## **Table of Contents**

## **Preface**

**Sponsors and Committees** 

## **Chapter 1: Structure Engineering**

The Thermal Induced Temperature and Stress Damage A.F. Li, S.H. Luo and Y. Gui	3
Analytical Solution of Bending and Vibration of a Rectangular Plate on the Elastic Foundation	
H. Zhang, C.L. Wang and A.Q. Wang	9
<b>Topology Optimization of Continuum Structures Based on SIMP</b> H. Zhang and X.H. Ren	14
<b>Experimental Investigation on Shear Property of RC Beams with Aramid Fiber Mesh</b>	
Stirrups E.J. Wu, J.L. Xing and Z.Q. Zhu	20
<b>Study on Shear Strength of SRC Beam-Column Connections</b> J.Q. Jia, W.Q. Zhu, G. Meng and D.L. Yao	25
<b>Analysis and Adjustment Techniques of Mounting Error for Frame Construction Block</b> Z.W. Chai, Q. Zhang and M. Liu	30
Application Research on Transformed Section Method in Stress Redistribution Deduced by Creep in Concrete Beam Reinforced with FRP	2.5
G.D. Zheng	35
Analyzing Effective Length Factor of OBS Members A. Naderi and M.R. Sohrabi	40
Nonlinear Finite Element Analysis of the Bearing Capacity of a New Type of Column under Axial Load	
Y.F. Xu, X. Zhao and Y. Fu	45
Analysis on Pre-Stressed Friction Loss in Bending Channel under Contact Pressure Non-	
Uniform Distribution Hypothesis H.Q. Cheng, Q.H. Cheng and K.Y. Zhang	49
Quasi-Plane-Hypothesis of Strain Coordination for RC Beam Strengthened with External-Bonded or Near-Surface Mounted Carbon Fiber Reinforced Plastic Strip	<b>5.4</b>
Z.H. Ren and X.T. Zeng	54
Analysis on Deviation Rectification and Reinforcement of Buildings H.P. Yin, C.L. Li and Z.Y. Xie	59
Research on the Construction Technology of High Brick Chimney H.F. Deng, M. Zhu, J. Guo and T. Lu	65
The Research on Strengthening Technique for Aged RC Beam B. Xie, B. Jia and R.H. Wang	70
Block Shear Behaviours of Stainless Steel Channel Bolted Joints with Four Bolts	70
T.S. Kim, M.S. Kim, S.H. Kim, Y.T. Lee and S.W. Shin	74
Parametric Analysis for Ultimate Strength Prediction of Stainless Steel Bolted Joints with	
Single Bolt T.S. Kim and J.S. Lim	79
Structural Optimization Based on Inversion Reduced-Basis Method Y.H. Li	84
Direct Strut-and-Tie Model for Ultimate Shear Strength of Reinforced Concrete Structural	
Walls J.Y. Wang, Y.L. Sun and M. Sakashita	89
Assessment of Building Sustainable Performance Based on Set Pair Analysis (SPA) Y. Liu	94
Concrete Beams Strengthened with Prestressed Near Surface Mounted Helical Rib Steel	94
Wire	00
Y.H. Ding, M.X. Zhang and C.S. Zhang	99

Experimental Research on the Flexural Performance of the Strengthened Concrete Beams with Prestressed CFRP G.W. Yao, Y.L. Wei and S.Y. Li	105
Effect of CFRP Thickness on Load-Carrying Capacities and Failure Modes of Strengthened	100
RC Beams G.W. Yao, M.S. Li and S.Y. Li	109
Numerical Analysis on Failure Mechanism of Intermittent Joints B. Wang, Q.H. Jiang, C. Yao and T. Xie	113
Experimental Behavior of Concrete-Filled Square Steel Tube of Mid and Long Columns Subjected to Eccentric Compression B. Wang	118
Reliability Evaluation of Reinforced Concrete Structures of the Fuzzy Evaluation Model J.Q. Chen, W.B. Li and J.H. Zhao	123
<b>Application Study on Surface FBG Sensor in Structure Experiment</b> S.G. Li, Q.M. Chen, H. Li and J. Zhu	128
Tensile Strength of Forged Ti-6Al-4V Welded Joints by Electronic Beam Welding H.Y. Qi, J. Xie, D. Pan, S.L. Li and X.G. Yang	132
Numerical Simulation for Stress Field Due to Corrosion of Rebar in Concrete Structure $Z.\ Xiao$ and $J.\ Wu$	137
A Plastic Damage Model for Practical Application H. Qi, Y.G. Li and X.L. Lu	142
Upper Bound Solution of Ultimate Pullout Capacity of Strip Plate Anchor Subjected to Pore Pressure Based on Hoek-Brown Failure Criterion F. Huang, X.L. Yang and K. Huang	146
Analysis on Bearing Capacity of Solid Multibarrel Tube-Confined Concrete Short Columns (CHS Inner and SHS Outer) under Axial Compressive Load Z.Q. Zhang and Y. Yao	151
Study on Construction Control of Project Manager X.R. Zhang	157
Analysis of Primary Aluminum Composite Panel Gypsum Board Construction Method Paste	
X.R. Zhang and L. Li	161
The Quasi-Static Analysis for Two-Dimensional Thin Plates L. Chen and Y. Bai	166
Tensile Test of the Fireproof Lining of Tunnel R. Yao, D.L. Peng and H.Y. Huang	170
Discussion on the Influencing Factors of Deflection-Span Ratio at Failure in Prestressed Concrete Hollow Slab X.Q. Cui, H.W. Zhao and N. Zhao	174
Study on Efficiency Factor of Bearing Capacity of Multi-Element Composite Foundation of Concrete Column and Lime Column	1/4
X.Z. Wang  Damage Detection Analysis of Reinforced Concrete Simple Beams Based on Three	178
Dimensional Curvature Mode J. Yao, J.Q. Wu, L. Cao, X.Y. Cheng and K. Ma	183
$\begin{array}{l} \textbf{Damage Detection through Changes in Frequency Base on Reinforced Concrete Beam} \\ X.Y.\ Chen,\ K.\ Ma,\ J.Q.\ Wu\ and\ X.\ Guo \end{array}$	188
A Beam-and-Column Based Macro Model for Masonry Infill Walls in RC Frames under Cyclic Loading J.C. Zhang, L.M. Zhang and X.L. Liu	193
Responses of Concrete-Filled Cold-Formed Square Hollow and Double-C Steel Stub Columns under Cyclic and Repeated Loadings C. Hansapinyo	198
The Study on Mechanical Properties of Single-Bolted Steel-Glulam-Steel Joints D.L. Xu, W.Q. Liu, D. Zhou, J.D. Ding, Y. Lei and W.D. Lu	204
Seismic Elastic-Plastic Analysis on Outer-Jacketing Mega Frame for Story-Adding by IDARC-2D	
X.J. Sun, J.P. Cao and W.Z. Zheng	209

Effects of Some Design Parameters on the Static Performance of the Truss String Structure C.W. Huang, R. Shao and D.L. Zhang	215
<b>Dynamic Life Prediction of RC Structures on Multi-Environmental Time Similarity Method</b> W.L. Jin, Z.Y. Li, J. Chen, J.Q. Wang and X.Z. Wang	220
Configuration, Classification and Development of Large-Span Annular Tensile Cable-Truss Structures Y.L. Yao, S.L. Dong and G.Y. Ma	225
Nonlinear Finite Element Analysis on CFRP-Confined Square Concrete Column under Cyclic Lateral Loading Q. Chen and H. Wu	230
Analysis on the Moment-Curvature Relationship for Prestressed UHPFRC Beams without Stirrup S.M. Han and Q.Y. Guo	236
Adoption of Appropriate Construction Technology for Western Rural Areas Based on Cost Compensation Method X. Ma, H.M. Li, P.W. Li, Q.P. Lu, L.P. Zhao and F. Ding	241
Analysis of Fire Response of a Spacial Pre-Stressed Steel Structure Subjected to Fire Load X.T. Wang, Z.G. Xie, M. Zhou and F.B. Yu	246
Research on Post-Fire Bearing Capacity of Ceramsite Concrete Filled Steel Tubular Short Columns	
X.T. Wang, M. Zhou, J. Yin and Y. Ji	251
Test of Fire Response of a Profiled Sheet-Ceramsite Concrete Composite Floor X.T. Wang, H.J. Wang, M. Zhou and Y. Ji	255
Investigation and Statistical Analysis on Fire Loads of Large-Scale Wholesale Commercial Building Y.Q. Bao	259
Analysis of Urban Disaster Prevention and Mitigation Y.Q. Bao	264
Advanced Inelastic Analysis of Frame Structures Considering Shearing and Warping Deformations L.K. Wang	268
Investigating Member Length Imperfection Behavior of Curved Scissor-Type Structures M.R. Ghasemi and H. Abbasi	274
Application of Value Engineering to the Ductility Design of RC Frame Columns with High Compression Ratio J.Q. Guo and Z.C. Fu	279
Investigations into Synthetic Fibre Reinforced Concrete Beams U.P. Waghe and S.P. Raut	284
Tensile Capacity of Post-Installed Rebars in Concrete Structure C.P. Wang, S.M. Wu, C.K. Wang and H.Y. Pan	289
Test of Perforated and Reinforced Steel Skeleton Joints under Low-Cycle Load H.Y. Zhang, J. Duan and M. Yu	294
Axial Compression Test of Perforated Section Steel Column Reinforced with Overlapped Plates H.Y. Zhang, Z.C. Luo and X.M. Chen	299
Dynamic Response Analysis of Column-Supported Silos Y.G. Ding, J.Q. Wang, Y. Cheng and L. Fan	304
Research on the Mechanical Properties of Concrete Members under Holding Load L.H. Lu, H.X. Sun, S.L. Chen, G.S. Pan and M.J. Yang	309
<b>Damage Identification of Offshore Platform Based on D-S Evidence Theory</b> Y.S. Diao and X.N. Tong	314
Experimental Behavior of Full Scale URM Building Retrofitted with Ferrocement Overlay M. Ashraf, A. Naeem Khan, Q. Ali, K. Shahzada and A. Naseer	319
Study on the Welding Residual Stress in Anchorage Area of Steel Bridge X.Y. Liu	324
Analysis of Stud Connector of Steel-Concrete Composite Structure X.Y. Liu and J.H. Yang	328

Research Situation of the Unilateral Contact Buckling of Thin Wall Steel-Concrete Composite Panels	
B.Q. Xia, J. Dong and L. Zong	333
Load and Resistance Factors for Progressive Collapse Resistance Design of Reinforced Concrete Building Structures Y. Wang, F. Lin and X.L. Gu	338
Analysis on Anchorage Length of Compression Anchor B.X. Tu, J.Q. Jia, H.S. Yuan and H.T. Wang	345
Performance of the Nail Joints on Wood Frame Shear Walls L. Yan, X.J. Zou and C.G. She	350
Strain Analysis of Corrosed Prestressed Concrete Beams on Fatigue Test J.Q. Jia, F. Yu, D.L. Yao and W.Q. Zhu	355
Fatigue Behavior of Prestressed Concrete Beams under Corrosion F. Yu, J.Q. Jia, D.L. Yao and W.Q. Zhu	360
Calculation Model for Crack Width of Smart Film Based on Shear-Lag Theory Y. Xu, Z.X. Zhou and B.N. Zhang	365
Study on the Buckling of Steel Columns with one Special-Shaped Section J.L. Chen, X. Huang and R.L. Ma	369
A Simplified Design Method on Steel Beam Strengthened with CFRP Q. Hu, S.L. Jia, J.B. Chen and J. Zhang	374
Mechanical Behavior Study on Headed Studs for Composite Truss Joint D.Y. Xue, Y.Q. Liu, S.F. Huang and B. Ma	379
Research on the Stress-Strain Curve and Damage of Steel Fiber Reinforced Concrete under Uniaxial Loading R.N. Yang and D.M. Wei	383
Structural Damage Detection Depending on Curvature Matrix of Change in Flexibility Y.M. Li, B. Zhou, X.Y. Zhou, G.F. Sun and B.Y. Yang	389
Analysis of Monitoring and Controlling of Settlement Caused by Construction of Wide Subway Tunnel with Center Drift Method	307
D.H. Li	394
Moment Redistribution of Two-Span Fire-Damaged Reinforced Concrete T-Beams Strengthened with CFRP Sheets K. Xiang, G.H. Wang, W.P. Han and J.T. Yu	399
Durability Life Prediction of Concrete Structure Based on Reliability Y.L. Ma and A.L. Zhang	410
Vulnerability Analysis of Small High-Rise Shear Wall Buildings J. Zhu and P. Tan	416
Research on Rigidity of Circular Tubular ZYY-Joint in Single Fold Surface of Multi-Planar Steel Structure of 26 <sup>th</sup> Universaide Shenzhen 2011	
W.B. Sun, T. Hu and W. Huang	421
Experimental Research on Shear Performance of Reinforced Block Short-Leg Masonry Shear Wall F.L. Wang, Z.X. Chen, G.C. Zhou and X.X. Xu	428
Research on Structural Damage Localization by Improved Curvature Method J. Chang and Y.M. Wu	439
Research on Detection and Reinforcement of Juye Bridge Based on the Finite Element Method X.Z. Zhang, X.Z. Fang and F. Tian	444
Durability and Microstructure of Ultra-High Performance Concrete Having High Volume of Steel Slag Powder and Ultra-Fine Fly Ash Y.Z. Peng, K. Chen and S.G. Hu	452
Calculation Method on Capacity of Eccentrically Loaded Square Steel Tube Columns Filled with Steel Reinforced Concrete T.F. Zhao, Y.W. Ou and X.X. Sheng	457
Compression Performance of Non-Dispersible Concrete Columns W.Q. Zhong, G. Sun, L.Y. Xie and Y. Ma	462
The Safety Monitoring System of Ship/Bridge Crash Testing Laboratory R. Ai, M.X. Lei, Z.B. Lei and B.F. Ou	467

Research on Mechanical Properties of the Stiffening Ring in Concrete-Filled Steel Tube Column with Steel Beam System with Non-Perpendicular Elements	
X. Qi, Q.C. Meng and S.C. Zhao	472
P-∆ Effects in Steel Structures Using Yield Point Spectra A. Naji and F. Irani	477
Simplified Procedure for Progressive Collapse Analysis of Steel Structures A. Naji and F. Irani	482
The Research of the Realization of Strong Column and Weak Beam Mechanism of Reinforced Concrete Beam Considering the Slab Width	407
Y. Zhou, C.Q. Zhang, D.Y. Zhou and Z.Y. Li Nonlinear Static Analysis of Seismic Response for Transfer Structure with Haunching	487
Braces W.S. Liang and J. Cai	493
Research on Support Spacing of Tower Crane W.G. Zhan, J. Wang and N.L. Lu	499
Fatigue Life Prediction of Corroded Reinforced Concrete Beams under Repeated Loads L. Song and Z.W. Yu	504
The Surface Properties of Corrosion Specimens S.H. Xu, Z.Y. Kong and C. Zhang	509
The Calculation of the Thickness for Uniform Corrosion and Localized Corrosion in Steel Corrosion  7. V. Kong, S. H. W. and V. S. Chan.	514
Z.Y. Kong, S.H. Xu and Y.S. Chen  The Influence of Spalling on the Fire Resistance of RC Structures	514
X.M. Yu, X.X. Zha and Z.H. Huang	519
<b>Experimental Investigation and Crack Resistance Analysis on Large Scale Prestressed Steel Reinforced Concrete Frame</b>	
X.Y. Xiong, F. Gao and Y. Li	524
<b>Laboratory Research on Relationship between Swelling Force and Allowable Deformation</b> H.P. Yang, X.Y. Tang, Y.L. Liao and Z.B. Zhang	529
Elastic Shear Bucking Analysis of Corrugated Web Steel Beam in the Fire S.H. Chen, Y.L. Han and J.H. Zhang	534
The Electrochemical Characterization of Rebar Passivation Film in Simulated Concrete Media W.Z. Gan, W.L. Jin and J.P. Shao	539
Building the CBR-Based Identification System Framework for Construction Accident	339
Precursors	546
X.Z. Liu, T.S. Zhao and K. Xiao  Research on Improving Friction Compensation of Large Structure's Weighing System  M. Liu, Q. Zhang and M. Gong	551
Corrosion Mechanism of Anti-Seepage Curtain Corroded by Acid Mine Drainage H.Y. Ju, J.Q. Zhao, J.H. Li, K.H. Zeng and G.Q. Gao	556
Propagation Characteristics of Ultrasonic Waves in Concrete Medium with Local Damage Y.C. Guo and S.H. Guo	561
Multifractal Analysis of Reinforcing Steel Bars with Nonuniform Corrosion Degree Y.D. Xu, L. Bian, J. Wang and Y.C. Chen	569
Fire Performance of Reinforced Concrete Beams Strengthened with CFRP Sheets Bonded with an Inorganic Adhesive F.X. Wan and W.Z. Zheng	574
Analysis and Calculation of the Force of Glass Panel of the Point Supported Glass Curtain Wall	
Z.P. Huo, C.W. Huang and G.J. Zhang	580
Stability Analysis of Roof Structure with Steel Tubular Arch-Truss S.J. Hu	587
Experimental Investigation on Steel-Plate-Masonry Composite Column Compressive Behavior	
D.H. Jing, S.Y. Cao and H.T. Zhou	591
Analysis on Secondary Effect of Corrugated Webs in Steel-Concrete Composite Beams K.B. Jiang, Y. Ding, Y.W. Liu and F. Zheng	596

