and J.C. Zhao	2031
Experimental Research on the Seismic Behavior of the SRC Short-Pier Shear Wall with Layered Braces Structures	20.45
W.W. Lan, X.N. Peng, X.H. Huang and Y. Lei Salastion of Pilo Testing Signals for Parallel Saismin Test	2041
Selection of Pile Testing Signals for Parallel Seismic Test J.Y. Zhang and L.Z. Chen Study of BP Network for a Cylinder Shell's Support Identification	2045
Y.Z. Luo and R.F. Tong	2050

Analysis of Cofferdam and Sand-Filling Subgrade's Slippage of Binhai Avenue C.Y. Liu, C.W. Liu, J. Ding and Y.L. Guo	2056
The Quasi-Frame-Shear-Wall Method for Reinforcement of Concrete-Masonry Mixed Structures	
J.T. Jiang, W. Liu, H.Q. Guo, S. Yang and D.R. Du	2060
Study on the Bearing Mechanism of Squeezed Branch Pile Based on BOTDR C.D. Piao and Y.Z. Qu	2065
Study of an Expert System for Safety Assessment of Soft Soil Roadbed C.Y. Liu, Z. Wang and S.S. Jin	2071
Observation and Evaluation of Subgrade's Settlement F.W. Pan	2075
Effect of Soil Conditions on the Seismic Response of Spatial Structure S.D. Xue, X.B. Luan and X.Y. Li	2079
Fracture Behavior Analyses Compared Dog-Bone Connection with Traditional Connection Y.P. Sun and Z.S. Hou	2084
Study on Wind-Resistant Design for Super High-Rise Building Envelop L. Huang and L. Chang	2089
Experimental Study on Behavior of Channel Steel Reinforced Concrete Beam under Pure Torsion	
R. Ren, J.Y. Xue, Z.P. Chen and Z.L. Mi	2094
Modeling of Tension-Stiffening Behavior of Reinforced Concrete Beams T.H. Liu, H.J. Chen, C.H. Huang and S.K. Lin	2098
Investigation of Dilapidated Houses and Analysis of Typhoon Disaster in Wenzhou District W.H. Shi and Z. Sun	2103
Subway Monitoring System Based on TM30 Georobot Research and Implementation X. Liu, S.Y. Wei, Q. Gao, Z. Qing and C.L. Ran	2109
Exploration of Height Control in Urban Historical & Culture Heritage Protection Area- Take Example of Qu Jiang New District of Xi'an H. Xie and Q.H. Zhou	2117
An Effective Combined Approach Based on GM and AR for Deformation Analysis of High-	
Rise Buildings C.Y. Gao, C.J. Pan and N. Gao	2123
Application of GIS and FEFLOW in Forecasting Groundwater Flow Field of Minqin Basin J.M. Ren, Y. Yang and X.W. Hu	2128
Analysis of Dynamic Displacement Response of Bridge with Impact of Standard Energy X.M. Zhang and K.S. Xu	2132
Analysis of Different Treatment Measures for Karst Caves of Aikou Pitch Core-Walled	
Rock-Fill Dam Base Y.T. Yang, J.H. Zhang, Z.X. Zhang and Q.W. Xiang	2136
A Study on the Safety Criteria for Dike and Slope Exposed to Vibration Y.C. Zhang, G.H. Yang and H.Y. Hu	2142
Deformation Prediction Based on Time Series Analysis and Grey System Theory D.L. Qiao and M. Zhao	2147
Treating by Self-Compensation Mud-Jack Materials for Voids Beneath Cement Concrete	
Pavement Slabs Q. Wang and Y. Duan	2153
The Capacity Assessment about Existing Reinforced Concrete Bridge with Cracks L.Q. Zhang, H.H. Cui and H.L. Wang	2157
Quality Control over Construction Process of Petrochemicals Project H.H. Jiang	2161
Research on Surface Failure Mechanism and Building Stability for Coal Mining H. Ji, X.Y. Yu and Z.X. Gao	2165
Damage Identification of a Cantilever Beam with a Breathing Crack Based on	
Instantaneous Frequency Q.F. Wang and F.L. Huang	2169
The Ultimate Shear Bearing Capacity of RC Beam Strengthened with SWR External	
Prestressing under Dead Load Level when Strengthening T.L. Yu, H.K. Han, X.Y. Li and Q. Ma	2175

Aluminizing Coating Prepared on Oil Casing Steel N80 by Low-Temperature Pack	
Cementation Y. Wang and M. Huang	2180
On Properties of Recycled Coarse Aggregate from Repeatedly Recycling Waste Concrete P.H. Zhu, X.J. Wang and J.C. Feng	2185
Vibration Analysis of Damaged Rectangular Plates with General Elastic Boundary Supports	
F.H. Xu, Y.X. Zhang, J.Z. Chen, J.B. Xu and Y. Zhou	2189
Research on Wireless Remote Monitoring System of the Durability for Large Concrete Structures S. Xu, J.Q. Yu, D.T. Niu, Z.P. Dong and P.X. Gao	2194
Study on Bearing Capacity of Beams Strengthened with Section Enlargement Method Considering Secondary Loading Process S.M. Liu, M. Sun and Q.Y. Liu	2200
The Expression of Surface Chloride Concentration in Ecological Concrete and Service Life Prediction S.F. Liu	2204
Movement and Deformation Rules of Gauss Coordinates Based on Ellipsoid Expanded Modal	
L.X. Jin, L.J. Wang and S.L. Yang	2211
Evaluate Engineering Project Risk Based on Fuzzy Set W. Zhang and L.F. Sun	2216
Nondestructive Testing and Strengthening of Old Aqueducts S.B. Zhao and S.W. Pei	2220
An Improved Direct Stiffness Calculation Technique for Damage Detection of Bending Structures	2224
Y. Yang, H. Liu and K.M. Mosalam Ultrasonic Detection Algorithm Research on the Damage Depth of Concrete after Fire J.T. Yu, Y. Liu, Z.D. Lu and P. Zhao	2224 2229
Bending Capacity of Reinforced Concrete Box-Girders Strengthened with SMPM Laminates	
T. Guo, W.H. Chen and Y.S. Song Leakage Detection and Safety Monitoring of Dam	2235
J.F. Wang, C.L. Hu, Z.X. Zhang and S.Z. Jin	2241
Sensitivity Analysis on Ultimate Load Bearing Capacity of a Single-Layer Three-Way Grid Cylindrical Shell to Failure of Member Y.H. Hou, Y. Wang and X. Hao	2245
The Role of the New Era of Construction Enterprises of Scale Analysis and its Perfect Reflection	22 13
L.M. Wang and X.K. Yan	2250
Spatial Threshold Regression Model Thinking Time Factor and Application in Excavation Displacement Monitoring Q.G. Yang, J. Liu and J. He	2255
Research on Detection Evaluation and Reinforcement Technique of Piled Wharf N. Zhuang, S. Ge, D. Chen, J.W. Li and W.J. Ye	2259
Analysis of Construction Risk Control Project for Shaft Close to Current Iron Tower H.S. Bo and H.K. Liu	2264
Finite Element Analysis of Double-Walled Steel Box Cofferdam M.L. Yang, Z.H. Zeng, F.P. Zhong and D. Chen	2268
Prediction Model for Dam Displacement Based on Decoupling Analysis Using Wavelet Packet Energy Spectrum	
L. Cheng, D.J. Zheng and Y.C. Zou	2274
Displacement Monitoring Method Based on Inclination Measurement N.H. Gao, M. Zhao and S.Z. Li	2280
Applications of Fiber Bragg Grating in Strain Measurement of Concrete Bridge X.X. Tang, X.Z. Tang, Y. Xu and W. Guo	2286
The Experimental Study and Finite Element Analysis on Deflection of RC Two-Way Slabs Reinforced with CFRP W.S. Li, X.W. Wang and X.W. Deng	2291
W.S. Li, X.W. Wang and X.W. Deng	2291