The Construction Technology of Light Masonry Retaining Structure Used in Fluctuating Belt of the Three Gorges Reservoir Area	£0.
L.F. Cheng and L.Y. Li	602
Experiment of the SCT Joint under Complicated Loading B. Liao, Y.F. Luo and X.N. Guo	607
Nonlinear Finite Element Analysis on the Steel Frame with Semi-Rigid Connection under Periodic Load	
L. Wang, B.S. Liu and N. Yang	614
Mechanical Behavior of Hollow Steel-Concrete Composite Columns with Perforated Ribs Y. Zeng and C. Wu	619
Study on Mechanical Mode of Frame Column Underpinning Joint A.H. Du and X. Zhang	624
A New Similarity Experimental Method of Carbonation Assessment on Concrete Structures L.B. Jin, X.L. Xiong, Z.R. Xiao and C.Y. Dong	629
<b>Design &amp; Research of Large Height Lifting Mechanism for Ultra-Large Structures</b> T. Sun, Q. Zhang and M. Liu	634
Assessment of Serviceability Based on Corrosion Cracking during a Long-Term Chloride- Induced Corrosion	(20
R.J. Zhang and H.L. Yang	639
Analysis on the Effect of Filler Wall to the Dynamic Characteristics and Storey Displacement of RC Frame Structure Y.X. Ye, H. Huang and D.W. Li	644
The Deformation Analysis and Control of Large Steel Structures Based on Non-Slide Construction Site	011
Y. Guo, Q. Zhang, X.Q. Bai and S.H. Pan	649
Damage Quantitative Investigation of Beam Structure Based on Changing Ratio of Modal Curvature	654
J.P. Ge	654
Identification and Damage Detection of Trusses Using Digital Processing of Vibration Signatures L. Niu and L.Y. Ye	659
Experimental Research on Steel-High Strength Concrete Composite Beams W. Xu, F. Xu, H. Wang and L.G. Wang	664
Multiple Anchor Behavior of Steel-to-Concrete Connections under Reversed Cyclic Loading Q. Xie, Q.Z. Sheng and H.X. Ju	669
Application Analysis of Water Source Heat Pump Auxiliary Supply Solar Energy for Heating and Cooling in Western Region of China C.Q. Hou, H. Hou, Y. Cai and R.X. Yang	674
Stream Flow Modeling of River Swat Using Regression and Artificial Neural Networks	071
(ANNs) Techniques	670
S. Daud, K. Shahzada, M. Tufail and M. Fahad Improvement of Mechanical Properties and Lateral Resistance of Brick Masonry Walls by	679
Using Indigenous Materials K. Shahzada, T. Goto, A. Naeem Khan, A. Naseer and M. Fahad	684
Shake Table Test of Confined Brick Masonry Building K. Shahzada, A. Naeem Khan, A.S. Elnashai, A. Naseer, M. Javed and M. Ashraf	689
Experimental Research on Axially Loaded Circular Concrete Columns Confined by CFRP under Preload	
Y. Pan, S.Y. Cao, D.H. Jing and S.C. Zhao	694
The Experimental Study on Realkalization Repair for the Durability of RC Structure after Fire	699
Y. Xiong and D. Wu  Modelling and Analysis of the Bottom Frames of Multi-Story Masonry Buildings Exposed to	099
Fire	<b>5</b> 0.4
K. Yan, W.Z. Zheng and Y. Wang  Causes and Control of Creek in Residential Building Designing	704
Causes and Control of Crack in Residential Building Designing J. Yan, H. Yang and F. Liu	709

Stress Characteristics Analysis of a Corrugated Web Composite Girder under Out-Plane Bending	
Z.Y. Wang, Q.Y. Wang, L.F. Tan, Y.Y. Chen and R.J. Jiang	714
Preliminary Parametric Assessment of a Bolted Endplate Joint under Combined Axial Force and Cyclic Bending Moment Z.Y. Wang and Q.Y. Wang	718
Experimental Study on Mechanical Properties of Timber Columns Strengthened with	/10
Carbon-Aramid Hybrid FRP Sheets under Axial Compression J.W. Pan	723
Experimental Study on Bending Behavior of Timber Beams Reinforced with CFRP/AFRP Hybrid FRP Sheets Q. Chun and J.W. Pan	728
Short Shear Wall Structure Conception Design on High Building M.T. Gao and J.X. Zhuang	733
Outrigger Structures for Twisted Tall Buildings K.S. Moon	737
Piezoelectric Impedance Based Prestress Force Monitoring for PSC Beam Z.G. Guo and Z. Sun	742
Several Written Instructions of the Technical Regulation of Shot-Pier Shear Wall Structure Key Figures Construction J.S. Liu and S.M. Liu	747
Application of the Pulse Electro-Osmosis Technology in the Control of Seepage of the Underground Structure	
J.M. Zhu, Z.X. Li, Y. Wang and R. Li <b>Bond Strength Modelling of Corroding Steel Reinforcement in Concrete</b> R. Zou, A. Shayan and F. Collins	752 757
The Optimization of Reinforcement Scheme of Building Based on Multi-Objective and Half-Structural Fuzzy Theory G.Y. Wang and M. Wang	762
Chapter 2: Bridge Engineering	
Study on Dynamic Test of a Large Span Steel Truss Pedestrian Bridge M.Q. Li	769
The Study of Mechanical Behaviors Performance of Bearing Form's Influence on Small-Radius Bridge M.Q. Li	776
Analysis of Creep and Shrinkage Mechanism of Bridge Considering the Effect of Shrinkage on Creep Stress Reduction	770
S. Lin, X.F. Xu, C. Wang and J.X. Ye	781
Design and Analysis of Slanting Cross Special-Shaped Arch Bridge H.L. Wang, R.B. Jiang and Z. Pan	786
The Design of Jianshe Bridge H.L. Wang, S.F. Qin and R.B. Jiang	792
Vertical Load-Carrying Natural Frequency of Railway Double-Track Pre-Stressed Concrete Continuous Bridge J.Y. Ren, W.P. Li, M.B. Su and Q.Y. Zeng	797
Equivalent-Beam Theory of the Self-Anchored Suspension Bridge B. Wei, Q.Y. Zeng and W.A. Liu	801
Applicability of Modal Pushover Analysis on Bridges	
B. Wei, Q.Y. Zeng and W.A. Liu	806
B. Wei, Q.Y. Zeng and W.A. Liu  Alignment Control during Construction of Continuous Bridge Suspended by Triangle  Frame	806
Alignment Control during Construction of Continuous Bridge Suspended by Triangle	806 811

Research on Setting of Pre-Camber of Long-Span Continuous Rigid Frame Bridge with High Piers	
Y.B. Zhang and D.P. Liu	821
Seismic Response Analysis of Double Chains Suspension Bridge Considering Non-Classical Damping N.H. Ding, L.X. Lin and J.D. Chen	826
Construction of Steel Tube Concrete Arch Bridge after Axes Change C.X. Li and X.Z. Wang	831
Wind Vibration Effect on Unit Glass Curtain Wall Considering the Turbulent Wind X. Hu and Y.T. Gao	836
Seismic Displacements Reduction for a Long-Span Cable-Stayed Bridge X.W. Yang and Z.B. Lian	840
Research on the Rigidity of Continuous Beam with Equal Span under the Temperature Load	
Y.S. Zhang and Y.Y. Li	846
Analysis of Parameter Sensitivity in Construction Control of Inclined Pylon Cable-Stayed Bridge without Backstays Q.C. Zhang and Q.S. Sun	851
Research on the Application of Horizontal Rotation Construction Method with Flat Hinge in Cable-Stayed Bridge Construction	
Q.S. Sun, X.G. Guo, D.P. Zhang, X.K. Guan and Y. Zheng	856
Research on Skeleton Curves of Steel-Concrete Composite Beams Y.B. Liu, F. Chen and J.B. Liu	861
A Retrofitted Case Study of Orthotropic Steel Bridge Decks Strengthened with Sandwich Plate System D.Y. Zhang, Y.S. Li and C.L. Cui	866
Construction Simulation of Long-Span Arch Rib Bridge W.F. Tian, S.X. Zhou, L.L. Zhang and A.T.S. Alghabsha	871
Chain-Styled Mechanism and Chain-Cutting Disaster Mitigation for Masonry Arch Bridge W.F. Tian, L.L. Zhang and A.T.S. Alghabsha	876
Asymmetric Construction Technology of Partially Cable-Stayed Bridge with Single Tower and Single Cable Plane X.M. Sun, Z.C. Yan, D.Y. Zhu and H. Chen	881
The Research of the Application of Reactive Powder Concrete Wind Barriers of High Speed Railway Bridges X.L. Lu and R. Gao	886
Chained Analysis of Effective Prestress for Long-Span PC Bridge: Identification, Simulation and Prediction	
Q. Guo and S.H. He  Design and Optimization of Concrete-Filled Steel Tube Arch Bridge Using Cable-Hoisting	891
Method X.F. Liang, Y. Xu and H.J. Du	896
<b>Study on Placement of U Tendons in Box-Section Pylon of Cable-Stayed Bridge</b> H.Y. Tang and S.P. Meng	901
Analysis of Shrinkage and Creep Effect on Improved Truss Composite Arch Bridge H.J. Wu, Y. Gao and P. Lu	906
Brief Analysis of Temperature Effect on the Low Pier Continuous Rigid-Frame Bridge H.J. Wu, H. Zhang and P. Lu	911
Service Life of European and American Bridges H.J. Wu, Y.Q. Kang and P. Lu	916
Analysis of Sensitive Factors of Long-Span Continuous Rigid Frame Bridge's Stability with Thin-Wall Piers in the Construction Stage H.J. Wu, Y.Q. Kang and L. Zhang	921
Parameter Correlation Study of Impact Factors on Concrete Curved Box Girder Bridges X.Y. Huang, W.D. Zhuo and S.G. Ping	926
Study on the PC Beam for Extradosed Prestressed Bridges X.S. Zhang, S.H. Sun and A.B. Gu	931

Experimental Investigation into Aerodynamic Stability of Narrow Steel Truss Girder Suspension Bridge	
H. Bai and J.W. Li	938
Numerical Simulation of Flow over a Circular Cylinder at Low Reynolds Number H. Bai and J.W. Li	942
<b>Bearing Capacity of Reinforced Concrete Simple Beam Bridge Inspection and Analysis</b> J. Bin, J.S. Lei and J.J. Liu	947
Thermal Stresses Simulation Analysis of Concrete Box Water Bridge under the Solar Radiation	
J.P. Sun, J.P. Chen and G. Li	952
The Analysis of Plant Disease Harms and Study on the Technology of Synthesis Reinforce in Arc-Arched Bridge of Solid Abdomen Type X.W. Li and X. Yuan	957
Seismic Response Analysis of CFST Arch Bridge Considering Input Earthquake Characteristics	0.60
F. Xing, L. Zhao and Y.Z. Xing	962
Approximate Deflection Calculation of Variable Box Section Girder Considering the Effect of Shear Lag and Shear Deformation L.X. Lin, Y.H. Zhang, Y.P. Wu and N.H. Ding	967
Development of a Kind of Multi-Defense Seismic Spherical Bearing	907
T.B. Peng, X.T. Yu and Z.N. Wang	972
Influences of Dimension Parameters on the Compression Performance of FRP Rubber	
<b>Bearings</b> T.B. Peng, Z.N. Wang and X.T. Yu	977
Effects of Frequency Content of Earthquake Ground Motions on Probabilistic Seismic Demand Assessment of Long-Span Bridge Structures L. Chen and J.S. Zhang	982
<b>Application of Dynamic Unstressed State Method in Vertical Rotation Construction of</b>	
Bridges W.W. Li, Z. Zhang and C.L. Huang	988
A Conceptual Design of a Cable Stayed Bridge with a Curved Back Span Ö. Avşar, A. Caner and B. Sarici	993
<b>Parametric Sensitivity Study on Fluid Viscous Damper of Long Span Suspension Bridge</b> G.H. Zhao and Y.M. Zhang	998
Analysis on Earthquake Damage of Daxinglu Ramp Bridge in Wenchuan Earthquake G.H. Zhao and Y.M. Zhang	1003
The Application of Fiber Optic Test Technology in Deformation Monitoring of Highway Corrugated Steel Pipe Culvert F. Zhang, P. Fang and H.T. Qian	1007
Stability Analysis of Xiwu Road Steel Box Arch Bridge in Zibo City	1007
Z.S. Gao, Y. Huang, Y. Liu and L.K. Qi	1012
Anti-Shear Reliability Analysis of Existing Pre-Tensioned Prestressed Concrete Beam Bridges under Atmosphere Condition	1015
F. Chen, D.L. Hu and Y.L. Sun	1017
Stochastic Analysis of Prestressed Concrete Cable-Stayed Bridges Considering Construction Errors H. Guan and D.W. Chen	1023
Bearing Simulation in Seismic Response Analysis of a Multi-Span Continuous Girder	1023
Bridge Y. Huang, J.J. Wang and D.Y. Jin	1029
Damage Analysis of the Bridge Structure Based on the Modal Parameters K. Ding	1034
Cable Deflection and Gravity Stiffness of Cable-Stayed Suspension Bridge G.P. Xia and Z. Zhang	1039
Study on the Construction Control of Long-Span V-Shape Rigid Frame Composite Arch	
<b>Bridges</b> H.Y. Gou, Q.H. Pu, J.M. Wang, G.W. Hu and Z.Y. Chen	1043
The Rehabilitation Project of Highland Road Tunnel H.J. Liu, J.Y. Zheng and Z. Lin	1048

Overall and Step Iterative Algorithm of Cable Force for Multi-Rib Steel Truss Arch Bridge in Procedure of Rib Segments Assembling S.X. Zhou, M. Zhang, W.F. Tian and J. Xu	1052
Elasto-Plastic Stability Analysis of a Twin Continuous Rigid Frame Bridge with 195m High Single Pier	1002
S.X. Zhou, J. Xu, Y.B. Li and Q. Zhou	1056
Model Test for a New Chorded Arch Bridge Y.M. Gao and Z.X. Zhou	1061
Nonlinear FEM and Control Method for Super-Long Span Three Main Trusses and Three Cable Planes Railway Cable-Stayed Bridge Z.S. Yang, M.X. Ye, Y.Q. Zhou and L. Ou	1065
The Effect of Shear Lag on Long-Term Behavior of Steel/Concrete Composite Beams L. Miao and D.W. Chen	1070
Dynamic Properties Analysis for Self-Anchored Suspension and Cable-Stayed Combination System Bridge	1077
B.L. Zhan, Y. Xu, Z. Xu and X. Yang	1077
Center Tower Stiffness Study in Multi-Tower Suspension Bridge X.Y. Zheng, Z.D. Feng, H.J. Du and Y. Xu	1082
Study on Web Parameters of Prestressed Concrete Composite Box Girder with Corrugated Steel Web	
X.L. Yang, L.M. Niu, R.L. Zhang and G.X. Wei	1087
Numerical Calculation and Safety Evaluation of Impervious Effects of the Reinforced Dyke Y. Zhao, J.W. Zhang, T.C. Wang and X.J. Huo	1092
Space Seismic Response Analysis of City Elevated Curved Box Girders Bridge Q. Zhao	1096
Damage Monitoring and Field Analysis of Dynamic Responses of Ha Shuang Prestressed Concrete Box Girder Oblique Bridge before Strengthening A.F. Naser and Z.L. Wang	1102
Study on the Stiffness, Carrying Efficiency and Fatigue Character of the End Anchor Cable X.L. Li, R.C. Xiao, D.L. Li, Z.G. Sun and Y.F. Fan	1107
Study on Applicable Spans and Static Performance of the Suspension Bridges Using CFRP Cables Y. Jiang and L.J. Jia	1115
Study on Rapid Closure Technology of Long Span Continuous Rigid Frame Bridge D.L. Tan, D.K. Wang, W.R. Lu, L. Zhang and X.Y. Lin	1120
The Assessment and Research of Seismic Performance for Large-Scale Bridge Based on Fuzzy Mathematics D.W. Zheng and L.X. Qi	1125
Dynamic Characteristics Analysis of a Large Aqueduct	1123
B. Bai, Y.H. Li and X.S. Deng	1130
Longitudinal Seismic Forces of Long-Span Bridge B. Bai, Z.Y. Wu and X.S. Deng	1134
Influence Analysis of Different Prestress Stretching Order to Rectangle Aqueduct Z.Y. Wu, X.L. Bai and Y.H. Li	1138
Fatigue Performance of Deck Slab under Hogging Moment in Continuous Composite Girder Bridge	1140
P. Gao, Q.T. Su, C. Wu, Y.M. Sun and H.Y. Liu	1142
Research on the Installation Lengths of Zero Block Concrete Segment in Prestressed Concrete Box-Girder Beams with Corrugated Steel Webs P. Zhao and J.S. Ye	1147
$ \begin{array}{c} \textbf{Transfer Mechanism Study about Free Beam Moment for Beam-Arch Association Bridge} \\ Y.K.\ Yi \end{array} $	1154
Dynamic Response Analysis of Large Aqueduct Structure X.L. Bai, Y.Y. Fan, W. Yu and D.F. Wang	1159
Structure Analysis of Large Rectangle Aqueduct during Construction and Operation Periods	
X.L. Bai, D.F. Wang, Y.Y. Fan and W. Yu	1163

Research of Longitudinal Seismic Response of Self-Anchored Cable-Stayed Suspension Bridge under Pile-Soil-Structure Interaction	
F. Miao, W. Bo and G. Ping	1167
Correlation Analysis on Frost Heaving Ratio of Subgrade Soil and Plasticity Index under Freeze-Thaw Cycles H.B. Liu, J. Wang, C.L. Wu and K. Feng	1171
The Research on Load Transverse Distribution Coefficient of Prefabricated Skew-Plate Bridge Based on ANSYS H.B. Liu and Y.Y. Sun	1176
Studies on Effective Width of Continuous Composite Beam of Arch Bridge Q.T. Su and W. Wang	1170
Survey and Analysis of Exiting Reinforced Concrete Ribbed Arch Bridges K. Chen and J.Y. Song	1187
Effects of Local Deck Removal on the Mechanical Behavior of Wide Box Composite Girder Bridge Q.T. Su, D.F. Wang and G.T. Yang	1192
Experimental Study on In-Plane Behavior of CFST Arch with New-Type Dumbbell-Shaped Section	
Y. Sheng	1198
<b>Analysis of Wind-Induced Vibration Control of Long-Span Space Structure</b> Z.Q. Zhang, Y. Chen, G.X. Su and X.G. Zhu	1204
<b>Geometrical Nonlinear Analysis on Three-Tower Suspension Bridges under Live Load</b> X.N. Wu, Y. Xu, W.H. Li and P. Liang	1209
Based on Nonlinear Viscous Dampers Seismic Behavior Research of a Long Span Cable- Stayed Bridge	
H.Y. Jia, S.X. Zheng, L. Yang and M.Q. Xia  Application of Flexibility Method to a Chain Suspension Stiffening Beam Bridge	1214
W.J. Niu and Z.Y. Wang	1220
Seismic Isolation Analysis on Long-Span Platform Bridge Connecting Twin-Tower Structures	
H.S. Sun, L.N. Cheng and S.H. Chen	1225
Static and Dynamic Experiment of the Behavior of the Constructed Hanjiang Super-Major Railway Bridge in Laohekou Z.W. Qi, S.J. Fang, G.D. Lin and H. Wang	1230
Law of Stiffness Degradation of the PC Box-Girder Bridges with Web Cracking H.D. Huang, Z.F. Xiang and R.S. Feng	1236
FEA of Deck Corner Cracking on Skewed Bridge Structures Y.Z. Zhuang, G.K. Fu, T. Ji and B.C. Chen	1240
Load Distribution for Moment and Shear on Skewed Bridge Structures Y.Z. Zhuang, T. Ji and B.C. Chen	1244
Analysis of Reasonable Reinforcement Structure of Concrete Bridge Deck X.X. Tang, X.Z. Tang, Y. Xu and W. Guo	1248
Numerical Approaches to Movement of Suspended Cable under Wind Based on VFIFE Z.Y. Zhong	1252
Application of Improved Genetic Algorithm in the Optimal Design of Wind-Induced Vibration	
Y. Qiang, L. Li, J.Y. Li and H. Jian	1256
Effect of Radius of Curvature on Seismic Response of Curved Bridge B. Wang and Y.X. Liu	1261
A Note on the Equivalent Modulus of Elasticity of Stay Cables Y. Xiao, W.D. Zhuo and L.C. Fan	1266
Real Time Temperature Simulation on Caohe River Aqueduct in South to North Water Transfer Project During Construction Period P. Zhang and B. Tian	1270
Coupling Analysis of Slip and Deformation of Steel Reinforced Concrete Beams G. Fu	1275
Parameter Effect of Side Retainers on Seismic Response of Bridges with Flexible Rubber	12/3
<b>Bearings</b> X. Xu, W.Q. Liu, X.L. Xu, D. Zhou, X.H. Li and Z.J. Li	1280

Transverse Vibration Research for Railway Deck Steel Plate Bridges before and after Reinforcement	
W.P. Li, J.Y. Ren and M.B. Su	1285
Effect of Shear Lag on the Long-Term Performance of Long-Span PC Box Girder Bridge Y.W. Niu	1290
<b>Experimental Research on Steel-Concrete Composite Bridge Towers with Different Cross Sections</b>	
Q. Wang, X.X. Wang, C.S. Wang and Y. Xu	1295
Fatigue Truck Load and Fatigue Life Evaluation of Concrete Bridges for Shaanxi Province C.S. Wang, G. Li, G.D. Guan and Y.J. Wang	1299
<b>Experimental Research on Steel-High Performance Concrete Composite Bridge Towers and Piers</b>	
C.S. Wang, X.X. Wang and Q. Wang	1303
Bending Experimental Investigation for Concrete-Filled Rectangular Tubular Flange Composite Girders	1207
C.S. Wang, X.L. Zhai and J.W. Zhu Shear Resistance Study of Hybrid I-Beams Fabricated by HPS 485W and Q345 Steels	1307
L. Duan, L. Zheng, C.S. Wang and J.Y. Hu	1311
Theoretical and Experimental Study on Cable-to-Irder Anchorages in Long-Span Cable-Stayed Bridges with Steel Box Girder	1015
X. Wei and J. Li The Personal Finished Deed State Personal of Porticilly Forth Anchored Coble Stayed	1315
The Reasonable Finished Dead State Research of Partially Earth-Anchored Cable-Stayed Bridge L.W. Zhang and R.J. Xia	1319
Study on the Similarity Relationship	
Z.J. Hu, Y.Y. Wang and T. Jiang	1326
Chapter 3: Architecture & Urban Planning	
Research on Public Participation in Urban Planning Y. Xing, J.W. Liu, B.X. Li, M. Zhang and D.G. Meng	1333
Experimental Research on Raw Soil Structure in Yunnan Province Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai	1338
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China	1338
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing	1338 1344 1348
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang	1338 1344
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing	1338 1344 1348
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage	1338 1344 1348 1353
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center S.P. Zhang and C.J. Xu  Simulation for the Interior Natural Ventilation Condition of the United Habitation in	1338 1344 1348 1353 1358
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center S.P. Zhang and C.J. Xu	1338 1344 1348 1353 1358
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation  W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing  X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage  Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center  S.P. Zhang and C.J. Xu  Simulation for the Interior Natural Ventilation Condition of the United Habitation in Marseilles	1338 1344 1348 1353 1358 1363
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center S.P. Zhang and C.J. Xu  Simulation for the Interior Natural Ventilation Condition of the United Habitation in Marseilles T.Y. Zhang, X.T. Zhu and Y.H. Shang  Basic Discussion on Tectonics and Regional Architecture Creation C.Y. Chen  Simulation Research of the Impact on the Heat Transfer Capability of Structural Changes in Tube Heat Exchanger	1338 1344 1348 1353 1358 1363 1368 1373
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center S.P. Zhang and C.J. Xu  Simulation for the Interior Natural Ventilation Condition of the United Habitation in Marseilles T.Y. Zhang, X.T. Zhu and Y.H. Shang  Basic Discussion on Tectonics and Regional Architecture Creation C.Y. Chen  Simulation Research of the Impact on the Heat Transfer Capability of Structural Changes in Tube Heat Exchanger B.S. Liao	1338 1344 1348 1353 1358 1363
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center S.P. Zhang and C.J. Xu  Simulation for the Interior Natural Ventilation Condition of the United Habitation in Marseilles T.Y. Zhang, X.T. Zhu and Y.H. Shang  Basic Discussion on Tectonics and Regional Architecture Creation C.Y. Chen  Simulation Research of the Impact on the Heat Transfer Capability of Structural Changes in Tube Heat Exchanger B.S. Liao  The Application of Space Syntax in the Conservation and Regeneration of Historical Areas B. Xu	1338 1344 1348 1353 1358 1363 1368 1373
Z. Tao, L.B. Qin, W. Pan, X.D. Yang and Y. Bai  Optimization of Building Envelope and Heating System in Heating Areas in Northern China P.F. Jie, D.Y. Li and N. Zhu  Consideration on Issues about Study of Building Energy Conservation W.H. Zhang and J.P. Liu  G-Level Open Space - a Case Study of NFHY Community in Chong Qing X.J. Li, Z.Y. Deng and Y. Zhang  Harmonizing and Accreting between History and Reality of the European Architectural Heritage Q. Zhang  The Performance-Based Design of Evacuation of a Conference Center S.P. Zhang and C.J. Xu  Simulation for the Interior Natural Ventilation Condition of the United Habitation in Marseilles T.Y. Zhang, X.T. Zhu and Y.H. Shang  Basic Discussion on Tectonics and Regional Architecture Creation C.Y. Chen  Simulation Research of the Impact on the Heat Transfer Capability of Structural Changes in Tube Heat Exchanger B.S. Liao  The Application of Space Syntax in the Conservation and Regeneration of Historical Areas	1338 1344 1348 1353 1358 1363 1368 1373

Research on the Localization Strategy of Green Building D.X. Zhang, D.P. Liu, M. Xiao and L. Chen	1394
Survey and Revelation about Habitation Demands in the Process of Suburb Peasants Urbanization	1200
J. Qian Simulation Study on the Aspirating Smoke Detection System in Large Space Buildings	1399
Z.N. Zhang and H.B. Chen	1404
University of New Design of Campus Planning C.W. Xie, G.R. Xie and F. Yang	1409
Investigation on Indoor Air Quality of Public Sites in Tainan Area Y.T. Wang, J.C. Chiu, Y.C. Hsu, T.N. Wu, Y.H. Shen and S.B. Wen	1413
Discussing the Campus Landscape Design from Hargreaves's Landscape Design Idea F. Yan, J.P. Liu and S.L. Zhao	1418
Theoretical Reflection on Disaster Prevention and Reduction in Southwest Mountainous Cities	
Y.Y. Li, W.M. Zhao and M. Zhu	1422
The Research of Urban Plaza Design F. Yan, J.P. Liu and L. Li	1426
Discussion on the Role of Rural Landscape Planning in Socialist New Countryside	1.20
Construction J.P. Liu, F. Yan and S.Q. Liu	1431
The Research of Urban Public Space Design	1731
J.P. Liu, F. Yan and Z.X. Tang	1435
On the Standard and Eco-Indexes for Ecological Residential Quarters Based on a Comparison of Chinese and German Experiences L.B. Zhu and A. Gruner	1439
Analysis on the Inter-Compensatory Problem in Green Building Rating System LEED-NC	1737
Based on Energy Saving T. Zhou	1444
Talk about the Soft Tradition in Architecture W.L. Yin	1449
Function Analysis and Evaluation of the Natural Light Environment in the Gymnasium Based on Value Engineering Theory Y. Liu, G. Yu and D.M. Liu	1454
Crossing Materiality and Immateriality: LED Architecture and Architectural	
Virtualization G. Yu, Y. Liu and G.T. Zhou	1459
Low-Carbon City and Underground Space Planning in the Mountain City - A Case of Chongqing	1.05
H. Yuan, X.R. Liu, Z.Z. Dai, J.F. Luo and P. Li	1464
Function Evolution of Urban Underground Space Before 20th H. Yuan, Z.Z. Dai, L.L. Dong and S.G. Yang	1468
The Present Situation and Design Strategy of Mountain City's Lake Park - a Case of Lake Park in Three Gorge Reservoir Area	
H. Li, H. Yuan and L.L. Dong	1473
Aesthetic Visual Ecology and Urban Landscape Planning D. Chu	1479
Intelligence Evolvement and Overall Design of Architecture Originality R. Zhang and B.Z. Yang	1484
The Inheritance and Development for Wooden Roof of the Traditional House in Nyingchi, Tibet	
K. Ma and B.T. Liu	1489
Research on Spatial Planning Strategy for the Margin Area of Harbin in Ecological Rehabilitation - Taking Xinyi Channel as an Example B.X. Xue, H.Z. Li and Z.Q. Zhao	1494
Study on Preserving Architectural Heritage in Qingdao	
C. Liu Citizen Participation in Chinese Urban Planning: Learning from Shenyang and Qingdao	1499
C. Liu	1503

Design of Miniature Scenery of Region Heritage in Expo2011 Xi'an - Planning and Design of Yanan Garden	
G.M. Song and X.L. Han	1507
Hotel Space Design and Planning and the Trend in its Development G.M. Shi	1512
Research of New Countryside Settlements Planning and Architectural Design under Eco- Design Strategy - Case Study with Countryside Settlements in GuanZhong Area Q.B. Liu and J.Y. Zhao	1518
A Preliminary Compare of the Chinese and Western Architecture X.P. Wu and Y.X. Zhou	1523
Formation, Declination and Rebuilding of City Features X. Li and W.M. Zhao	1527
Improvement of the Indoor Environment and Airborne Contamination Control in an Operating Room	
F.J. Wang, Y.H. Yau, W.B. Ng and C.M. Lai	1532
<b>Performance Testing of a Thermoelectric Cooler for Medical Application</b> F.J. Wang, J.C. Chang, K.C. Lin and Y.H. Yau	1537
The Construction of the Daily Life Mode of Low Carbon City Y. Dong and D. Wei	1541
Research on Urban Color Environment Planning Based on Regional Characteristics - Take Urban Color Environment of Zhengzhou for Example J. Ren	1546
Research on the Revival Application of Wooden Building with the Properties of Anti-	1340
Seismic Energy-Saving and Environment Protection	
Y.L. Wang	1551
The Acrylic Spike Design of British Pavilion, 2010 EXPO D.C. Mao, W.X. Li and M. Cerini	1558
Space Design of Business Buildings Base on the Different Gender Shopping Behavior J. Tang	1563
The New Perspective of Research on Settlement Patterns in China Cities - Environment-Behavior Studies Q. Wu and X.M. Wang	1568
Illumination Oriented Function Design of Beijing Sanlitun Village Commercial Blocks Y. Zhang, Z.Y. Deng and X.J. Li	1573
The Study on Audio Oriented System of the Track Transportation Subway Spaces Y. Zhang, Z.Y. Deng and X.J. Li	1578
Carbon Emissions Calculation Model of Building Based on PAS2050 X.F. Yan and Y. Meng	1582
Material Management System Based on Daily Work	
S.C. Kim and Y.W. Kim	1587
Protection and Utilization Research of Qingdao Historical Celebrities' Former Residences H.X. Yu and K.F. Xu	1592
Strengthening Analysis on Tenon-Mortise Joint of a Face Beam in Tai-He Palace in the Forbidden City in China Q. Zhou and W.M. Yan	1597
Sinkage of a Chinese Ancient Rampart Soil by Simulation Q. Zhou and W.M. Yan	1603
The Planning Strategy of Public Rental Housing in the Perspective of Residential	1003
Segregation - Taking Metropolitan Area of Chongqing as an Example Y.H. Xu, Y.K. Lv and Y. Huang	1607
Strategy of Adaptable Renewal Planning on Culture-Led Existing-Blocks in the Main City of Chongqing Y.H. Xu and J. Xu	1612
The Research on "Urban-Rural Field and Park" Planning Mode of Chongqing New	1012
Countryside Construction – Taking Qianqiu Village as a Case on Study Y.H. Xu, Y. Huang and D.C. Luo	1617
Forecasting the Future City & Building by Analyzing the Future Oriented Neologisms & SF Movies with Maslow's Hierarchy of Needs	
K.I. Chin	1622