Dynamic Elasto-Plastic Analysis on the Steel Spatial Arch Truss with 60m Span and 0.1 Rise-Span Ratio	
H.W. Li, K. Li and J. Liu	2295
Damage Alarming Method Based on Statistics to a Benchmark Structure Y.S. Song, Z.G. Sun and F. Gu	2299
Study on Ground Motion Parameters of Seismic Appraisal for Existing Structures Based on Residual Service Life X.L. Zhou and Y.M. Li	2303
Rapid Detection Method of Dr Value of Large Particle Size Filter Materials in Earth Rock-Filling Dam of NuoZhadu J.F. Li, Y.X. Zhou, Z.J. Ning and Q.Q. Zhu	2309
Experimental Study on Bond Behavior between CFRP Sheet and Wood Q.F. Xie, J.Y. Xue, H.T. Zhao and J.F. Hu	2314
Research and Application of Time-Variation Analysis and Key Control Technology in Complex Steel Structures Construction Y.L. Guo, G.Y. Tian, X.A. Wang, G.D. Chen and F. Fan	2319
Effect of Initial Geometry Defects and Crane Runway Partiality on Security of Single Layer Steel Structural Workshop Y.L. Zhang, X.P. Hu and X. Zhang	2327
Cyclic Behavior of the Steel Plate Reinforce Concrete Shear Walls Built at the Aspect Ratio Is 2	2321
W. Wang, J.J. Gao and Y.C. Chen Application of Equal Strength Substitution Method on Concrete Beams Strengthened with	2333
Steel Plates H.L. Zuo, C. Zhuang and L.L. Zhu	2341
Experimental Study of Pre-Stressed Concrete Beams with Fatigue Subjoining Freezing-Thawing Circle Y.D. Zhang, R.G. Liu, Y. Chen and K. Fu	2346
Study on Cracking Reasons for Continuous Box Girder Bridge with Secondary Concreting S.P. Lu, F.L. Huang and Y.B. Wu	2351
The Analysis of Building Subsidence Prediction Based on Grey Model Combined with Radial Basis Neural Network Y. Bai, Q.C. Ren and F.K. Zeng	2359
Research on Design Reference Period and Structural Design Method J.N. He and Z. Wang	2364
The Application of the Complete Decomposition Model in Analyzing the Incontrollable Construction Cost L. Fang and X. Ma	2369
Experimental Study on Flexural of RC Beams Strengthened with Basaltic Fiber Sheets S.Y. Zhao, T.C. Wang, Z.W. Li and Z.H. Bian	2376
The Status and Prospect of Long Span Bridges Detection B.B. Zhang, W.L. Cao, H.Y. Yu and H.C. Wang	2381
Experimental Studies on Seepage Failure of the Top Stratum at a Weak Spot in Double- Layer Dike Foundations H.X. Zhou, H. Cao and W. Zhang	2387
Nonlinear Finite Element Analysis on Seismic Behavior of Concrete Filled Square Steel Tube Planar Frames X.T. Wang, Y.S.F. Ma and G.Q. Luo	2394
Modal Decomposition Solution of Lamb Wave Scattering at Step-Like Discontinuity F.L. Feng and Y. Liu	2398
Lamb Waves Signal Analysis in Structural Health Monitoring Systems N.Z. Zhao, C.T. Huang and X. Chen	2402
Application of MGM(1,N) on Concrete Temperature Prediction of RCC Dam Y.Q. Zhao and Y.P. Tong	2406
Nondestructive Test on Typical Roadway Supports of a Mine via Drilling Core and Ground Penetrating Radar J.P. Han and H.P. Liu	2411
Structural Health Monitoring of Plate Structures Using Lamb Wave Methods N.Z. Zhao, C.T. Huang and X. Chen	2417