Multiobjective Optimization on Urban Flooding Using RSM and GA X.G. Tang, M. Rezoug, R. Hamzaoui, D. Bassir, R. El Meouche, J.F. Khreim and Z.Q. Feng	1627
Analysis and Test on Indoor Thermal Environment of Tibetan-Style Dwellings of Different Materials	
L.P. Li	1632
Analysis of Landscape Design of Green Space of University Students' Living Area from Environmental Psychology - a Case Study of Chang'an Campus of a University in Xi'an X. Chen and J.H. Yu	1639
Approach to Folk Construction Techniques of Earth-Dwelling Caves L.P. Tong, Z.Y. Chen and W.J. Li	1644
The Optimization Design of Traditional Dwelling House in Loess Plateau - a Case Study of New Countryside Cave Dwelling House in Yan'an City Y. Wu and H.F. Li	1649
Chapter 4: Dynamics of Structures	
Simulation of a 3-D Concrete Frame Structure Collapse in Considering Impact Action among Blocks	
J. Hou, M. Zhou and Z. Yang	1655
Control of a Spring Pendulum with Single-Frequency Excitation H. Xiao, J.S. Tang and W. Yan	1660
Dynamic Response of Stiffened Plate under Underwater Contact Explosions J. Zhang and X.H. Shi	1665
A New Spectral Representation of Earthquake Recordings Using an Improved Hilbert- Huang Transform	1671
T.L. Huang, W.X. Ren and M.L. Lou  Identification of MDOF Non-Linear Uncoupled Dynamical Systems Using Hilbert  Transform and Empirical Mode Decomposition Method  T.L. Huang, W.X. Ren and M.L. Lou	1671 1676
Analysis of the Dynamic Response of Underground Structures under Internal Explosion P.F. Ning and D.G. Tang	1681
Correction Model of Ship Bridge Collision in Navigable Waterways of Fujian Province Y. Su, G.P. Shang, W.D. Zhuo, G.R. Lin and D.M. Fang	1687
Structural Dynamic Characteristics Determination Using Response Data in Small Earthquakes M.S. Gong, J. Sun and L.L. Xie	1692
Dynamic Response of a Heterotypic Concrete Filled Steel Tube Arch Bridge Subjected to Moving Vehicles	1092
Y. Li and X.Y. Huang	1696
Study on the Effect of Hydrodynamic Force on Deep-Water Bridges in Earthquake Y. Li, K.H. Wang, Q. Li and W. Han	1701
Numerical Simulation of Highway Double Curved Arch Bridge Structure Blasting Demolition C.M. Xie and J. Yang	1706
Effects of Column Stiffness on the Modal Contribution to Displacement Response of Singe-Column Bent Viaducts in the Transverse Direction L. Chen	1711
Study on Applicability of Equivalent Single Degree of Freedom Methods for Single Column Pier with Uniform Cross Section L. Chen	1716
The Precise Transfer Matrix Method for Dynamic Characteristic Analysis of Curved Box Beams J.P. Sun and Q.N. Li	1721
Analysis of the Action Blast-Induced Vibration Generates on Structure Z.X. Yan, H.C. Cai, P. Jiang and H.Y. Wang	1721
Free Vibration Analysis of Orthotropic Circular Membranes in Large Deflection Z.L. Zheng, W.J. Song, C.J. Liu, Y.P. Xu and J. Long	1730

Spatial Coupling Vibration of Vehicle-Track-Bridge System due to Different Track Irregularities	
Y. Zhang	1735
<b>Design of Collision-Proof Equipments for Non-Navigable Hole of Inland River Bridge</b> G.B. Liu, M.X. Lei, Z.B. Lei, C.C. Chen and B.F. Ou	1740
High Speed Photography System of Vehicle/Barrier Crash Testing Laboratory Y.Z. Wang, M.X. Lei, Z.B. Lei and J.J. Ling	1745
The Study for the Electronic Control Technology of the Electric Power Traction System in the Bridge/Shipping Crash Testing Laboratory X.Y. Zhang, M.X. Lei, Z.B. Lei and B.F. Ou	1750
Overall Design Method for Large Structure Crash Testing Laboratory Z.B. Lei, X.Y. Zhang and M.X. Lei	1755
Progressive Collapse Mechanics of Reticulated Dome under Impact D.Z. Wang, J.W. Dai, F. Fan and X.D. Zhi	1760
Research on Dynamic Responses of Subway Stations to Explosive Loads D.S. Kong, W.W. Zhang, Q.H. Zhang and Q.H. Meng	1765
<b>Vibration Source Inversion and Vibration Evaluation of a Tall Residential Building</b> M.F. Li and G.F. Jin	1770
Analysis on Vehicle-Bridge Coupled Vibration of a Rigid-Frame Arch Bridge Based on Measured Road Roughness W.S. Han, S.J. Yuan and B. Wang	1775
Dynamic Performance Analysis of Roof Structure with Steel Tubular Arch-Truss J. Yuan	1775 1781
Research on Dynamic Factor of the Column with Different Constraints Subjected to Blast Shock	
Y.F. Jiao, Y.L. Hou and X.Y. Wei	1785
Coupled Vibration Analysis of Vehicle-Bridge System for Yujiang River Bridge on Nanning-Guangzhou Railway Line D.S. Shan and S.G. Cui	1790
Longitudinal Vibration Control of Long-Span Railway Cable-Stayed Bridge D.S. Shan, Y. He and L. Qiao	1795
Research on Deflection and Stress of CRCP under Concentrated Vehicle Load over Hollow Base	
X.B. Chen, X.M. Huang and J.H. Tong	1800
Vibration and Bridge-Borne Noise from Urban Rail Transit Trough Beam J.L. Han, D.J. Wu and Q. Li	1806
The Three-Phase Boundary Dynamic Variation of the Porous Gas Electrode M. Zhu and X.Z. Xu	1810
Testing Study on Damage Fracture Responses of Rock under Dynamic Impact Loading P. Cao, Y.X. Wang and K.W. Xia	1815
Theoretical Research of the Active-Type Dynamic Vibration Absorbers Z.L. Chen, A.L. Ma, X.L. You and L.Q. Shi	1820
<b>Dynamic Response of Simply-Supported Curved Girder Bridges due to Vehicles</b> J.Q. Bu and G.W. Li	1825
An Integral Equation Method for Free Vibration of Circular Plate with Concentrated Mass at Arbitrary Positions G. Cheng, Q. Cheng and W.D. Wang	1830
Structural Modal Analysis Based on HHT and Butterworth Filter D.Y. Cui, K.G. Xin and Q.Q. Qi	1836
Chapter 5: Computer Simulation and CAD/CAE	
Campier of Computer Simulation and Crib/Crib	
Application of Earthquake Damage Forecast with PKPM Software on Important Buildings in Xichang	
Q.Y. Li, G.H. Yu and X.Y. Guo  Application of Computer Simulation Technique in Smake Control System Design	1843
Application of Computer Simulation Technique in Smoke Control System Design Y. Chen, S.C. Li and J. Ji	1848

<b>3-D Numerical Analysis on Performance of Prestressed and Precast Concrete Segment Joint</b> F.J. Liu, L. Xie, H.H. Zhu and N. Yu	1853
Numerical Analysis of the Rural Building due to Flood Impact S.Y. Xiao and Y.F. Sun	1857
Automatic FLAC3D Mesh Generation Based on Advancing-Frontal Method Y.L. Qiu, X.Y. Hu, Z. Wang and Z.J. Wang	1862
Numerical Study on Progressive Failure of the Marble Plate Based on the Thin-Layer Tri- Node Jointed Element J.H. Qi, Z.N. Zhang and X.R. Ge	1867
Finite Element Analysis and Simplified Model of Searing Bottom Concrete for Steel Cofferdam	1072
M.L. Yang, G.Y. Xia and F.P. Zhong  Steel Cofferdam Design and Calculation for High Pile Cap Construction G.Y. Xia, M.L. Yang, C.X. Li and S.W. Lu	1873 1879
Research on the Superficial Thermal Insulation Calculation Method of Massive Concrete Structure J.K. Ren, S.Y. Li and L.J. Zhao	1885
On Validity of the Crack3D FEM Code to Solve the Crack Cylinder of the Saint-Venant's Torsion Problem	1003
X.Y. Tang	1891
<b>3D Modeling of Complicated Geological Body in Numerical Software</b> D.M. Yu, H.L. Yao and F.G. Chen	1895
Theoretical and Numerical Analysis on Membrane Effects of RC Slabs C. Li and F. Qin	1900
Secondary Development of ANSYS Software to Calculating Sunshine Temperature Stress of Hollow Pier J.Y. Ge	1906
<b>FEM Simulation of Deformation Field during the Sheet Metal Forming</b> B. Li, H.T. Zhang, H. Wang and J.D. Chang	1910
Practical Method for Concrete Creep Calculation Based on ANSYS J.Y. Ge and H. Zhang	1915
A Semi-Analytical Finite Strip for the Analysis of Folded Plates R.J. Jiang	1920
The Research on Application of Strength Reduction Finite Element Method in Stability Analysis of Weak Intercalated Rock Tunnel D.K. Shi and Y.S. Zhang	1926
Study on the Dedicated CAD Sub-System for Custom Tooling X. Cheng, J.Y. Liu, X.H. Yang, Z.Q. Tian and P. Jia	1930
An Improved Finite Beam Element Method for Calculating Lateral Displacements of Piles Subjected to Inclined and Eccentric Loads	1024
M.H. Yang, B.F. Ou and S.W. Lu  Structure Statics Finite Element Model Updating Based on Response Surface Methodology	1934
M.Y. Deng and G.H. Li  Design Method of Longitudinal Bracing Force Based on Monte Carlo Simulation	1939
J.Y. Zhao, X. Guo, W.C. Liu and H.L. Zuo	1944
Preprocess and Post-Process Tunnels with Parameterized EPS Layers Based on ABAQUS Using Python D.L. Wang	1949
Analysis of Reinforced Concrete Column Using a Beam-Column Element with a Meshed Section L.Y. Zhou and Q. Li	1954
Nonlinear Analysis of Reinforced Concrete Core Walls Based on Three-Vertical-Line- Element Model K. Li and Q.X. Shi	1959
Finite Element Analysis of a Steel Spiral Staircase with Multiple Supports T. Chen and H.D. He	1939
Exact Expression of Element Stiffness Matrix for a Tapered Beam and its Application in Stability Analysis	1707
L.X. Meng, N.L. Lu and S.M. Liu	1968

Finite Element Analysis on Mechanical Behavior of Column Underpinning Joints for Building Moving	
Q.X. Yue and X. Zhang	1974
Effection of Relevant Parameters of Infilled Frame Wall on its Structural Lateral Stiffness S.M. Liu and D.S. Huang	1979
Gait Recognition Algorithm Based on the Trajectory of Tiptoe Y.B. Li and Q. Yang	1984
Structural Property Analysis of a Kind of Petri Net Synthesis C.L. Xia, Z.D. Liu and P. Sun	1989
<b>Data-Based Adaptive Fuzzy Wavelet Filter for Robot-Assisted System</b> Z. Liu, Q.H. Wu and Y. Zhang	1994
LS-SVM Based Self-Learning Tremor Controller for Microsurgery Z. Liu, Q.H. Wu and Y. Zhang	1999
The Symmetrical Variation of 2DPCA for Face Recognition Z. Yue, D.Z. Feng and X. Li	2004
The Research on Mediating Effect Model of Relationship Benefits in Materials Industries:  Data Mining	
Q.M. Kong and M.L. Zhang	2009
Towards the Harmonious Mating for Genetic Algorithms F.L. Huang	2013
Six-Dimensional Chaotic System and its Circuit Implementation J.L. Zhu, Y.J. Wang and S.Q. Kang	2018
User Identification Based on Force-Sensing Keypad by Force-Space-Time Method L. Tang, C.Q. Yang and Z.W. Wu	2023
Improving Relevance Feedback via Using Support Vector Machines Z.L. Chen and Y. Lu	2028
Preprocessing in Model Counting through Clause and Variable Elimination Q. Guo, A.L. Wang and Y. Liu	2033
An Adaptive Edge Detection Method Based on Canny Operator B.H. Lang, L.Y. Shen, T.L. Han and Y.Q. Chen	2037
A Real-Time Audio Watermarking Algorithm Based on MCLT Q.Y. Zhang, Y.B. Huang and J.B. Deng	2042
Fingerprint Image Enhancement Algorithm Based on FDCT C.B. Tao and G.D. Liu	2047
Research on Bullwhip Effect Considering Allocation Mechanism in Supply Chain Z.Q. Li	2052
An Image Retrieval Model Based on Local Fisher Discriminant Analysis Y.M. Wang	2057
An Efficient Subcarrier Power Allocation Algorithm in Cognitive WSN X.R. Xu, J.W. Zhang, B.Y. Zheng and J.R. Yan	2062
Domain-Relied QSOFM and its Application in Deep Web Topic Classification L. Zhang, Y.L. Lu and J.H. Liu	2067
Fused Image Quality Measure Based on Structural Similarity Y.Y. Han, J.J. Zhang, B.K. Chang, Y.H. Yuan and H. Xu	2072
MEMS Gyroscope Null Drift and Compensation Based on Neural Network J.K. Shiau, D.M. Ma, C.X. Huang and M.Y. Chang	2077
Colonial Competitive Algorithm Assisted Least Squares Support Vector Machines Y. Ren and G.C. Bai	2082
A Network Expense Model for Improving P2P Data Distribution Schemes J.H. Chen, J.Q. Xi and L. Shao	2087
Optimal Trajectory Planning for Robot S.H. Piao, Q.B. Zhong, X.F. Wang and C. Gao	2091
Research of Object Recognition Algorithm Based on Variable Illumination S.H. Piao, Q.B. Zhong, S.A. Wang and X.F. Wang	2096
A New Robot Stance Control Method	2101
A Home Security Monitoring System Study of Intelligent Building Y.Y. Zhang	2106

Sustainable Development of IT Industry in Taiwan Y.C. Chen, D. Chang and C.E. Huang	2111
Research on Simulation about a Class of Complex Adaptive System Y.H. Shao and S.N. Xu	2116
Enhancing the Flexibility of Kademlia under Churn Q. Xu, L.C. Sun, M. Zhang and T. Zhao	2121
<b>Turing Instability and Hopf Bifurcation for the General Brusselator System</b> G.H. Guo and B.F. Li	2126
Ammonia Detection by Dye Immobilized Microstructured Optical Fiber L.R. Peng, X.H. Yang, L.B. Yuan, E.M. Zhao, L. Li and S.Z. Luo	2131
<b>Application Research of Fuzzy Control for AC Motor on the PLC Platform</b> L. Qin, Y. Jiang, X.X. Tan and L.Y. Li	2136
<b>An Improved P-SVM Model for Patent Application Filings Prediction</b> S. Xu and T. Qi	2141
<b>Super-Resolution Reconstruction of Video Sequences by GST-Driven Adaptive Filtering</b> L. Guo and L.Z. Lian	2145
Research on Pyrolysis Analysis and Morphology Change of Waste Computer Mainboard H. Jiang and H.Y. Chen	2150
<b>Detection of Laser Direction and Wavelength Using the Unitized Wedge</b> L. Zhang	2155
A Novel Variable Step-Size Algorithm for Implicit Integration J.X. Zou, C.Y. Zhou and G. Zheng	2159
The Missile Fault Diagnosis Expert System Based on GA-BPNN J.X. Zou, Y. Zhang and G. Zheng	2164
The Experimental Study on Infiltrating Characteristics of Different Mediums H.F. Liu, T.W. Qian and H. Chen	2169
Green Optimization Based on Cellular Automata for Process Planning and Production Operation in Workshop	2174
G. Zhao, H. Zhang, Z.G. Jiang, W. Yan and Y.H. Wang  Functional Safety Management in Microcontroller Design and Development Process: the  Case of Safety-Critical Vehicle Systems  B.H. Zhou and Z.Q. Zhai	2174 2179
Facial Expression Recognition Using Improved Canonical Correlation Analysis L. Gang and Z. Yong	2183
A Inter-Subsystem Private Data Transfer Protocol Based on a New High Secure Computer Architecture G.X. Sun, F.J. Shao and S. Bin	2188
ID-Based Deniable Ring Signature with Constant-Size Signature C.Y. Hu and P.T. Liu	2192
An Application Anti-Attack Model H.J. He, L. Luo, Y. Wang, Z.P. Duan, Z.H. Fang and W.Z. Zhang	2197
Evaluation of Pushing and Pulling Force for Substitute Astronaut (SA) at Comfortable Position D.X. Li and Y. Zhao	2203
Cooperation, Competition and Independent in Channel Relationships: An Empirical Study Based on E-Commerce X.F. Tang, Y. Wang and J. Zheng	2208
Research on Smooth Support Vector Regression Based on Hermite B. Ren and L.L. Cheng	2215
A New Congestion Control Algorithm of CDMA Systems P. Liu	2220
Enforcing Data Privacy in Outsourced Database Services Y.H. Yu and W.Y. Bai	2224
Research of the Two-Vehicle Joint Operation Control System Based on Joint-Movement	<i></i>
Navigation L.X. Li, D.K. Ding and H.X. Li	2229
Class Hierarchical Structure-Based Text Classification X.Y. Chen and J.H. Chen	2233

A Content-Based Multilevel Caching Policy for Super-Peer Networks	2220
Y.S. Tan and Y.T. Wu A Novel Secure Communication Scheme Based on Chaotic System	2238
P.C. Wei, W. Ran and J.J. Huang	2242
Study on Intelligent Extracting Algorithm of Zipper Teeth from Image Y.C. Zhong, J.F. Chen and J.L. Gao	2248
A Smart Predictive Control Algorithm for Heating Furnace J. Yang, J.B. Tang and Z.H. Xu	2253
Data Dissemination Scheme Research in Opportunistic Sensor Networks H.L. Shen, Z.G. Chen and Z.L. Chen	2257
A Passive Third-Order Cascade PLL Filter L. Feng, C. Wu, B. Jin and Z.Y. Wu	2262
Research on Exact Lower Bounding Segmentation of DTW Distance L. Feng, C.Y. Xu, H. Zheng and B. Jin	2267
Affine Reconstruction Based on Parallel Plane and Infinity Point Y. Zhao and X.H. Hu	2272
Research on Human Behavior Recognition in Video Surveillance W.Q. Zhu, Q.Q. Li, J.F. Man and X.B. Wen	2276
<b>Segmentation and Tracking of Human in Crowded Environments</b> J.F. Man, H.Y. Lin, Q.Q. Li and X.B. Wen	2281
Plant Identification Based on Artificial Intelligence Y.Y. Gan, C.S. Hou, T. Zhou and S.F. Xu	2286
Robust Watermarking Algorithm Based on Hilbert-Huang Theory M.H. Deng, Q.S. Zeng and X.L. Zhou	2291
Some New Security Strategies Description about Grid Y.H. Liu	2296
Chapter 6: Earthquake Engineering	
Research on Pounding Response at Expansion Joint in the Linear Bridge and the Curved Bridge under Earthquake	
Bridge under Earthquake T.L. Wang and Q.N. Li	2303
Bridge under Earthquake T.L. Wang and Q.N. Li Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness	
Bridge under Earthquake T.L. Wang and Q.N. Li Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area	2308
Bridge under Earthquake T.L. Wang and Q.N. Li Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih	
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu	2308
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave  Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu	2308 2313
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB	2308 2313 2318
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu  Influence of Earthquake Attack Angle on Seismic Demands for Structures under Bi-Directional Ground Motions Y. Zhang, Q.W. Li and J.S. Fan  The Influence of Column-to-Beam Strength Ratio on Seismic Performance of Concrete Filled Tube Moment-Resistant Frames	2308 2313 2318 2325 2330
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu  Influence of Earthquake Attack Angle on Seismic Demands for Structures under Bi- Directional Ground Motions Y. Zhang, Q.W. Li and J.S. Fan  The Influence of Column-to-Beam Strength Ratio on Seismic Performance of Concrete Filled Tube Moment-Resistant Frames B. Mou, P.Z. Xu, X. Wu, D.M. Gao and L.C. Zhang  Dynamic Characteristics of Base-Isolated Steel Frame under Seismic Ground Motion	2308 2313 2318 2325 2330 2335
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu  Influence of Earthquake Attack Angle on Seismic Demands for Structures under Bi- Directional Ground Motions Y. Zhang, Q.W. Li and J.S. Fan  The Influence of Column-to-Beam Strength Ratio on Seismic Performance of Concrete Filled Tube Moment-Resistant Frames B. Mou, P.Z. Xu, X. Wu, D.M. Gao and L.C. Zhang  Dynamic Characteristics of Base-Isolated Steel Frame under Seismic Ground Motion M. Saeed Masoomi, S.A. Osman and A. Jahanshahi	2308 2313 2318 2325 2330
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu  Influence of Earthquake Attack Angle on Seismic Demands for Structures under Bi- Directional Ground Motions Y. Zhang, Q.W. Li and J.S. Fan  The Influence of Column-to-Beam Strength Ratio on Seismic Performance of Concrete Filled Tube Moment-Resistant Frames B. Mou, P.Z. Xu, X. Wu, D.M. Gao and L.C. Zhang  Dynamic Characteristics of Base-Isolated Steel Frame under Seismic Ground Motion	2308 2313 2318 2325 2330 2335
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu  Influence of Earthquake Attack Angle on Seismic Demands for Structures under Bi- Directional Ground Motions Y. Zhang, Q.W. Li and J.S. Fan  The Influence of Column-to-Beam Strength Ratio on Seismic Performance of Concrete Filled Tube Moment-Resistant Frames B. Mou, P.Z. Xu, X. Wu, D.M. Gao and L.C. Zhang  Dynamic Characteristics of Base-Isolated Steel Frame under Seismic Ground Motion M. Saeed Masoomi, S.A. Osman and A. Jahanshahi  Prediction of Target Displacement of Reinforced Concrete Frames Using Artificial Neural Networks	2308 2313 2318 2325 2330 2335 2341
Bridge under Earthquake T.L. Wang and Q.N. Li  Seismic Performance of Haunched Beam Transfer Structures of Frame-Supported Short-Leg Shearwall with Varied Ratio of Short-Leg Shearwall Section Height to Thickness Y. Qi, C.M. Zhu, S.S. Zhong, F. Wang and Y. Xiang  Numerical Study of the Characteristics of Wave-Wave Interactions in Multiphase Wave Field Near Coastal Area R.S. Shih  Application of Wavelet Transform Theory to Rayleigh Wave Exploration J.Z. Lin, M.J. Zhao, D.L. Wu and X.J. Liu  Experimental Study on Three-Dimensional Base-Isolated Model with 3DIB Y.M. Zhao, J.Y. Su and M. Lu  Influence of Earthquake Attack Angle on Seismic Demands for Structures under Bi- Directional Ground Motions Y. Zhang, Q.W. Li and J.S. Fan  The Influence of Column-to-Beam Strength Ratio on Seismic Performance of Concrete Filled Tube Moment-Resistant Frames B. Mou, P.Z. Xu, X. Wu, D.M. Gao and L.C. Zhang  Dynamic Characteristics of Base-Isolated Steel Frame under Seismic Ground Motion M. Saeed Masoomi, S.A. Osman and A. Jahanshahi  Prediction of Target Displacement of Reinforced Concrete Frames Using Artificial Neural Networks I. Kameli, M. Miri and A. Raji  Correlation between Damage Indexes in Knee Bracing Frames Subjected to Earthquakes	2308 2313 2318 2325 2330 2335 2341 2345

Assessment of Seismic Capability of an Old Masonry Teaching Building X.C. Feng, X.Y. Li and Z.C. Deng	2360
Effect of Parameters on Equivalent Number of Cycles Using Nonlinear Seismic Site Response Analysis	2265
E. Gheibi and M.H. Bagheripour  Influence of Soft Interlayer in Concrete Sandwich Panel on Propagation Characteristics of  Plane Explosive Ways	2365
Plane Explosive Wave Y.X. Dong, S.S. Feng, X.J. Duan and L.X. Xiao	2370
<b>Study of Seismic Collapse Damage Based on Structural System Method</b> L. Yue and S.C. Zhao	2375
Analysis of Seismic Resistance Capability of Masonry Structure H.B. Liu, X. Guo and Y.Y. Yu	2380
Topology Optimization of Bracing Systems for Multistory Steel Frames under Earthquake Loads	2388
J.Z. Huang and Z. Wang  Analysis of Earthquake Resistance & Seismic Isolation Capacity about Mass Concrete  Equipment Foundation of Industrial Buildings  H.J. Liu, H.M. Li and J. He	2394
Typical Seismic Damage Analysis and Repair Reinforcement Methods Study of Reinforced Concrete Industrial Buildings H.J. Liu, H.M. Li and J. He	2399
Study on Reconstruction Program of Cereals Infrastructure after the Wenchuan Earthquake - with the City of Mianyang for Example G.X. Chen, Z.R. Xiao and M. Shan	2404
Comparison between Supporting Structure Programs in Deep Foundation of Zhengzhou Exhibition Hotel and Analysis on Monitoring Results G.X. Chen, Z.R. Xiao and M. Shan	2409
Seismic Behaviour Experimental Study of the D-Type Energy Dissipating Eccentrically Brace	
X.Z. Pan, J.P. Hao and J. Gao  Saigmin Bouferman & Evaluation for Steel Beinforced Congrete Frame Structures	2414
Seismic Performance Evaluation for Steel Reinforced Concrete Frame Structures Q.W. Wang, Q.X. Shi and L.J. Tang	2421
Performance-Based Pushover Analysis for Reinforced Concrete Frame H.Z. Zhang and X.Q. Cui	2426
Experimental Study on Direct Performance-Based Behaviour of High-Performance Concrete Shear Walls X.W. Liang, J.L. Kou and M.K. Deng	2434
<b>Experimental Investigation on Seismic Behaviors of High-Performance Concrete Shear</b>	
Walls of Rectangular Section X.W. Liang, J.L. Kou and M.K. Deng	2439
<b>Experimental Study of Uniaxial Tensile of High Performance Ductile Engineered Cementitious Composites</b>	2444
J.L. Kou, M.K. Deng and X.W. Liang  Analysis on Stress of Inner Steels of Isolator with Large Diameter and Low IRHD Rubber under the Condition of Large Horizontal Deformation	2444
C.Y. Shen, M.H. Zhou, X.Y. Huang, Y.H. Ma, X.Z. Zhuang and J.M. Jin	2449
Research on the Base-Isolation Efficiency of Large-Scale Terminal C. Zeng, Z. Tao and W. Pan	2456
Five-Element Connection Number Method for Seismic Damage Evaluation on RC Structure F.X. Li	2461
Seismic Performance Analysis of Buried Pipeline S.H. He, Z.P. Li and X.Z. Zhang	2466
Considering the Effect of Infilled Wall in Frame Structure Based on Reinhorn-Valle Damage Model on Earthquake Damage Analysis J.L. Chen, Z.Y. Wang, J. Ren and L. Zhang	2471
An Equivalent Frame Model for Seismic Analysis of Existing Masonry Building Q.W. Su, Y. Xia and S.C. Zhao	2478
The Seismic Experiment of Steel Frame with GRC Lath L.F. Lu, T. Zhang and W.Q. Fang	2483

<b>Study on Seismic Performance of Double Spherical Bearing</b> B. Yan and P. Liu	2488
Research on Aseismatic Reinforcement of a Frame Structure Energy Dissipation and Shock Absorption	
H. Ji and H.S. Zhao	2492
Seismic Damage Detection Using Pushover Analysis M. Vafaei, A. bin Adnan and M. Yadollahi	2496
Performance-Based Seismic Design of Reinforced Concrete Beam-Column Joints B. Wei, Z.G. Guan and J.Z. Li	2500
Optimized Fuzzy Logic Controller for Semi-Active Control of Buildings Using Particle Swarm Optimization	
M. Ostadali Makhmalbaf, M. Amin Tutunchian and M. Zabihi Samani  Dynamic Response Analysis for Intersection of Transverse Traffic Tubes and Main Tunnel in a Highly Seismic Region  L.J. Chen, B. Liang and Z.Y. Wang	2505 2510
Smart Base Isolation Control Adopted Semi-Active Fuzzy Strategy for Seismic Response of Structure	2310
G.Y. Yan and W.J. Wu	2515
An Analytic Solution for the Diffraction of Plane P Waves by a Cylindrical Inclusion in Half Space	2520
D.G. Li, X.P. Gao and Z. Ying  Three Dimensional Seismic Response Analyses on the Isolated Spatial Beam String	2520
Structure N. Zhao and Y. Jiang	2526
Research on Elastic-Plastic Seismic Response of Inclined Mega-Structures N. Zhao and L.X. Jiang	2532
<b>Design of Large-Span Raft Foundation Based on Interaction Analysis</b> N. Zhao and Y.F. Guo	2541
Analysis of Vertical Isolation and Earthquake Prevention on Isolation Structure N. Zhao, K. Ma, H.X. Geng and T. Li	2546
Elastic-Plastic Analysis on Damaged Multi-Tower Isolation Structure with an Enlarged Base	2550
N. Zhao, H.X. Geng, K. Ma and K.N. Li  A Direct Displacement-Based Design Method Based on Chinese Code of Base Isolated	2550
Structures	2555
Z. Sun, W.Q. Liu, S.G. Wang, D. Zhou and D.S. Du  Vibration Mitigation Effect of a Friction Damper with Variable Resistances on the Steel	2555
Frame Structure P.B. Zhang, Y.P. Sun and S.C. Zhao	2560
Effects of Base Isolation on Multi-Layer and High-Level Framework H.Q. Liu, X. Guo and H. Wang	2568
Seismic Vulnerability of Long-Span Continuous Rigid Frame Bridge with High Pier Based on Fiber Model and IDA Method	
Y. Gu, W.D. Zhuo and W.T. Zheng  Analysis of Cantilever Column under the Isolation Device Considering Additional Moment	2573
H.Y. Zhang, H. Li, X. Zhang and R.S. Pan	2579
Ductility of Concrete-Filled Steel Box Columns with Binding Bars Subjected to Axial Compression Y.L. Long and J. Cai	2584
Seismic Design of Reasonable Spacing between Anti-Slide Pole Board Wall of High and Steep Slope in High-Intensity Earthquake Region B. Liang, D.G. Liu, L.J. Chen and C. Yu	2588
A Study on Temperature Distribution of Surrounding Rock and Mechanical Characteristics of Lining of Monglian Tunnel under High Geothermal	2000
B. Liang and N.Y. Zhao	2594
PDEM-Based Seismic Response Analysis of Structures Z.J. Liu and Y.L. Lei	2601