The Construction Measure Control Technology of the Pylon of Sutong Bridge X.Y. Xie	2421
Experimental Study on Frost Resistance Durability and Service Life Prediction of Normal Cement Concrete	
S.Z. Lin, H.M. Li and H.Y. Zhang	2425
Influence of Water Repellent Treatment on Corrosion of Steel in Concrete with Chloride Ingress Z.J. Ren	2430
Modal Analysis of Brick Walls Reinforced with Concrete Wall	2430
M.R. Zhou, Q. Wang, J.P. Li and S.G. Guo	2437
Damage Detection of Historic Timber Structure Based on Cross Correlation Function Amplitude Vectors Y.F. Hou and W.B. Hu	2442
Impact of Structural Course Thickness on Heavy Load Semi-Rigid Asphalt Pavement Service Life	
J.S. Sun, X.H. Wang, T. Xiao and C.Z. Jin	2447
Assessment Method of Stress Reliability Based on Effective Prestress Testing for Existing PC Bridge L. Yan and Y.C. Liu	2452
Research on the Bending Bearing Capacity of Old RC Beam Reinforced with CFRP Sheet R.H. Wang and J. Cheng	2457
Unloading Analysis and Real-Time Monitoring of Steel Reticulated Shell in China University of Petroleum P. Deng, L. Wang, N. Han and Y. Liu	2463
Experimental Research on Ultimate Bending Capacity of Reinforced Concrete Poles in Service Period	• 4.50
K.Q. Xia, N. Wang, Z.P. Chen and M. Zhong	2468
Study on the Jacking Force of the Underpinning by Pipe-Jacking for the Historical Masonry Constructions W.X. Zhang and Y.T. Liu	2473
Dynamic Behavior Analysis and its Application in Tower Crane Structure Damage Identification	2479
S.C. Wang, R.S. Shen, T.H. Jin and S.J. Song A Dynamic Test of Fully Prestressed Concrete Beams	2478
Y.T. Zhang, Y. Zheng and H.J. Li	2483
Study on the AE Characteristics and Wave Velocity of Concrete during the Total Failure Process	2401
X.D. Zhao, J. Liu, S.C. Cao and S.D. Xu Optimal Design of Foundation Pit Dewatering Based on Objective Functions and Numerical	2491
Analysis	
Y. Xu and Y.Y. Yan	2495
Numerical Simulation of Creep Deformation for Large Section Tunnel in Soil with Visco- Elastic-Plastic FEM S. Liu, T. Liu, B.Z. Liu and Z.C. Dong	2500
Ground Settlement of Buildings Caused by Foundation Pit Excavation: a Case Study X.M. Li and Y.G. Chen	2504
Constitutive Model Identification of Rock Based on Artificial Intelligence S.J. Sha, X. Hao and S.H. Zhai	2509
Numerical Analysis of Damage for Y-Shape Tunnel D.M. Lin, Y.J. Shang, G.H. Li and Y.C. Sun	2517
Numerical Analysis of the Influence of Tunnel Construction on High-Voltage Transmission Tower	
H.L. Zhang, J.S. Yang and Y.H. Yang	2521
Transportation Matching Design of Earth Pressure Balance Shield in Medium Distance Tunnel	2525
Y. Jia, L.C. Yang and J.G. Liu Coupled Numerical Analysis of Tunnel Exceptation in Seturated Soft Clay under High	2526
Coupled Numerical Analysis of Tunnel Excavation in Saturated Soft Clay under High Groundwater H. Yuan, H.T. Wan and Z.L. Zhao	2533

Coupled Mechanical and Hydraulic Analysis of the Effect of a Front High Hydraulic Conductivity Zone on Shield Tunnelling	
J.H. Song, L.C. Miao and F. Wang	2537
Analysis of Pipe Pile-Pile Cap-Superstructure Ground Motion Response C.Y. Liu, M.F. Han and D.K. Sun	2541
Mechanical Performance of Settlement-Reducing Pile Foundation with Cushion H. Zhang and M.L. Shi	2545
Test Study on Effective Reinforcement Depth of Dynamic Compaction and Filling Replacement	
W. Li, C.X. Zhang and P.X. Sun	2550
Experimental Study on Compression and Rebound Characteristics of High Liquid Limit Clay of the Yellow River Alluvial Plain Z.R. Zhao and H.X. Yang	2554
Experimental Study on Compaction Characteristics of High Liquid Limit Clay of the Yellow River Alluvial Plain and its Subgrades Filling Technology H.X. Yang	2558
Numerical Modeling of Affection of Foundation Pit Excavation on Metro Tunnel J.S. Ding, Y.Q. Xian and T.J. Liu	2562
Analysis of Parameters Sensitivity to Mechanical Properties of Large Section Tunnel in Soil S. Liu, T. Liu, B.Z. Liu and Z.C. Dong	2567
Model Test Study on the Effect of Horizontal Load on the Vertical Bearing Capacity of Disk	
Pile C.Y. Lu, J.J. Li and F.L. Meng	2571
Analysis on Dynamic Transfer Characteristics of Low Geosynthetic-Reinforced Embankments Supported by CFG Piles Subjected to High-Speed Railway L.L. Fu, Q.M. Gong and Y. Wang	2575
Study on the Simulated Testing on Repairing Drainage Pipe of Connecting Passage of Metro Tunnel with the Method of Liquid Nitrogen Freezing Y. Zhang, F.T. Yue, R.J. Shi and L. Lu	2581
The Finite Element Model Determination in the Loess Regions under Subway Vibration	
Loads Z.B. Meng, S.C. Cui, T.F. Zhao and L.Q. Jin	2586
Chapter 6: Geotechnical Engineering and Underground Space Structure	
Power Gaining in Modern Nantong Planning H.Y. Yu	2593
Study on the Features of Community Supporting System for the Elderly at Home in Beijing- through a Comparison on Three Communities	
F. Xu A Surveying Method Even from Domogo to Ancient Building Board on the Oudinary Digital	2597
A Surveying Method Free from Damage to Ancient Building Based on the Ordinary Digital Camera J.W. Wang, Q.Y. Guo and Y.J. Sun	2602
National Cultural Fusion and Green Building — the Study of some Old House in Nanning Y.L. Gu	2607
In-City Villages, an Inharmonious Factor in Chinese City Y.W. Na, Z.M. Li and H.B. Zhao	2611
The Application of Traditional Symbols in Modern Architecture Q. Liu, J. Chang and N. Shi	2617
Experimental Study on Reasonable Distance of Tunnels with Small Spacing X.M. Wen, J.H. Yang and H.H. Zhu	2621
Numerical Analysis on Vertical Structural Stability of Floating Drilled Shaft during Sinking J.M. Liu and C.B. Wang	2625
Study on Formative Mechanism and Preventive Measures of Rammed Earth Wall Cracks Y. Zhang, X. Gao and D.J. Zhao	2630