Probability Density Evolution Method for Seismic Reliability Evaluation of Structural	
Systems Y.L. Lei and Z.J. Liu	2606
Seismic Vulnerability Assessment of Long-Span Cable-Stayed Bridges G.J. Li and W.H. Zhang	2612
Anti-Seismic Analysis for Hydropower Underground House T. Guo, L.X. Zhang, W.Q. Wang and J. Sha	2618
Seismic Resistance of Unreinforced Brick Masonry Buildings: An Experimental Study A. Ullah, K. Shahzada, A.N. Khan, A. Naseer, M. Ashraf and M. Shoaib	2622
Earthquake Disaster Mitigation through Retrofitting of Unreinforced Concrete Block Masonry Buildings M. Shoaib, A. Naseer, K. Shahzada, A. Naeem Khan and M. Ashraf	2627
Analysis of Seismic Appraisal Evaluation of Existing RC Frame Structure Used for Primary and Secondary Schools in Kunming	2622
Z.W. Liu, Y. Bai, X.H. Xiong and J.T. Li Seismic Capacity Evaluation of Masonry Structures of Primary School Buildings	2632
B. Cao, Y. Bai, W. Pan and J.R. Yang	2637
Chapter 7: Environmental Engineering	
Study on Opposite Folded Plate Anaerobic Reactor in Treatment of Low Concentration Sewage	
T.H. Song, T. Long and P. Wang	2645
Experimental Study on Combing Chloramine and Potassium Permanganate to Inactivate Total Coliform Group X.Y. Tian and W. Zhang	2649
Behavior of Lolium perenne, Festuca arundinacea and Trifolium repens Growing in Textile Dyeing Sludge	2652
X.J. Lu, Q.Y. Liu, X.G. Li and D.L. Xi Analysis on the Human Factors to the Air Pollution in Large Supermarket Based on Analytic Hierarchy Process (AHP)	2653
W.L. Gu and H.M. Peng	2658
On the Influencing Factors of Fugitive Dust Control System Based on Analytic Hierarchy Process (AHP) H.M. Peng, G.M. Tu and Z.Q. Zhang	2663
Source Apportionment of Atmospheric Total Suspended Particulate (TSP) in Zhuankou	2003
Area of Wuhan T. Mi and X.M. Yu	2668
Hydrodynamics Simulation Study on Dian Lake Ecosystem H.L. Cheng, J.R. Yang, J.M. Hu and Z.A. Lu	2673
<b>Study on Removal of Organic Matter by Enhanced Filtration with Iron-Coated Ceramsite</b> G.Q. Gao, H.Y. Ju and Z.J. Ju	2681
Pilot-Scale Study on Treatment of High-Algae and Low-Turbidity Source Water by Air Flotation in South China	
G.Q. Gao, H.Y. Ju and D.W. Li	2686
Simulation of Simultaneous Nitrogen and Phosphorus Removal in MUCT System by ASM2d X.L. Wang, J. Yin, X.D. Wei and S. Gao	2691
Comparison and Analysis of Denitrification Effect and Kinetics Regarding Several New Type Carbon Sources	
H.Y. Li, D.H. Yang, H.Y. Wu, Q. Lu and X. Zheng	2695
Exterior Wall Insulation Technology J. Zhang and D.Y. Li	2700
Visible Light Activated Photocatalytic Degradation Effect of V-TiO <sub>2</sub> on Methyl Tert-Butyl Ether	
C.H. Shen, C.Y. Chang and S.L. Lo	2705
Synthesis of Magnetic TiO <sub>2</sub> Particles for a Recoverable Application on Water Treatment C.H. Shen, Y.J. Chang and S.L. Lo	2710

Experiment Research on Extraction Method by Chloroform Treatment Poly-THF Wastewater	
S.S. Ai, Y. Zuo, L.G. Wan, Z.F. Cui and D.J. Bian	2714
Innovative Stormwater Treatment Implementation at Parking Lot in China R. Zhang, A.N. Tafuri, R. Field, S.L. Yu, W.B. Zhou and H. Zhang	2718
Experiment Research on Phosphorus Recovery in PTMEG Wastewater J. Liu, Q.K. Ren, X. Tian, H. Qu, W.H. Zhang and D.J. Bian	2722
Research on Effect of Copper on Chlorophytum Comosum-Soil System Y.B. Wang, N.N. Wang and D. Wu	2727
Molecular Weight Distribution of Organics in Raw and Treated Water H. Fang, D.F. Xu, X.R. Fu, Y. Wang and J.L. Lu	2731
Engineering Example of High Concentration Printing and Dyeing Wastewater Processed by UBF Craft S.Y. Huang, Q. Huang, S.B. Chen and Y.Y. Gao	2736
Effects of Aeration Volume on Velocity Distribution of Fluid in Multi-Flora Biological Wastewater Treatment Reactor	
D.J. Bian, Q.K. Ren, L.G. Wan, S.S. Ai, X. Tian and H. Qu	2740
Evaluation of Shallow Groundwater Quantity in Harbin by Numerical Modeling C.L. Dai, Z.J. Li, S.M. Du and C.H. Liu	2745
Field Plate Load Tests on Dredged Sediment Dump Pond with Cement Solidified Crust Above	
C.L. Zhang, Q.S. Liu and J.B. Liu	2751
Measures on a Building in Beijing for Energy Saving Y.J. Zhou, J.D. Sun and Q.H. Zhang	2756
Effects of Perforation Pollution Zone on Fracture Initiation S.L. Wang, Q.B. Li, Z.X. Sun and Z.W. Tian	2761
Cation Exchange Capacity Of a Quartz-Rich Soil in an Acidic and Basic Environment A. Eisazadeh, K.A. Kassim and H. Nur	2766
<b>Evolutionary Game Analysis of Price Competition Strategy for Water Market</b> R. Yu, H.M. Wang and W.J. Niu	2771
The Isolation of one Chlorpyrifos Degrading Microbe and the Research of its Degrading Characterisation M.F. Niu, W.D. Xu, T.S. Ming and S.Y. Wang	2776
Sewage Treatment of Post-Denitrification Oxic/Anoxic Biological Filter W. Li, X.M. Hu, W. Wei and T.H. Sun	2770
<b>Experimental Study on Rubberized Cement-Soil Resistance to Chlorine-Ion Permeation</b> F.C. Wang, Q.B. Li and P.F. Li	2786
Simultaneous Removal of Heavy-Metal Ions by MnO <sub>2</sub> Loaded D301 Resin H.M. Ma, Z.L. Zhu and Y.Q. Cheng	2791
Effect of Environment Factors on Phosphorus Removal Efficiency of Phosphate Reduction System	2797
C. Yao, C.J. Gan and J. Zhou  The Effect of Urban Rail Transit on Decreasing Energy Consumption and Air Pollution in	2191
Ahvaz City S.A. Tabatabaiee and A. Rahman	2802
Influence of Sediments on Permeability of Recharge Well with Filter Layer during Artificial Recharge of Groundwater W.L. Li and Y.T. Li	2806
Influence of pH, Ionic Strength and Temperatureon Adsorption of Lead, Copper and Zinc	2000
in Natural Soil F.J. Zhang, X.X. Ou, C.Q. Ran and Y.N. Wu	2810
Efficient Star-up of Partial Nitrification Process in Sequencing Batch Biofilm Reactor with Domestic Wastewater at Room Temperature	2010
T.T. Zeng, D. Li and J. Zhang	2815
Compressive Strength Characteristics and Volume Change of Sewage Sludge Matrices Solidified by a New Binder	
Y.X. Wang, J.W. Ding and Z.S. Hong	2819

Research on Diversified Subjects of Environmental Performance Evaluation for Local Party and Government Leaders J.K. Zhou	2824
Assessment of Water Quality Using Grey Relational Analysis and Principal Component Analysis	
Y.Q. Cheng, H.M. Ma, Q.W. Song and Y. Zhang  Heterogeneous Photocatalysis Applied to Indoor Building Material: Towards an Improved	2829
Indoor Air Quality Q.L. Yu, M.M. Ballari and H.J.H. Brouwers	2836
Capacity Control of Phosphate in Caofeidian Sea Area D. Du, C.P. Kuang, R. Huo and X.M. Sun	2841
Inhibition of Population Growth in the Copepod Calanus sinicus during Diatom Bloom J. Li, Y.J. Liang, G.W. Zhang and Z.H. Liu	2845
<b>Stochastic Evolutionary Game Dynamics of Resource Allocation in Finite Grid Population</b> X.Q. Zhang, C.L. Li and Q.F. Qian	2850
Classification of Area Flowing Based on KRNN Method X. Sun	2855
New Oil-Absorbent Fiber Absorb the Oil of Water M. Tao, J.T. Niu and B.D. Jin	2860
Warehouse Management System Applicable to Small and Medium Retailer Enterprises Y.N. Wu, W. Luo and X. Ba	2867
A Study on the Characteristics of Zeolite-Enhanced Activated Sludge in the A/O Biological Nitrogen Removal Process	
G.W. Cheng, X. Shan, Z.C. Wu, X.F. Huang and F.J. Zhang  Research on Operational Risk Management of the Eastern Route of South-to-North Water	2872
Transfer Project in China J.F. Chen, L. Yang and Y. Weng	2877
Gender Differences in Information System Usage: A Case Study S.S. Lin and K.T. Fang	2882
Approach of Customer Requirement Decomposition Based on Requirement Element in Product Configuration Design and its Application C.F. Yuan, W.L. Wang and L.X. Shen	2886
A Study on an Inverse Estimation Method for Solving Soil-Structure Interaction System M.H. Lee	2891
<b>Study on Threshold Detection of Micro-Seismic Signal Based on Constraint Judgment</b> C.P. Ji, M. Gao and J. Yang	2898
Decolorization of Methyl Orange Simulated Wastewater by Chlorine Dioxide with Ultrasound	
L.J. Huang, T. Xu and S.F. Wang	2904
Comprehensive Assessment System for Resource and Environmental Attribution in Manufacturing Process Chains H. Zhang, Y.H. Wang, W.H. Yue, Z.G. Jiang and G. Zhao	2909
Integrated Technology Based on Resource and Environment Attributes for Workshop Planning and Production Operation	201.4
H. Zhang, G. Zhao, Z.G. Jiang, Y.H. Wang and M. Xiao  A Study on the Relationship between Crown Characteristics, Fractal Dimension and Water	2914
Consumption of Poplars A.Q. Chen, G.C. Liu and D. Zhang	2919
Effects of Mineral Fertilizers and Organic Manure Long-Term Application on Carbon Dioxide Emissions from Black Soils in Harbin, China L.F. Wang, Y.J. Qiao and X.L. Zhang	2925
The Decontamination of Vehicle Emissions NOx through Functionality Surface of Concrete Road	
X.F. Ai and M. Chen	2930
Microbial Community Analysis on Oxic-Settling-Anaerobic Process by Using PCR-DGGE Assay	
J.F. Wang and Q.L. Zhao	2934

Medium Optimisation for Improved Growth-Rate Inhibition of Microcystis Aeruginosa Exposed to AgBiO <sub>3</sub> Using Response-Surface Methodology X.J. Yu, J.Y. Zhou, Z.P. Wang, Y. An and W.M. Cai	2940
Climate Change Mitigation through Forest-Based Carbon Sequestration Projects in China: Potential Benefits and Challenges	
E. Liu and S.R. Liu	2949
Fluorescence Polarization Immunoassay in the Detection of Brucella P. Li, T. Geng and H.B. Wu	2953
<b>Optimum Condition for 2, 6-DNT –Microbe Degrading Using Uniform Design</b> Y.B. Ji, C.R. Xu, C.F. Ji and L. Lang	2958
Electrochemical Pretreatment of Wastewater from DDNP Production Using BDD Thin Film Electrode	
R.G. Fan, C.E. Li, Y.X. Bai, D.Q. Huang, L.W. Fang, H.X. Liang and Q.C. Wang	2962
Research of Volterra Series Kernel Coefficient Calculation Method Y. Chen, X.L. Wen and J.T. Meng	2967
Theoretical Studies of the Atomic and Electronic Structure of Mercury/Aluminium Oxide Interface	
P. He, J. Wu, X.M. Jiang and N.C. Chen	2972
<b>Distribution of Heavy Metals in Urban Gully and their Pollution Assessment</b> Y.J. Song and H.Q. Liu	2977
<b>Adsorption of 2-Methylisoborneol in Drinking Water by Different Granular Carbons</b> X.Y. Ma, N.Y. Gao, J. Li and C. Chen	2981
Kinetics on Oxidation of Odor Contaminant-Dimethyl Trisulfide by Potassium Ferrate in	
<b>Drinking Water</b> S.F. Hu, X.Y. Ma, H.Y. Wang, J. Li, J. Huang and Y. Zhang	2987
Adaptive Power Function Based on Data Fitting Method L.Y. Wang, M. Huang and W.Y. Zhang	2994
<b>Dynamic Energy of Building under Earthquake Excitation Based on FEM</b> P.Y. Li, A.G. Huang and C. Xia	2998
Design and Realization of 60kW Fuel Cell Engine H. Ming and R. Quan	3003
Study on Scheduling Design of TTCAN Protocol of Fuel Cell Bus H. Ming, R. Quan and S.H. Quan	3008
Atmospheric Quality Assessment Model Based on Immune Clonal Selection Algorithm L.M. Wang, X.M. Han, M. Li, C.J. Zhang and Y.T. Zhang	3013
<b>Application of Discriminant Analysis Techniques to Determine Soil Fertility Grades</b> B.C. Fan	3018
Supplier Involved Collaborative Project Management in Complex Product Development C.L. Zhao, X.G. Ming and X.H. Wang	3022
The Negotiation Support System for High-Tech Virtual Enterprise	_
L.L. Zhai, Z.Y. Yang and Q.Y. Sun  Sorption Behaviors of Methylene Blue onto γ-Cyclodextrin Polymer	3027
N. Li, X.L. Xiong and B. Lin	3032
Cultivation of Aerobic Granular Sludge under Selective Pressure in a Sequencing Batch Reactor	
K.Z. Su, C. Wang and H. Fang	3037
Discussion of Factors Affecting Tree Root Water Absorption in Expansive Soil and their Implications in Numerical Models Y.Y. Zhou, J. Li, G. Ren and X.S. Shi	3042
Pondering over Water Conservancy Measurement Combined with Schistosomiasis Control	
B. Chen, H.C. Chen and T. Yan	3047
Chapter 8: Fiber-Reinforced Polymer	
Discussion of High Arch Dam by Performance-Based Deformation	
Y. Tao, H.M. Cheng, X.G. Hu and Z.J. Li	3055

Nonlinear Analysis for the Rectangle Axially Loaded Column with CFRP Considering Secondary Load	
Y. Tao, J. Sun, Z. Liu and L.W. Ma	3059
<b>Experimental Study for the Strength with CFRP in Small Eccentric R.C. Column</b> Z. Liu, J. Sun, Y. Tao and Q. Li	3064
<b>Research on Mechanical Property Test of CFRP Hanger in Steel Box Arch Bridge</b> Q. Chen and L.Y. Liu	3070
Flexural Strengthening of Reinforced Concrete Beams with Prestressed CFRP Plates L.N. Deng, H. Chen and K. Kang	3077
Research on the Stressed Performance of Polypropylene Fibrous Concrete Ditch H.H. Zhang, J.R. Zhang and J. Xiong	3082
High-Strength Concrete Structure Strengthened with CFRP: Experimental Study and Nonlinear FE Analysis H. Hai, Y.H. Zhao and L.Y. Sun	3087
Preparation of Glass Fiber Reinforced Composite Sandwich Hollow Columns and their Mechanical Properties Y.W. Wen	3091
Numerical Analysis of the Bond Performance between CFRP and Steel Y.X. Yang and Y.T. Huang	3097
Numerical Analysis of RC Beams Strengthened with Pre-Stressed CFRP Sheets Y.X. Yang, W. Zhang, Z.W. Guan and W. Xie	3101
Application Study of CFRP in Longmen Grottoes Plank Way Cantilever Beam Reinforcement Project X.J. Gao and X.M. Liu	3106
Load Bearing Capacity Analysis of Squeezed Branch and Plate Pile under Vertical and Lateral Loads X.J. Gao and Y. Sun	3110
Finite Element Modeling (FEM) of GFRP Bar Reinforced Concrete Beam: Flexural Behavior J.W. Huang	3114
Long-Term Performance Prediction of GFRP Bar in Moist Concrete under Sustained Loads J.W. Huang	3119
Envelope Response of Corroded RC Circular Columns Strengthened with Hybrid Fiber Reinforced Polymers J.H. Li, Y. Li and Z.C. Deng	3124
Experimental Analysis of Interface Bond-Slip Relations between the Concrete and Fiber Plasterboard X.L. Jiang and Q.B. Zhao	3129
Bond-Slip Numerical Simulation of Concrete and Gypsum Board Q.B. Zhao and X.L. Jiang	3133
Efficiency of Discrete Glass Fiber Reinforced Cement Mortar in Compression A. El-Kariem and S. Shoeib	3137
Chapter 9: Highway Engineering	
Evaluation of Environmental Vibration Effect in Cement Concrete Pavement Rubblizing by Multiple Head Breaker Z.L. Yan and H.P. Li	3145
Analysis of the Impact of Cracking Old Portland Cement Concrete Pavement to	2210
Underground Pipe P. Li, C. He, G.X. Wu and X.L. Wang	3150
Effective Compactible Time of Asphalt Pavement Y. Gao, R.X. Wang and W.B. Yu	3156
Remaining Life Prediction of Asphalt Concrete Pavement under Dynamic Load M. Qin and Z.F. Lu	3161
Characteristics of Different Warm Mix Asphalt Compacted at Low Temperature L.M. Wang, Y.Q. Tan and Z.W. Shi	3166

Application Study of the Geotextile - Graded Gravel - Geomembrane Composite Drainage Layer in Subgrade Construction	
Y.Y. Liu, L.Q. Hu and Z.W. Huang	3171
<b>Evaluation of Shear Strength on Pavement Layers by Use Tack Materials</b> J.C. Du	3176
<b>Evaluation of Asphalt Emulsion for Use in Warm Mix Asphalt</b> J.C. Du and K.C. Chang	3180
Effects of Compaction Method and Temperature on Warm Mix Asphalt B. Li, J.X. Liu and X.L. Su	3185
Experimental Study on the Weathered Red Sandstone Soil Road Performance Stabilized with EN-1 Soil Stabilizer J.S. Huo, Y.J. Geng and Z.Q. Yu	3190
Experimental Study on High-Temperature Characteristic of Compound Crumb Rubber Modified Asphalt and Mixture L. Wang, Y.M. Xing and C.Q. Chang	3195
Numerical Analysis of Joint Opening Displacement for Cement Concrete Pavement under Temperature Gradient J.J. Li, Z.F. Wang and Q. Zhang	3200
Evaluation of Airport Pavement Service Performance Based on Fuzzy Matter Element and Combination Weights Method X.C. Yan, X.Z. Weng, X.J. Liu and J.Q. Jia	3205
Study on the Technology of Exposed-Aggregate Roller Compacted Concrete Pavement Used in Tunnels	3203
M. Tang, X.B. Mu and Y. Tian  Air-Entraining Concrete Bubble Distribution Fractal Dimension and Anti-Chloride Ion	3211
Diffusion Characteristics M. Tang, Y. Tian, X.B. Mu and M. Jiang	3217
<b>Performance and Application of Sampave Overlaying on Old Cement Concrete Pavement</b> M.L. Xing, S.F. Chen, Z.Z. Li, H.X. Chen and B.G. Wang	3223
The Research on Building up the Hierarchy Process and Fuzzy Evaluation Model and Evaluation System about the Cement Concrete Pavement on the Basis of the Fuzzy Mathematics Theory  Z.B. Liu, W.S. Fei, P.G. Wu and F. Chen	3228
Analysis on the Stability of Tailing Dam under Seepage Y.Y. Zhou, W.S. Fei and W.L. Liu	3234
Study Fatigue Performance Predict Model of Asphalt Layer Basement on Accelerated Loading Test S.X. Chen and W.X. Ren	3238
3-D Permeability Model of Porous Asphalt Mixture Y.B. Guan	3244
The Effect of Compaction Temperature on Volume Parameters of Warm Asphalt Mix with Sosabit	32
H. Dou, B. Li, W.H. Ren and Q. Wang  Load Stress Analysis of the Impact of Parameters Variation on Super-Thick Cement	3249
Concrete Pavement B. Yang, L.J. Suo, C.R. Zhou and K.L. Dong	3254
Behaviour of Silico Manganese Slag Manufactured Aggregate as Material for Road and Rail Track Construction A.V. Patil and A.M. Pande	3258
Investigations and Countermeasures Analysis of Rutting in Highway Asphalt Concrete Pavements	22.62
S.H. Fan and L. Lin  The Nonlinear Viscoelastic Behavior for Asphalt Mixture Materials	3263
Y. Ye and Y.Z. Cai	3268
Lattice Slope Foundation-Cantilever Structure Complex Road for the Roadway Widening in Steep-Sloped Mountainous Areas L. Fan and Z.X. Zhou	3272
Settlement Control Research of Soft Soil Subgrade Based on Long Qi Bay Project X.D. Zhang, M. Wang and X.L. Zhang	3277

Gray Relational Analysis of Graded Gravel Base Asphalt Pavement Structure X.S. Wang, L. Wang and X.J. Ding	3282
Pavement Performance of Cold Recycling Sulphur Asphalt Mixture with Emulsified	
Asphalt H.C. Yu, L.J. Sun, L.P. Liu and L. Jia	3287
Validity Evaluation of Different Laboratory Asphalt Concrete Material Compaction Methods with Digital Image Processing Technique J.M. Yu, Z. Li and X.N. Zhang	3292
The Research of Bituminous Mixture Water Stability Based on Aggregate Cleanness X.D. Guo, C.M. Gao, H. Wang and M.L. Zhang	3297
Research on Gradation Design of Asphalt Mixtur in Tropical Climate Region M.W. Hu, Y.T. Zhou, L.K. Li and Y.N. Wang	3302
The Application of Geogrid in Highway Widening Project of Zhangzhou Coastal Main Artery	
Y.W. Meng and H.J. Chai	3307
Correction Factor of Surface Deflection for Inverted Asphalt Pavement Based on Linear- Anisotropy Z.F. Li, X.Y. Guo and M. Zhang	3311
The Implementation and Assessment of the Nonlinear Finite Element Method Based on the	3311
Chord Modulus in Loess Subgrade R.J. Li, W. Zheng, H. Duan, G.F. Che and W.Y. Jiao	3316
The Effect of Short-Term Aging on Rheological Properties of Asphalts	
L.X. Ma, J.F. Huang and Z.D. Li	3321
Evaluation and Improvement of Asphalt Mixture's Performance at Low Temperature Y.Q. Zhong, X.M. Huang and G.Y. Liao	3326
Approach to Set Stresses Field of Flexible Pavements B.L. Wang and H.T. Li	3330
The Analysis and Application Progress of Construction Formwork B.M. Wang and K. Song	3335
Conformal Mapping-Based Approach for Transformation of Vehicle Loads Y.L. Shao, Y.X. Li and B.L. Wang	3340
Application of WMA on Thin Overlay on Airport Cement Concrete Pavement X.Z. Weng, J.Q. Jia, X.C. Yan and J.Z. Jia	3345
Influence of Aging on Viscoelastic Response of Asphalt Mixture P.L. Li, Z. Ding and Z.Q. Zhang	3350
Theoretical Study on Similarity Relation of Small Scale Subgrade Shaking Table Test Model	
J.B. Li, H.R. Zhang and Z.Q. Li	3354
Experimental Study of Fly Ash Activator in the Application of Aeolian Soil X.D. Zhang, Y. Liang and Y. Yue	3361
Mechanical Properties of Road Base with Roadbood EN-1 Z.Q. Zhang and Y.L. Jing	3366
The Distortion Analysis on Semi-Rigid Pavement Structure under the Wheel Load J.H. Gao	3371
Model Tests on Working Performance of Geogrid Reinforcement Influenced by Differential Settlement Y.M. Wang, H. Yi and Q.Z. Li	3376
Pavement Performance Research on Fine Volcanic Ash Modified Asphalt Mastic and Mixture	
Z.G. Chen, Z.N. Chen, J.T. Wu and H.C. Yao	3382
Test Research of Geogrid Reducing Pavement Rutting on Soft Foundation Z. Zhang and X.W. Yang	3387
Dynamic Response Analysis for Two Typical Structures of Saturated Asphalt Pavements with 3D Finite Element Method	
R.B. Ren, L.T. Geng and W.Y. Qi	3391
Application of FBG Sensors in Flexible Pavement Monitoring L.T. Geng, R.B. Ren, Y. Zhong and Q. Xu	3397

Experiment and Mechanism Study on Effect of Water/Binder and Fly Ash on Mechanical Properties of HPC	
S.X. Li, A.Q. Xu, X.J. Tang and Q. Hu	3404
Research on Physical and Chemical Behavior of Crumb Rubber in Asphalt Rubber Z. Ding, J. Jiang, S.Y. He and C. Shen	3411
Temperature Stress Analysis of Concrete Overlay on Old Asphalt Pavement L.Y. Wei, K. Wang, S.N. Li, S.B. Ma and Y.F. Wu	3416
Reliability Analysis of Asphalt Pavement Structure Based on Three-Dimensional Finite Element	
S.B. Ma, K. Wang, Y.F. Wu, L.Y. Wei and M.W. Zhang  Analysis on Three-Direction Strain of Asphalt Pavement Structure Based on Accelerated	3421
Pavement Testing J.T. Wu, F. Ye and Y.T. Wu	3426
Research on Performance of Emulsion Asphalt Cold Reclaimed Mixture with Various RAP Contents X.Y. Tang and J. Xiao	3432
Study on the Mechanism of the Landslide of Heda Expressway K377 L. Nie, M. Zhang and H.Q. Jian	3437
Fatigue Life Evaluation of Asphalt Rubber Mixtures Using Semi-Circular Bending Test J.H. Liu	3444
Develop Probability Distribution Function to Select Pavement Preventive Maintenance	3444
Materials and Methods M.M. Khabiri	3450
Geosynthetic Material Suitable Depth Staying to Control Failure of Pavement Rutting M.M. Khabiri	3454
Chapter 10: Hydraulic Engineering	
Numerical Simulation of Characteristics of Sudden Reduction Tube Flow Based on FLUENT	
W.Z. Ai and B.G. Huang	3461
Large Eddy Simulation of Hydraulic Characteristics after New Lateral Aerator G.J. Li, G.Q. Dai, Q. Yang and X.D. Ma	3466
Reinforcement Analysis of Wanjiakouzi Arch Dam Using 3D Nonlinear Finite Element Method W. Wei, Q.H. Jiang, C. Yao and T. Xie	3472
3D Finite Element Analysis on DongQing CFRD D.W. Sun, K.P. Wang and H.Q. Yao	3478
Back Analysis about Shear Strength and Deformation Parameters of High Excavated Accumulation Slope in Xiaowan Hydropower Station	3170
L.H. Wang, J.L. Li, S.S. Yang, Z. Cheng and M. Zhu	3482
Unsaturated Seepage and Fluid-Solid Coupling Analysis of Rainfall Infiltration of Slope B.L. Xiong, J.S. Tang and C.J. Lu	3488
Dam-Reservoir Interaction Including the Effect of Vertical Component of Earthquake Acceleration on Hydrodynamic Pressure R. Attarnejad and A. Bagheri	3493
Calculation Method and Application for Navigable Hydraulic Parameters of Jinsha River M. Chen, M.D. Chen and Z.C. Yang	3500
Dynamical Simulation of Magnetorheological Fluid Characteristics J.Q. Zhang, J. Zhang, Y.N. Kong and H.L. Cuan	3505
The Design of Cooling Water Pipe and Cooling Analysis in Mass Concrete P.W. Li and Q.Q. Si	3510
The Arch Dam Foundation Rock Mass Unloading and Relaxation Deformation Characteristics and their Monitoring Result Analysis S.S. Li, Z.R. Dong, Q. Li, H. Zhao and H. Zhang	3514
Influence of Hengsha Passage on Sediment Deposition in the Upper Reach of the Deepwater Navigation Channel in the Changjiang River Estuary	JJ1 <b>7</b>
J. Gu, W. Chen, C.P. Kuang, X. Qin and D.Q. Ma	3524

<b>Study on Depositional Environment of Soil Based on Multi-Fractal Theory</b> J.D. Cai, D.C. Yu, Y.D. Chen and Q. You	3530
Gravel Soil Landslide Sliding Mechanism and Stability Analysis Based on Fluid-Solid Coupling	
Z.B. Sun and X.L. Yang	3535
Analysis of the Atmospheric Temperature Stress on Mass Concrete by ANSYS Software P.W. Li, J.M. Gao and X.Z. Zeng	3539
<b>Prefabricated Box Girder Crack's Reason Analysis and Preventative Measures</b> P.W. Li and Z.X. Xue	3543
<b>Study of the Influence of Hydration Coefficient on Concrete Temperature Stress</b> P.W. Li, P.D. Qu and X.Z. Zeng	3548
Experimental Study on Micro-Pressure Hydraulic Characteristics of Drip Irrigation Emitters with Multiple Types of Channels J. Liu, Q.S. Wei, A. Li, C. Wang, W.T. He and Y.S. Shi	3553
Experimental Study of Water Force Acting on Spur Dike T. Yu, P.Y. Wang, C.Y. Yang, G.J. Gao and J.S. Zhang	3558
Research on the Bearing Capacity for Rock Bolt Crane Girder in the Underground Powerhouse of Large Hydropower Station J.B. Xie, T.C. He, J. Yao and C.B. Zi	3563
Study on the Thermal Stress Field of Steel 1045 Quenched by Water	3303
J.B. Xie, T.C. He and H.M. Cheng  Study on the Properties of Mass Hydraulic Concrete with Admixtures of Limestone Powder	3568
and Water Quenched Iron Slag J.B. Xie, T.C. He, Y.P. Ai and G.J. Ji	3573
Study on Data Transfer Methods for Fluid-Structure Interaction Analysis B. Su, R.J. Qian and X.K. Han	3579
Study on System of Gravity Dams Aided Design Z.Y. Hou, B. Tian and Z.Y. Xiao	3584
<b>Bed Load Transport under Complex Flow</b> C.R. Liu and D.L. Xu	3589
The Prediction Model of Chaotic Series Based on Support Vector Machine and its Application to Runoff G.R. Yu, J.R. Yang and Z.Q. Xia	3594
Study on Restoration of Influence of the Waterway Landscape Ecology Due to the Water	
Conservancy Projects G.R. Yu, J.R. Yang and J. Wang	3600
A New Calculation Approach to Deal with Hydraulic Pressure in the Sandy Strata and its Application in Wuhan Subway	2605
S.M. Wang, C. He, S.J. Liu and Y.L. Gao  Study on Swelling-Shrinkage Behavior of Vertisols along Fujian Coast M.X. Chen and H.J. Zhu	3605 3610
Exploring of the Plunge Pool Shape Optimization T. Yan, H.C. Chen, B. Wen and B. Chen	3615
Dam Safety Reliability Analysis Based on Artificial Neural Network H. Wei, H.S. Yang, L. Wu and Y. Gui	3620
Dam Safety Monitoring Model Based on Markov Chain H. Wei, H.S. Yang, D.P. Tian and Q.H. Wang	3626
Assimilating Observation Data into Hydrological Model with Ensemble Kalman Filter J. Xiong, X.L. Huang and Z.Y. Cao	3632
Numerical Simulation Study on Slaking Deformation Properties of High Earth Core Dam H. Xu, X.B. Rao, B. Huang, J.J. Pan and Y. Chen	3637
Study on the Influence of Seepage Behavior of Dam Foundation during Wenchuan	
Earthquake K.H. Zeng, H.Y. Ju and H.X. Peng	3642
Experimental Study of Subgrade Scout Width Along River Bend L. Liu, H.K. Chen and G.C. He	3646
Analysis on Turbulent Debris Flow's Movement Energy in Circulation Area L. Liu and Q.H. Wei	3651