The Test Study of Genetic Creep Kernel Function of Artificial Frozen Clay and its Parameters	
B. Lin, Z.B. Chen and T. Ma	2634
Architecture Concrete Mesostructure Analysis Based on CT Image Fracture Process L. Zhao, C.H. Li, F.N. Dang and D.F. Chen	2638
Reliable Analysis and Study of Lining Structure of Tunnel in Loess Areas Z.L. Niu and Z.P. Song	2642
Research on Construction of Loess Cave Y. Zhang, P. Zhang, X. Gao and S.H. Yang	2646
Precise Calculation and Visual Model for Complex Engineering Earthwork L.Y. Wen, Y. Zhang and D.X. Nie	2650
Computation of Jacked Pipe Pile Side Resistance Based on Time Effect J.T. Wang	2657
Optimization on Excavation Design with VE Method H.Y. Chen and H.W. Tong	2661
DDM Analysis of the Effect of Non-Linear Structural Plane on <i>In Situ</i> Stress Field K. Li, Y.Y. Wang and X.C. Huang	2667
3D-DDM Simulation of Crack Propagation of Non-Linear Deformation Structural Plane K. Li, Y.Y. Wang and X.C. Huang	2673
Reliability Analysis of Plate on Elastic Foundation X.G. Kong and J.Q. Liu	2679
The Experimental Investigations of the Deep Artificially Permafrost Constitutive Character B. Lin, T. Ma and Z.B. Cheng	2683
Analysis of Single Pile Settlement in Layered Soils Based on Shear Displacement Method G.H. Fu, L.M. Wei and H. Zhou	2688
Frequency Response of a Fractional Derivative Viscoelastic Type Lined Tunnel with Partial Sealing	
H.X. Gao, M.J. Wen and R.X. Li	2692
Three-Dimension Rheological Model and Parameters Solving for Unsaturated Soil G.F. Tian	2698
Analysis of Application and Development of Diagram in Architecture Creation M. Wu and Z.L. Ma	2702
Study on Vertical Bearing Capacity and Time Effect of the Jacked-in PHC Pipe Pile in the Cohesive Soil Area	2707
H.L. Zuo, L. Wang, H.Y. Gao and L. Guo Numerical Analysis of Metro Station Construction by Large-Diameter Shield and Pile-	2706
Beam-Arch Method D.Y. Ding, X.R. Yang, W.D. Lu, W.N. Liu, M. Yan and A.M. Li	2711
Model Test Research of the Influences of Rock-Fall Impaction on Deformation of the Cut-	
and-Cover Tunnel Structure Y.S. Wang, J.M. Zhao, J.H. Tang and G.Q. Li	2716
Research on Application of Seismic Piezocone Penetration Tests in Pile Foundation Q. Cao, H. Chen and F.B. Chen	2722
Comparative Analysis of Schemes for Metro Station Built by Enlarging Large-Diameter Shield Tunnel	
M. Yan, X.R. Yang, A.M. Li, W.J. Wang and D.Y. Ding	2731
Study on Mechanism of Migration and Outburst of Natural Gas in Tunnel B.L. Zhu	2736
A Semi-Analytical Solution of Single-Phase Elastic Foundation Three-Dimensional Static Characteristics C.Q. Cao, C. Gao and H. Li	2740
Analysis of the Design Method of Shield Tunnel Lining Based on the Characteristic	2710
Parameters L.X. Li, X.L. Geng and M. Li	2744
Numerical Simulation Study on Size Effect of Dynamic Properties of Coarse Materials G. Yang, Q.Y. Gao, D.Q. Gao and Y.C. Liu	2749
Analysis Again for Earth Pressure Calculation Theory Considering Displacement Effects T.H. Yang, H.J. He and X.C. Gong	2755

Computing Method of Elastic Foundation Beam by MATLAB and its Application Q. Wang and L.Y. Tong	2760
Test Methods of Soil Micro-Mesostructures Q.Z. Hu, F. Shuai, G.L. Tao and Y.P. Zhou	2764
Influence of Ground Structure on the Seismic Response of Underground Subway Station in Soft Site H. Long, G.X. Chen and H.Y. Zhuang	2769
Analytical Evaluation of Lateral Displacement of Cemented Soil Retaining Wall for Excavation	
H.Y. Xu and L.Z. Chen	2776
Experimental Study on Laterite Eroded by Alkaline Materials H.S. Yang, H. Wei, Y.L. Yang, J.Y. Li and X.L. Yin	2781
Controlled Blasting for Subgrade Near Bridge Abutment X.X. Yang	2787
Effects of Underground Structure on Acceleration Response of Site C. Sun and Q. Wang	2791
Security Control Method of Loading for Surcharge Preloading Based on the Stress Path H. Hu, Y. Li, Z.L. Dong, Y. Luo and G.X. Zhang	2795
Yield Design of the Reinforced Embankment B. Zhang and X.M. Wang	2804
Calculation Method Comparative of Vertical Stresses under Embankment H.B. Xiao and G.L. Jiang	2808
The Mechanical Behaviors of the Embankment Filled with EPS Composite Soil H.M. Gao, G.X. Chen and Z.H. Wang	2813
Quantitative Assessment of the Disturbance Factor in Hoek–Brown Formulas G.J. Luo and W.X. Fu	2819
Stability Analysis of Highway Tunnel Portal Slope in Shiyan Area S.L. Liu, W.G. Zhao, Y. Zhang, H.J. Gao and F.W. Fu	2824
A Hoek-Brown Criterion Based Reliability Analysis Method for Slope Stability and its Application X. Zheng and W.X. Fu	2828
A Viscoelastic Analysis on Saturated Axial Symmetrical Problem B. Zhang and Y.H. Zhao	2835
The Application of Cast-in-Place Pile in Fanhe Harbor Bridge B. Tang, Y.G. Liu and X.X. Zhang	2839
3D Analysis on the High Rock Slope Stability of Ningde Nuclear Power Plant, Fujian Province	2843
C.L. Zhang, Y.G. Zhang, X.W. Zhang, X.N. Deng and T.L. Li Effects of Groundwater on Chemical Grouting in Geotechnical Medium	20 4 3
T.C. Han and M.H. Tan	2848
Research on the Dynamic Responses of Shallow-Buried Depth Tunnel under the Action of Rayleigh Waves	
H. Xu, T.B. Li and C.W. Yang	2852
The Effection of Stress Path on the Rock Relaxation Area of Large-Section Tunnel Z.X. Yan, Y.G. Fang and B. Wu	2859
Top-down Excavation of a Metro Station in Soft Clay Y. Lu and Y. Tan	2866
Study on the Vertical Rational Structure of Tunnel Lining in the Fault-Rupture Zone D.W. Li	2870
An Exploratory Study on Influence of Metro Works on Adjacent Tree Growth Q. Zhuang, G.G. Wang and S.W. Li	2875
Shrinkage Induced Tension in Reinforced Concrete Struts for Retaining Large-Scale Excavation L. Li	2880
Experimental Study of Liquefaction Resistant Characteristics of Remodeled Clayey Sands Y.L. Wang, Z.Y. Li, R. Sun and X.M. Yuan	2887
Experimental Study on Shear Strength of Intact Loess at Different Stress Paths S.Q. Su, B.T. Deng, J.F. Hou and Z. Lv	2891