Fluid-Solid Coupling Analysis of External Water Pressure Distribution Patterns on Drainage Segment Lining	
Q.X. Yan, X. Cheng and J. Zheng	3656
Comparison on Somatotype of X- and Y-Shape Flaring Gate Pier Connected with Stepped Spillway Z. Ting, W. Chao and Z. Qi	3661
Calculation and Control of Seepage of Hardfill Dam with Different Foundation Y.F. Peng	3666
Briefly Discuss Safety Monitoring of Underground Powerhouse F. Li, B. Tian, S. Zhang and Z. Chen	3671
Safety Analysis of the Temporary Dam Body of Concrete Faced Rockfill Dam during Construction Period X.C. Lu, B. Tian and S. Zhang	3676
Experimental Study on Flow Coefficient of Broad-Crest Ridge-Free Weir of Gudi Hydroelectric Power Station J.B. Wang	3682
Response of Liquid in Cylindrical Tank with Rigid Annual Baffle Considering Damping Effect	2.607
J.D. Wang, D. Zhou and W.Q. Liu  Research on the Numerical Simulation of Silting in Floodplain and Scouting in Main Channel of Over-Bank Flooding in the Lower Yellow River	3687
X.L. Zhang, D.P. Sun and F.R. Zhang  Hydrodynamic Pressure Effect Analysis of Double-Column Pier in Deep Water under	3692
Earthquake Actions F.R. Li and Z.H. Wang	3697
Optimization Study of Advance Support in the Roadway of Paste Filling Working Face S.J. Chen, W.J. Guo, H.L. Wang and B. Li	3702
Chapter 11: Mining Engineering	
Investigation on Deformation and Failure Characteristics and Stability Control of Soft Rock Roadway Surrounding Rock in Deep Coal Mine J.C. Chang and G.X. Xie	3711
The Research of Coat Materials Performance Based on Multi-Scale Method K.L. Ren, Y. Dong and Y.C. Wang	3717
Study on the Deep Rock Parameters of Fushun Mining Area J.J. Zhou, Z.L. Fu, G.B. Zhao and G.Y. Han	3722
<b>Application of Ground Freezing Method in Underground Construction</b> W.Y. Zhang and J. Wei	3727
Prediction Technology of Coal and Gas Outburst in Xuandong Coal Mine S.S. Zhao, W.D. Pan, X. Wang and J.D. Liu	3731
Characters Evaluation of Ground Pressure in Fully Mechanized Top Coal Caving Face in Soft Coal Seams W.D. Pan, X.H. Wu and Y. Li	3735
Instability Identification of Goaf Risky in Mines Based on Distance Discriminant Analysis Method	
	3740
X.M. Yan, X.Y. Chen and F.Q. Gong	3744
The Coal Mining Mode of Paste-Like Fill and its Application Prospects Y.C. Huang, R.M. Feng, H.P. Wang, W.P. Zhao and Y.F. Liu	3/77
The Coal Mining Mode of Paste-Like Fill and its Application Prospects	3749
The Coal Mining Mode of Paste-Like Fill and its Application Prospects Y.C. Huang, R.M. Feng, H.P. Wang, W.P. Zhao and Y.F. Liu Numerical Analysis on Tunnel Support Nearly Mined Area and Stability Evaluation W.J. Yu Analysis of Ground Fissures Induced by Underground Mining in a Metal Mine H.J. Zhao, F.S. Ma and J. Guo	
The Coal Mining Mode of Paste-Like Fill and its Application Prospects Y.C. Huang, R.M. Feng, H.P. Wang, W.P. Zhao and Y.F. Liu  Numerical Analysis on Tunnel Support Nearly Mined Area and Stability Evaluation W.J. Yu  Analysis of Ground Fissures Induced by Underground Mining in a Metal Mine	3749

Hysteresis Analysis of RC Columns Based on Fiber Cross-Section Model Y.Q. Zhou, M.X. Ye, Z.S. Yang and L. Ou	3770
Thick Board Theory on the Bolting Support of the Ribs in Coal Mine Roadway S.S. Yang and S.Q. Niu	3775
Study on the Structure Characteristics and Ground Pressure Behavior of Overlying Strata with Shallow Buried Coal Seam L. Yu, Z.Z. Fan and G. Xu	3780
Development of Scientific Mining: a Case Study of Gob-Side Entry Retaining Technology in China	
Y. Xu, J.B. Bai, Y. Chen and J. Yue	3786
Analysis of Transverse Seismic Performance of Large Diameter Tunnel in Different Soils Y. Xu, L. Lv and J. Yue	3793
Research of Bored Pile Bearing Capacity with Mud Layer X.D. Zhang, X.L. Zhang, M. Wang and H.H. Zhang	3797
Simulation of Deep Excavation and Shoring with FEM Based on ADINA X.D. Zhang and S. Zhang	3802
The Inverse Modeling Method of Rock Rheological Model X.D. Zhang, J.J. Ruan and C.Y. Lan	3807
Rock Bearing Capacity-Based Stepwise Bolting for Deep Underground Coal Roadway in China	2012
N. Zhang, Y.M. Zhao and G.Y. Si Numerical Simulation of Structure Dynamic Response for Civil Architecture under Mining	3812
Blasting Vibration Z.Y. Zhang, L.F. Luan and J.B. Xie	3817
Study on the Influence of Stability for Higher Precipitous Open Pit Slope under Mining Blasting	
Z.Y. Zhang, L.F. Luan, J. Yao, J.B. Xie and X.L. Li	3822
Physical Model Test on Thick Gravel Layer Inclined Shaft Deformation and Failure in Yili No.1 Coal Mine D.M. Guo, Y. Zhang, P.F. Han and J.Z. Zhuang	3827
Research of the Best Combination of Cooling Parameters in High Temperature Work Deep	3027
Stope Y. Zhang, D.M. Guo and Q.Y. Han	3832
Chapter 12: Project Management	
Risk Assessment on Ground Fissure Disasters of Xi'an Metro Line 3	3841
Z.W. Jiang and Q.Y. Wang  A Study on Designing No-Penalty Reporting System about Enterprise Staff's near Miss	
L. Zong and G. Fu  Returns Policy Model for Supply Chain with Electronic Market in Fuzzy Environment	3846
Q.E. Guo, X.Q. Wang and Z. Wei	3852
A Model of Construction Quality Intelligent Control for Large-Scale Complex Project W.X. Lv and H.J. Shi	3857
Stability of Automobility across Lifecycle Stages over Time Y.L. Sun, Z.Y. Huang and R. Kitamura	3862
Sustainability Assessment of Residence Project in China Q.L. Zhou	3867
Analysis of Contract Dispute Settlement Mode for International Project Based on DAB W. Tan, Y.H. Zhou, J.W. Huang and S. Zhang	3872
Risk Assessment and Transaction Cost Incorporated Budgeting for Construction Joint Ventures M.R. Yan	3878
The Application of Construction Company Selection with Multi-Attribute Decision Making Model under the Uncertain Condition	3070
C.Y. Yuan and H.M. Li	3883

Evaluation of Investment Risk in International Engineering Project Based on Improved Risk Matrix Method	200=
J. Liu and X.N. Gao	3887
<b>Developing a Framework of Economic Model for Building Component Lifecycle Repair</b> N. Bt Mohamed Ali, N. Amani and R. Abd Samad	3893
Communication in the Cladding Supply Chain Q. Du, J. Yang and S. Ledbetter	3898
<b>Research on Whole Life Cycle Management Policy for Green Buildings in Tianjin Eco-City</b> J.X. Hu and D.Q. Bu	3903
Analysis on Whole Life Cycle Cost Management of Highway Engineering H.H. Feng, X.P. Ding, J.S. Chen and Y. Chen	3907
Design-Oriented Construction Management Model for Large Gymnasium and Stadium Projects B.Q. Geng	3911
<b>Design and Application Research on Division System of Steel Enterprise Group</b> F.X. Li	3916
Critical Safety Factors in Construction Projects G. Heravi and H. Nabizadeh Rafsanjani	3921
Research on Construction of Risk Information Mining System in Programme Z.G. Zhang	3928
Study on in-Service Bridge LCC Decision Model Based on Maintenance Management	
System Y.M. Wu and J. Chang	3933
The Scientific Development of Buildings Industry Based on Life Cycle Cost Theory T.B. Sun	3938
Quoted Risk Cost Study Based on AHP Y. Zhang and B.W. Shen	3943
<b>Application of Emotional Quotient in Project Management of Construction</b> S.Y. Zhu, M. Zhang and N.M. Mo	3948
Theoretical and Practical Risk Assessment Method in Tunneling P.O. Evbuomwan and D.M. Yu	3953
<b>Large-Scale Group Company Strategic Management of Project Informatization</b> F.H. Xie, Q.C. Gao and H. Zhang	3958
The Impact of Chinese New Housing Policies on the Changsha Real Estate Market J. Luo, L. Tan, Y.F. Li and W. Huang	3963
Analysis on the Transmission Type of Programe Schedule Risk H.D. Li and X.Q. Zhang	3968
Chapter 13: Railway Engineering	
Study on Ground Penetrating Radar in Detecting of Zero-Temperature Boundary under the Railway Bed	
L.Z. Du, X.P. Zhang, J.H. Qiu and W.B. Liu	3975
The Minimum Longitudinal Horizontal Linear-Stiffness of Piers of Typical High-Speed Railway's Layout of Turnout and Bridge Z. Liu and W. Ping	3979
Model Prediction on the Behavior of Cerium in Heavy Rail Steel C.J. Liu, H.L. Liu and M.F. Jiang	3984
Wheel/Rail Contact Geometry of Different Wheel Tread Profile in High-Speed Railway Turnout	3988
R. Chen, W. Ping and Y. Song  Effects of Shallow Gas on Diaphragm Wall Trenching Construction of Hangzhou Metro	3788
Y. Wang, L.W. Kong and A.G. Guo	3993
Study on Prediction Model of Shrinkage and Creep of Prestressed Concrete Beam in Passenger Dedicated Line J.L. Luo, Z.S. Xu, J. Li and J.H. Yang	3998

Observation Study on the Stability of Frozen Soil Roadbed Equipped with Thermosyphon in Chaidaer-Muli Railway	
C. Ji, Z. Bo, R.F. Song, X.F. Dong and L.X. Zhang	4003
The Research of Existing Railway Survey and Evaluation Methods X.S. Zhao, X.H. Diao and J.N. Zhu	4008
Study on the Relationship between Soil-Cement Parameters and Unconfined Compressive Strength	
J.Q. Ma and Y.X. Wang	4012
Study on Stability of Lateral Vibration for Train-Bridge (Track) System Z.H. Zhou, L. Yang, L.K. Lin and Q.Y. Zeng	4017
Influence of the Track's Stiffness Coefficient on the Acting Loads, Deflection and Dimensioning of Slab Track K. Giannakos	4022
The Application of Crushed Rock Materials upon Railway Embankments in Permafrost	7022
Regions Y.H. Mu, W. Ma, Z.Z. Sun and Y.Z. Liu	4027
Analysis of Excavation Monitoring for the Fu-Qing Road Station in Ningbo Urban Rail	
Transit R.H. Ye, G.B. Liu and J.N. Ye	4034
Development of the Small-Sized Equipment for Detecting Short-Wave Irregularity of the Top Rail	
Y.L. He, W.L. Zhu, J. Kun, B. Zeng and C. Yang	4039
The Influence of Cracks in Track Slab and its Reflection in Structure Design P.R. Zhao	4043
Chapter 14: Transportation Engineering	
An Idea of T-Shaped Integer Cantilevered Road Z.X. Zhou and L. Fan	4051
<b>Evaluation of Sustainable Urban Transport in China</b> J. Fang	4056
<b>Traditional Traffic Demand Definition Defects Analyze and Redefinition</b> Y.G. Chen, W. Cheng and H.C. Xiao	4061
A Traffic Control Strategy for Sensitive Junction under Disaster Conditions Y. Liu, Z.S. Yang and F. Liu	4065
The Optimum Selection of Instrument Flight Procedure Design Scheme Based on the Relative Superiority Degree	4070
C. Ken  Measuring the Impact of Latent Variables on Mode Choice Behavior between Bike and	4070
Electric Bike M.W. He, M. He, X.Q. Yang and Q.Q. Zhao	4075
Multi-Criteria Optimization of Bridge Management Z.Z. Wang, L.C. Fan and M. Hastak	4080
Study on the Coordination between Urban Rail Transit and Bus Y.P. Wang and C.Q. Ma	4085
Special Considerations for TDOA Application to the Reconstruction of Traffic Accidents L. Zhang, W.H. Qin, T.J. He and W.N. Li	4090
On the Public Private Partnership Financing Strategies of Urban Rail Transit J.X. Chen and J. Fang	4095
The Research of Vibration Influence to Surrounding Environment for Viaduct Railway	
Traffic P. Wang and W.D. Huang	4100
Study on Quantitative Risk Assessment of LGP Transportation in Road Tunnel Y.C. Zhang, C. He, Y. Fang and X.Q. Sun	4105
Analysis of Barge Adjustment in Large-Scale Structures Ro-Ro Ship Process M. Gong, Q. Zhang and M. Liu	4110
<b>Pre-Arrange Trim Method on Panamax Vessel when Transit through the Panama Canal</b> J. Shen and Y.T. Wang	4115

Research on the Impacts of Zhengzhou Urban Rail Transit to Residential Price H.L. Zhao, J.P. Liu and Y.F. Sun	4119
The Research on the Alignment Continuity of the Prairie Highway Based on Possible Speed X.H. Li, S.L. Zhu and Y.B. Sun	4123
The Model of Short-Time Traffic Flow Prediction on High-Grade Highway H. Chen, Y.W. Yuan, J. Sun and N. Bao	4128
Chapter 15: Application and Others	
Thermo Mechanical Simulation of the Flue in Coke Dry Quenching Technology X. Chen, Q.M. Chang, C.J. Chen and Y.X. Zhang	4135
Simulation of the Thermo-Mechanical Behavior and Failure of Refractory of Converter X. Chen, Q.M. Chang, C.J. Chen and Y.X. Zhang	4139
Thinking at Pedagogical Reforms of Architecture Design Course in China Three Gorges University J. Xue	4143
Research on Design of Neotype Wire Rope Safety Barrier C.C. Chen, M.X. Lei, Z.B. Lei, Y.H. Li, X.C. Zhang and G.B. Liu	4150
Strategy and Realization for Obstacle Avoidance of Wheeled Mobile Robots Based on	4130
Dynamic Modeling P. Jia, Y.M. Huang, X. Cheng and X.H. Yang	4155
Mobile Phone Laminator of Image-Based Feedback System Z.X. Peng and Q. Zhang	4161
Virtual Assembly of Equipment in Large Steel Structure G.Z. Zuo, Q. Zhang and M. Liu	4166
Application of the EKE and LSE-UI Based Substructure Approach for Damage Detection with Limited Output Measurements Y. Lei and C. Liu	4171
Parameter Revision of the Bailey Method on Gradation Examination Y.L. Xu and H. Jiang	4176
Uniform Design and its Application in Grouting Simulation Experiment Q. Liu, S.C. Li, L.P. Li, N. Zhang and Y. Zhao	4181
Magnetic Microscopic Evaluation of Early-Stage Fatigue in WMZ (Weld Metal Zone) of Low Carbon Steel Plates (JIS, SS400)	4106
K. Kida, T. Honda, E.C. Santos, K. Saruwatari, M. Uryu, K. Houri and K. Kanemasu Experimental Research on the Bearing Capacity of Timber Columns Repaired and Strengthened by BFRPS	4186
J.S. Ma, R.S. Bai and Y. Hao Ultimate Bearing Capacity Analysis of Schwedler Suspendome	4193
F. Li and X.B. Min	4197
Field Investigation and Wind-Environment Numerical Simulation of Cable-Stayed Bridge Site in the West Midlands Region Y. Zhang and M. Zhou	4202
The Finite Element Analysis of South Cap Excavation of Left Branching of Ma on Shan Yangtze River Highway Bridge Y. Zhang and M. Zhou	4207
Seismic Safety Evaluation for Mountainous Highway Bridge Based on Risk Matrix G.Y. Xie and Z. Yue	4212
Effect of Material Ultimate Plasticity Strain on Collapse Resistant Capacity of 3D Steel Frame Structure during Earthquake H.D. Zhang, Y.F. Wang, D.J. Yang and H. Jiang	4217
Degradation of Sulfa Pharmaceuticals in Aquatic Environment by O <sub>3</sub> and UV/TiO <sub>2</sub> Processes	,
L.C. Chuang, C.H. Luo, S.W. Huang and C.J. Lin	4222
Study of Treatment Effect of Front Slope for Deng Cao-Tang Tunnel Outlet K.S. Chen and X.S. Zhao	4227

Numerical Simulation of the Gas-Solid Two-Phase Flow in the Cement Precalciner Based on Fluent Software N.N. Xing and W.L. Zhao	4232
Structural Damage Identification Based on Hilbert-Huang Transform and Verification via Shaking Table Model Test J.P. Han, J. Qian and P.J. Zheng	4237
Combining Data Mining Technique and Group Method of Data Handling (GMDH) Method to Assess Flexible Pavement Conditions H.M. Hsu, S.J. Chao and J.R. Chang	4242
Multiphysics for Early Stage Cement Hydration: Theoretical Framework Z. Liu, B. Zhang and X.B. Yu	4247
Innovative Sensor and Analyses for Investigating the Effects of Freeze-Thaw on Soil Z. Liu, X.B. Yu, J. Gonzalez and X.B. Yu	4251
Numerical Analysis of Damage to Retained Rock Mass of Dam Foundation Caused by Blasting Excavation	
H.Y. Liu and M. Wang  Numerical Simulation on Rock Shock Accumulation Damage Effect	4256
H.Y. Liu and H. Zhang	4262