Experimental Studies on Explosion Effect in Typical Cavity Underground F. Han, H. Zhang, Y. Hu and X.Y. Bai	2895
Analysis on Parameters in Duncan-Chang Constitutive Model B. Zhang	2900
Preliminary Analysis of Correlation between Ground Response and Subsoil Softening L.W. Chen, X.Z. Ling and X.M. Yuan	2904
Study on Construction Blasting Vibration Control and Effect of Space Coupling of the Large Cavern under High Crustal Stress S.X. Lei and B. Gao	2908
Pile Foundation Analysis of Ground Motion Transfer Law C.Y. Liu, D.K. Sun and M.F. Han	2915
Main Points about Blasting Demolition of a Building at Lin'an J. Hu, Z.K. Xin, G.C. Liu and X.P. Tang	2919
Monitoring Analysis of the Underground Cavities in Guandi Hydropower Station during the Construction Period C.Y. Gao, J.H. Deng and F.L. Meng	2925
Calculating Method of Active Earth Pressure behind Rigid Retaining Wall Based on Pseudo-Dynamic Theory K.H. Wang, D.H. Wu, S.J. Ma and W.B. Wu	2932
Study of the Influence of Sediment Properties on Complex Impedance at the Head of Rock-Socketed Pile	2752
K.H. Wang, W.B. Wu, D.H. Wu and Z.Q. Zhang The Research on Shallow Tunnels Construction Technology	2939
F.W. Pan Analysis on the Development Trend of the Longitudinal Cracks During Tunnels	2945
Construction Based on the Strength Reduction Theory X.Q. Gao, G. Rong and Y.Q. Zhu	2949
Earth Pressure Analysis on Subway Deep Excavation near Arch Bridge Abutment Y. Xu, Z.S. Liu and W. Zhao	2955
Study on Unsaturated Mechanism of Loess Compaction Q.F. Lv, J.W. Zhao, S.X. Wang and Y.X. Zhao	2960
Rapid Consolidation Behavior of Dredged Clays at High Water Content Y.P. Cao, J.W. Ding, X. Bian, F. Ji and G.Z. Xu	2966
The Overall Design of Qingdao Jiaozhou Bay Subsea Tunnel C.Y. Song and S.M. Zhou	2971
Chapter 7: Construction Technology of Large Complex Structure	
The Study of Architectural Theory of Promote Neighborhood Interaction W. Wang and J. Ma	2979
Regional Earthquake Disaster Macro Risk Assessment Model Research J.L. Li, J.Y. Su and X.Z. Li	2983
Primary Research on Inheritance and Innovation of Hehuang Vernacular Residence in Qinghai	2007
Y.B. Jin, J. Wang and W.H. Cui Cultural Continuity of the Traditional Elements in Architecture X.R. Zhang	2987 2993
The Exploration of Regional Characteristics of Architecture Based on Historical Context Inheritance and City Characteristics Shaping	2993
Z.X. Li, L.L. Zhou and X.Z. Luo The System of Evaluation Indicators for Urban System Planning	2997
L. An and P. Zhang	3002
Character and Social Interpretation of Local Architecture in the South of Shaanxi J. Yan and J. Wang Simulation Analysis of Congrete Tomporeture and Stress of Blant Elbayy Section of Sluice	3006
Simulation Analysis of Concrete Temperature and Stress of Plant Elbow Section of Sluice Dam S.K. Chen and L.X. Guo	3011

Study on the Critical Height of Homogeneous Clay Slope Y.N. Jiang	3015
Study on Bearing Capacity of Cylindraceous Double-Concrete Shaft Lining Y.L. Ren	3022
Mathematically Modeling for a Nautilus-Shaped Building P.C. Zhang, Y.X. Gu and S. Zhao	3028
The Erection Technology of Pile Foundation Construction Platform for the Sanmenkou Cross-Harbor Bridge D.G. Li and J.P. Chen	3032
The Application of Virtual Reality Technology in Integrally Migration Construction of a Memorial Archway Y. Zhang	3036
A Study on the Construction Techniques of an Open Cut Tunnel Annexed to an Existing Electric Railway While Assuring Safe Traffic X.M. Xie	3045
Study on the Complete Equivalent Initial Imperfection of High Formwork Supporting Frame with Pulley-Clip Style W.J. Yang and Y.D. Yang	3052
Chapter 8: Infrastructure Construction Management and Sustainable Urban Development	
Design and Application of Comprehensive Development Level of the Construction Industry Model Based on SPSS in Shandong, China X.H. Song, Y.T. Gu, J.J. Sun, C. Wang and X.J. Cao	3059
Strategy Researches on the Consultation Institute Development J. Zhang, H.M. Li and C.Y. Yuan	3063
The Development of Construction Management System on Architect View in Our Country S.H. Chen, H.M. Li and X. Ma	3069
Discussion on the Supplying Merchanism of the Supporting Public Facilities of the Urban Edges Residential Area Y. Peng and Y. Chen	3074
Research on Supply and Demand of Xi'an Real Estate Market Z.J. Meng, T. Zhou and S.H. Gao	3078
Research on Xi'an Real Estate Market and National Economy Based on Spectral Analysis H. Tang, H.M. Li and T. Zhou	3083
Study of the Rural Infrastructure Project Evaluation Index System Based on Sustainable Development	
Y.X. Hu, Y.X. Sai, H.M. Li and W. Tian A Study on the Evaluation of China's Real Estate Business Performance — Based on	3088
Modified TOPSIS Method Y. Zhou and J.Y. Liu	3093
Study on Project Management Maturity of Real Estate Enterprise Y.N. Wang	3098
How to Use Lean Construction to Control the Implicit Quality Costs in Construction Projects P. L. Shoo, Z. Chen and F. Wong	3102
B.L. Shao, Z. Chen and F. Wang Derivation of Geometrical Nonlinear Stiffness Matrix for Space Beam Element W.S. Wang and G. L. Bao	3102
W.S. Wang and G.J. Bao Public Transportation Dynamic Guidance Model and Algorithm L. Zou and L.X. Zhu	3113
Exact Solutions of Stiffness Matrix for Curved Beams with Pinned-Pinned Ends X.F. Li, Y.H. Zhao, C.Y. Zhu and C. Chen	3113
Model Test Study on Vibration Transferring of Dynamic Compaction and the Measures of Reducing Vibration	J11/
Q.J. Meng, W.H. Ma and J.S. Qiao	3121

The Contradictions Researches of Urban Housing Demolition with the Perspective of Interactive Justice Theory	
M.S. Yang and L. Zhang	3127
Analysis of Rutting Change Rule on Asphalt Pavement Overlay Z.Y. Yao, L.J. Zhou, Q.S. Shang, J.M. Guo and N. Wang	3131
The Supporting Conditions of Finance-Construction on Consignment Mode in China Based on PPP X.C. Hou	3137
Solution of Slope of Simple Frame without Force in one Direction by Principle of Conversion Method X.J. Yu	3141
Application of Structural Lightweight Aggregate Concrete in the Pearl River Delta G.F. Zhu and H.Z. Cui	3145
Research on Applying the Total Quality Management to Implicit Cost Control in Construction Projects	21.50
B.L. Shao, F. Wang and Z. Chen	3150
On the Application of Design of Urban Public Environmental Facilities in Natural Disasters X. Li, B.N. Wu, Q.Y. Chen, J. Wang, Y.Y. Shen and C.J. Liu	3155
The Analysis of Xi'an Real Estate Investment's Contribution on Regional Economic Development C.H. Zheng and W.J. Li	3159
The Fault Diagnosis of Tower Crane Based on Genetic Algorithm and BP Neural Network S.C. Yuan, J.Q. Shang, X.Y. Wang and C. Li	3163
Force Characteristic Analysis of Overlying Stratum Based on Elastic Foundation Beam	
Theory L. Wu, M. Li and M. He	3167
Research on Analysis and Control of Seepage Failure in Foundation Pit Y.G. Shen, X.Q. Li, N.J. Du and Z.F. Shi	3171
Safety Risk Assessment of Highway Special Maintenance Project Based on BP Neural Network	2175
W. Tian, H.M. Li, R.Q. Yan and Y.X. Hu	3175
Fuzzy Probability Method-Based Risk Assessment of International Engineering Project Z.J. Liu and Y. Kong	3180
Calculation and Analysis of Ecological Footprint on Cities of the Poyang Lake Ecological Economic Zone Y.X. Sai, J.G. Cai, H.M. Li and W.R. Wang	3184
The Subjects of Building Fire Risk Management and Analysis of their Correlation Y. Huang, H.M. Li and B. Yang	3192
Analysis on Statistical Data of Registered Constructor Test Q. Li and H.M. Li	3196
Problems and Solution of Practice Qualification Institution of Constructor in China B. Yang, H.M. Li, Y. Huang and X. Tan	3202
Study on the Mechanical Properties of Rubber Gasketed Joints in Segmented Pipeline Y. Han, J.F. Duan and Y.Y. Qin	3206
Research of Resource-Exhausted Mining Site Regeneration H. Zhang, D.H. Wu and W.J. Yang	3210
Research on Financing Patterns of China's Public Sports Venues L.X. Jia and D.W. Wang	3217
Influence of Different Anode Materials on the Treatment of Azo Dyed Wastewater by Electrochemical Method Y.H. Zhao, D.C. Jin, X.Y. Cang and J. Li	3221
Dynamic Robust Pricing Model of European Call Option and Empirical Research in Fractional Market	
H. Zhang and W.Y. Meng	3226
Numerical Simulation of Interface Softening for Large Size Direct Shear Test Z.Y. Xiao, W. Xu, Y.S. Deng and F. Tu	3230
Study on the Value of Serial Properties: Taking Tianjin's Beitang Battery as a Case M. Yan, H. Ji, N.N. Aoki and S.B. Xu	3236

Factors Influencing the Strength of Alkali-Activated Slag Cement Z.J. Zhou, H. Li, Q. Song and B.J. Shen	3240
Chapter 9: Continuity of Architecture History Context	
Cantilever Structures' Environment Symbiosis Technologies in Mountainous Housings J. Tang	3249
Analysis on the Space Remodeling of the Old Public Buildings Courtyard Y.B. Lei and F.H. Lu	3254
Study on the Evaluation Principle of Xi'an Urban Rail Transit Network from the Perspective of Historic City Conservation H.Q. Chang	3258
Study on Source Locating Technology of Visible Fire Detection in Large Space Building Z.F. Ma, H.Q. Wang, D.Y. Zhao, Y. Hu and C. Luo	3262
Changing Traffic Mode and its Impact on Pedestrian Network: Analysis of the Historic Town Tong-Li, China	2266
Y. Chen, L.H. Ni and X.L. Dai The Research of Changchun Parks' Construction and Development	3266
W. Mo and M. Leng	3271
Researches on the Space Network Analysis and Optimize of Urban Commercial Pedestrian Space — Take Xi'an Shu-Yuan-Men Commercial Pedestrian Space as an Example X.L. Li, W.K. Zheng, P. Wei and Y. Li	3280
Architectural Historical Context Continuation and Modern Architecture Self-Realization X.Y. Tang	3284
An Analysis of the Settlement Pattern Based on Linear Layout - a Case Study on Shangzhuang Village of Yangcheng, Shanxi Province F. Kang	3288
The Contribution of Overseas Chinese towards the Development of Modern Zhongshan City	2202
H. Zhang, X.S. Fang and X.W. He The Research on the Contemporary City's History Context Inherited in Speed Time	3292
T. Wang, F.R. Wang, R. Zhang and F. Nie	3300
To Explore Campus Spirit — A Research on the Campus Renewal Design of Chengdu Xindu No. 2 Middle School W. Wang, L. Dong, X.J. Wang and P. Hou	3305
The Modern Evolution and Protection Development Strategies of the National Rural Settlement: The Dong Ethnic Group as Case Study	3303
L. Cai, Y. Deng and X. Jiang	3311
Pre-Warning Information System of Traffic Safety J.L. Peng and D. Wang	3320
Reflection on Integrated Conservation for Zhenbeitai Y.L. Lei and Y. Liu	3324
Color Design of Architectures in YueLu-Mountain University Group Y.H. Wan, F. Wu and P.J. Zhu	3328
Architecture Design for Context — Case Study of Jincheng Vocational Technical College F. Wu, J. Yang and Z.Y. Cai	3335
Building up New Physique: an Investigation on Tianjin Quanye Expo Site in Early Twentieth Century China T.J. Zhang, S.B. Xu and Y. Sun	3340
A Novel SPD Design for Lightning Protection of Intelligent Buildings W. Sun, Y. Li, D. Lu, X.G. Zhao and Y. Yu	3344
From Ideology to Physical Form about the Planning and Design of Luyi Laozi-House Y.Z. Zhang and Z.R. Guo	3348
Research on Quantified Performance Index for Steel Reinforced Concrete Frame Structures	
Q.W. Wang, Q.X. Shi and L.J. Tang	3353

Urban Context Visualize and Inherit — Research on Conservation and Exhibition of	
Daming Palace Site Park Z.G. Liu, B. Liu and T. Duan	3357
Transformation from an Idea to Image — An Analysis on Visual Training and Representation for a Designer D. Wang	3362
Urban Development and Great Ruins Protection in Xi'an of China D.F. Yu	3366
Architectural Education with the Context-Based Concept T. Duan, G.Z. Yang and Z.G. Liu	3370
The Particularities of the Protection of Urban Excellent Modern Architectures Y. Pan, D.F. Tang and Z.M. Li	3374
Research on the Traditional Residence Space Model of Beizhu Village in Jiaozuo M. Ma and H.H. Zhang	3380
Semantic Network Method of Urban Design Scheming J. Dong and G.T. Zou	3384
Spatial Design Research for Urban Mitigation to Strength Urban Resilience R. Nie, J. Zeng and X.P. Zhao	3388
Study on Programming Methods in Urban Renewal Planning P. Su	3392
Study on Environmental Protection Energy Type Bamboo-Steel Composite Wall J. Xu, Q.T. Xie and Y.S. Li	3396
The Inspiration of Qujiang New District Landscape Design to the Ecological Construction of Cosmopolitan Xi'an City G.X. Zhang and Y. Wei	3400
The Optimistic Research of Spatial Form of Zhaohua Ancient City in China P. Yao and L. Yuan	3406
Investigation and Study on Cognitive Maps of City Environment — For Example as Xi'an City Y. Wang	3410
On Modern Landscape Design Integrating Chinese Traditional Spiritual Culture Q.P. Liao	3414
Spirit of Space Renaissance of Town God's Temple in Xi'an J.L. Bi and R. He	3418
Research on Urban Religious Place Layout C.C. Chu	3423
A Study on the Innovation of Urban Planning Paradigm Based on Low-Carbon Concept Y. Rui and L.X. Jiao	3427
Design Concepts of Redevelopment in Urban Industrial Historical Area — a Primary Urban Renew Plan of Chongqing Special Steel Factory Site H.X. Heng and Y.H. Yang	3431
Simple Discussion on Creating a Historical and Cultural Concept on City Square Design — Exemplified by Hundred Miles of the Yellow River in Lanzhou	2.425
M.H. Ye, X.W. Meng and H. Zhang The Research on the Inherited of Traditional City's History Context in Speed Time	3435
Z. Qiao and T. Wang	3440
Chapter 10: Reproduction and Inherit of Local Architecture	
Intensive Design Thinking of Chongqing Public Space G. Chen and F.J. Liu	3447
Overall Image Shaping in Tourist Development of Industrial Towns Based on Human Geography and Physical Geography Contexts - Taking Xiaolan in Zhongshan City as an Example	2451
W. Hu and Y.X. Xu Initial Analysis on the Chinese Traditional Symbol and the Contemporary Regional	3451
Architecture T. Hu and Y.R. Wu	3459

Research on and Inheriting the Cultural Identity of the Rural Settlement in Northern Part of Shaanxi Province	
H.Z. Yang, H. Yi and S.R. Wang	3465
The Establishment of Zhongshan Park and its Connotation of Cultural De-Colonization Y. Sun, S.B. Xu and T.J. Zhang	3469
Integration Method for Information System with Cloud Computing J. Liu and X.S. Qin	3473
Seeking Ourtopia through Mega Event: Succession and Innovation from Expo 2010 Shanghai Industrial Heritage F.L. Liu and D.Z. Chu	3477
Humble Opinion about the Chinese Medicine and Local Architecture Creation S.R. Wang, K.C. Liu, M.C. Li and H. Yi	3481
From Traditional Cave to Green Design of Modern Earth-Sheltered Architecture: A Case Study of Chongqing Empirical Study Center of Building Energy Conservation X.D. Zeng and D.M. Song	3486
Research on Space Form Design of Local Culture and Custom in Qia Chuan Wetland Settlement	3490
L. Xu, Z.D. Lei and S. Wu A Simplified Evaluation of the Influence of the Bond Pattern on the Brickwork Limit	3490
Strength	2405
A. Bacigalupo, A. Cavicchi and L. Gambarotta Development of Energy Consumption Monitoring Platform for Managing Public Building	3495
K.Y. Yao and L. Zhang	3509
On Inheritance and Development of Chinese Domestic Architecture B.N. Liu and P.P. Wei	3513
Preliminary Study of Residential Architecture Regional Style L.J. Hao and Z.T. Xiao	3517
Again Study Evolution of Residential Architecture Regional Style Taking Xi'an as the Example	
L.J. Hao and Z.T. Xiao	3521
An Investigation on the Urban Form Transformations in Contemporary Chinese Cities Z. Li and T.J. Zhang	3525
Reproduction of Traditional Architectural Form — Design of Engineering Teaching Group as an Example, Yunnan University Y. Cao and J.P. Yang	3529
A Force Method Model for Static Analysis of Transmission Line System Subjected to in- Plane and Out-of-Plane Loadings X. Ma, J.E. Mills, G. Brown and Z.G. Yan	3535
Various and Flexible Catholic Churches of Baroque Style in Shanxi Province Y. Wang	3539
Artistic Characteristics of Harbin Middle East Railway Employees' Apartments J. Zhang, D.P. Liu and Y. Zhang	3545
Resource Pattern and Active Adjustmentan Updated Research in the "applicable Technology" of Vernacular Architecture in Arid Area Y. Li, J. Wang and W.H. Cui	3551
An Exploration of Huizhou Architecture Connotation in the Background of Traditional Culture Changes	2556
Y.C. Zheng and C.M. Yan Measurement and Analysis on Natural Ventilation of Rural Residential Buildings in	3556
ChaoShan Area J.Y. Jia, L. Jin and L.H. Zhao	3561
Study on the Material and the Structure of Earth Building in Fujian P.C. Zhang, K. Luo and W.B. Liao	3567
Study on Traditional Residence Features of Jiaozuo Beizhu Village M. Ma and H.H. Zhang	3571
Fractal of Frequency of Joints and its Application in Rock-Mass Structure Y.H. Song and Y. Wang	3575

Study on Earthquake Shelters Planning and Construction in Downtown Area — a Case of Xianyang	
C. Zhou	3579
Research on Indoor Thermal Environment of the Folk Houses in the Winter in the Hot-Summer and Cold-Winter Climatic Zone H.Y. Yan, L. Yang, Y.G. An, F. Xia and D. Meng	3583
The Humanistic Comfortableness Creation in External Space of the Public Rental Housing Community	
G. Chen and J. Lin	3588
A Primary Investigation into Revolution and Way to Reform under the Background of Smart City Construction W. Wei and R.Q. Li	3593
Architectural Concept of Dynamic is the Origin, still is the Carrier Z. Rui and Q. Zheng	3598
Reflections on Ecological and Environmental Construction of New Rural Program in Underdeveloped Areas Z.X. Li and M. Chen	3602
Regional Features of Gao-Tai Dwelling in Kashi H. Song	3607
The Fuzzy Space Design Strategy in Low-Carbon Ecological Construction H. Yi and X.B. Tang	3611
Chapter 11: Innovation and Application of Ecological Architecture Technology	
Ecological Architectural Technology Optimization Design — Longgang High School's Cafeteria Design as an Example P. Yue, J.P. Liu, B. Zhou, Y.X. Lu and A.X. Zhang	3619
Dynamic Analysis of Frame-Shear Wall Structure of Concrete Filled Steel Tube under Rare Earthquake	
X. Hu and Y.T. Gao	3624
A Preliminary Study on Saving Parking Lot J. Liu and W.X. Zhang	3628
Analysis on Urban-Rural Integration Planning Practice for Resource-Based Towns in Northern Shaanxi F. Li and X.M. Wang	3632
Research on Building Construction System of SDE2010 H. Liu, H. Gao and D. Wan	3638
Water Efficiency and Applying Water Resources in the Design of Urban Resident Plan R.Z. Wang, Y.M. Qian and W. Mo	3643
Appropriate Ecological Strategies for Rammed Earth Wall Traditional Dwellings Z.H. Zhang, T. Feng and W.Y. Pan	3648
Design Analysis of the Gorilla Building in Zoos J. Fu, J.J. Zhang, Y.G. Li, Y.J. Li, Z.S. Xu and K.D. Tang	3654
Let "Ruin" into a "Home" — Create a Ruins Environment in the Contemporary Urban with the Model of Ecomuseum X.M. Wang and F. Li	3659
Building Energy-Efficiency Running Mode of Large-Scale Public Building: Based on Energy Performance Contracting Q. Song and X.J. Zhang	3663
Indoor Thermal Environment Test and Investigation Analysis—Based on Newly-Built Residential Houses in Daping Village, Sichuan Province H. Cheng, J.P. Liu, D.L. Liu, F.W. Tang and Y.G. An	3667
Discussion of the Development Trend of Urban Residences in the 21 st Century X.H. Guo and L. Zhang	3672
Experimental Stress Analysis of Cast <i>In Situ</i> Concret Roof-Slab under Indirect Load of Variable Temperature	23.2
S.G. Ding, T. Ding, Q.W. Li and Z.M. Wang	3676

The Analysis and Optimal Design for Thermal Environment of Gymnasium B.Q. Ma and D.W. Wang	3682
Study on Design Processes of Urban Residence Based on Whole Life Cycle Concept G. Chen and X.C. Liu	3688
Analysis of Space Planning and Design Principles in Campus Site Based on Spirit of University	3000
T. Wen	3696
Exploration on Color Environment Design of Blocks in Beijing City Abstraction J.T. Wang, H. Xiao and L. Wang	3700
A Case Study of Integrated and Human-Oriented Sustainable Architectural Design H. Peng, Y. Liu, Y.L. Zhang, M.Q. Tan and C. Gan	3706
Thermal Performance Experimental Study of Hot Wall in Cold Region H.G. Ren, G.W. Li and X.M. Fang	3711
Integrating Passive Cooling and Solar Techniques into the Existing Building in South China Y.W. Liu and W. Feng	3717
Eco-Space Complex for High-Rise Office Buildings Y. Cao and J.P. Yang	3721
Extenics Analysis of Activity Support Element J. Dong and L. Qi	3727
Urban Transformation Process of Soho from 1889 to 2004 - A Discussion of the Form and	
Function Relationship X.L. Dai and H.L. Zhang	3732
A New Navigate Pressure Deflector Louver Sun-Breaker Composed with Multi-Functions of Rainproof and Sun-Shading	2727
T. Zhang, J.P. Liu and Q.W. Zhang Urban Road Cross Section Eco-Design Based on Storage-Infiltration of Rainwater and	3737
Snowfall H.Z. Zhang and H.M. Li	3741
Research and Design of Intelligent Building Energy Management System	
Y.F. Wu and F. Li	3745
Ecological Solution Research for Water Network Protection of Small Towns in Southern Jiangsu	
Y.Z. Huang, Q.Y. Li and Y.B. Zhou	3749
A Study of the Optimization of Building External Shading Methods in Chongqing Area X.D. Zeng and F.A. Huang	3753
A Brief Discussion and Analysis on Methods of High Performance Architecture Facades Design	
Y. He, M. Chen and X. Wang	3757
Enlightenment of Modern Architecture Design from Geomancy	277.1
Z.P. Deng and P.H. Yi An Analyze on Parking Environment in Residential Areas of Xi'an	3761
D. Xie, C. Chen and L. Tang	3765
Features of Application of Modern Wooden Structure into Reconstruction in Wenchuan- Earthquake Region	
Y. Cao	3769
Towards a Theory of Innovation in Architectural Design: Development of Lingnan Architecture School X.X. Tang and Y. Chen	3773
The Highway Architecture Characteristics	3113
Z.L. Li, M. Huo and X.X. Gu	3780
Study on Microstructure and Properties of High Strength Construction Steel Bars G.Z. Xiao, J.X. Zhao and L.L. Zhuang	3787
Chapter 12: Intelligent Building and Digitalized Urban Construction	
Research on the Treatment of Dyeing Wastewater by Heterogeneous Catalytic Ozonation Process	
L.P. Wang, Y.J. Mao, Y.C. Guo and E.D. Du	3793

Research into the Building Information Model during the Whole Building Life-Cycle X.D. Zeng and W.Q. Zhou	3797
Study on Foreign Developments in Green Building Evaluation System X.F. Li and X.M. Ma	3801
Sustainable "Low-Tech" Architecture—Take Traditional Residential Houses in West Hunan for Example M.F. Zhong	3805
Comparative Study of the Flux of Filamentous Bulking MBR and Non-Bulking MBR Z.L. Chen, W.B. Wang, L.A. Hou, H.X. Liu and Z.J. Ren	3809
A Study on R&D Process for an Eco Friendly Inorganic Paint H.S. Shim, Y.Y. Lee, D.Y. Cho and G.H. Choi	3816
The Analysis on the Test of Impact Rolling on the Roadbed of HW Y.M. He and Z.J. Ma	3821
Discussion on Application of Digital City Construction in Wuhan N. Lin and F. Liu	3825
Sustainability Assessment Indicators and Methodology for Intelligent Buildings J.Q. Yu, B. Dang, D. Clements-Croome and S. Xu	3829
Parametric Design in the Context of Ethics W.Q. An and C. Wang	3833
Building Information Model for 3D Indoor Navigation in Emergency Response Y. Li	3837
Micro-Architecture under Perspective of Landscape H.B.B. Yuan and Y.H. Kong	3841
Study on Developing Scheme for Building Applications of Renewable Energy in Shaanxi Province of China	2047
Y.J. Li, Z.F. Yan and S.Y. Wu Study on the Maximum Installed Capacity of Surface Water Source Heat Pump System J.M. Feng, J.M. Gao and P. Woods	3847 3853
The Application of a New Digital Method for Fire Protection Design in the Large Commercial Building Field	3023
L. Bai, Z.F. Yan and S.P. Zhang Flow Forecasting of the Regulation of Parallel Water Pumps with Variable Numbers	3857
Y.Z. Fu, H.H. Liu, Y.Q. Cai and Y. Jiao Study on the Deformation Behavior in-Plane of a New Energy-Saving Wall	3862
J. Zhao, C.Y. Ma, C. Liu and J. Chen	3868
Smart Cable Based on Desensitized Encapsulation FBG Sensors B. Chen and S. Li	3873