PROCEEDINGS OF THE TENTH INTERNATIONAL SYMPOSIUM ON STRUCTURAL ENGINEERING FOR YOUNG EXPERTS

Volume II

Edited By
Bin Xu Yan Xiao Ji-Ping Ru and Wei- Xin Ren
Volume II

9. Large Scale and Complex infrastructures and Spatial Structures

Elasto-plastic Finite Element Model on Thin-Walled Spatial Beams
Xiao-Feng Wang, and Qing-Shan Yang
1039

Elastoplastic Performance Analysis of New Spatial Structure-Composite Ribbed Shell
Yu-Zhen Chang, Xiao-Li Li, and Min-Zhe Wu
1045

Identification of Dominant Modes to Wind-Induced Vibration Response of Large-Span Roofs
Yu-Xue Li, Qing-Shan Yang, and Yu-Ji Tian
1051

Comparison of Results between Shaking-Table Test and FEM Analysis on a Complex High-Rise Building
Jing Ji, Peng Xiao, Shu-Ning Zhao, and Xiao-Lei Han
1057
A Coupled Fluid-Structure Method in Load Analysis of Air-Inflated Cushion Membrane Structure ................................................................. 1063
Yue-Xiao Song, Qing-Shan Yang, and Wei-Liang Zhu

Static and Dynamic Nonlinear Analysis of a Super High-Rise Hybrid Structure .................................................................................. 1070
Ji-Ping Hao, Jun Jiang, Ming Hu, Kang-Ning Li, Yang-Cheng Li, and Bing You

A Study on the Effect of Horizontal Strengthen Storey to Super High-Rise Steel Braced Frame ........................................................................ 1078
Yuan-Qing Wang, Yi Huang, Yong-Jiu Shi, Gang Shi, and Si-Qing Wen

Study on Construction Safety and Simulation of Large-scale Structures ........................................................................ 1084
Yong-Jiu Shi, Yang Jiang, and Yuan-Qing Wang

Geometrical Nonlinear Analysis of Space Steel Frames Considering the Rotational Properties of Moments Directly .................................. 1089
Lian-Kun Wang, Ji-Ping Hao, and Zhou Li

Configurations in Spatial Structures ........................................................................ 1095
Yao-Zhi Luo, Xian Xu, De-Can Mao, Na Li, and Ying Yu

The Study of Roof Structure Solutions for Large-Span Hangars ......................... 1101
Yong-Jiu Shi, Yong-Zhong Pei, and Yuan-Qing Wang

10. Dynamics, Monitoring and Control for Large Scale Structures

Online Monitoring of a Railway Tunnel Lining Structure Using Polypropylene Fiber Reinforced Concrete .................................................. 1109
Yuan Hua, Tai-Quan Zhou, and Bao-Hua Lv

Discrete-Time Variable Structure Control for Buildings Using Fuzzy Adaptive Regulation of Reaching Law ........................................... 1113
Zhi-Jun Li, Zi-Chen Deng, and Zhi-Ping Gu

Experiment Modal Analysis of Liquid-Structure Interaction on Steeliness Rectangular Liquid-Storage Tanks .............................................. 1119
Xuan-Sheng Cheng, Xiao-Yu Shi, Gui-Wen Zhang, and Yong-Feng Du

Analysis and Numerical Simulation of Structural Secondary Vibration induced by Urban Traffic ............................................................. 1124
Le Chang, Wei-Ming Yan, Min Ren, and Fu-Lin Zhou
An Experimental Investigation of Micro-Vibration of Xi'an Ancient City Wall Excited by Traffic Vehicles
Zhao-Bo Meng, Wei-Bing Hu, Min-Zhe Wu, and Jun Yuan

Vibration Isolation Performance of Floating Slab Track System
Jun Yuan, Min-Zhe Wu, Zhao-Bo Meng, and Ke Zhang

Analysis Approches of the Load Excited by Metro Traffic
Jun Yuan, Min-Zhe Wu, Zhao-Bo Meng, and Ke Zhang

Wavelet-Based Active Sensing Technique for Delamination Detection in RC Structures
Xin-Qun Zhu, Hong Hao, and Ke-Qing Fan

Preparation of Precision Alloy Foil for Bridge Fatigue Life Gauge
Dan Xiao, and Wei-Xin Ren

Reduction of Wind Induced Vibration in Spatial Structures with Optimal Arrangement of MR Dampers
Zhen Huang, Dai Zhou, Hong Shuai

Parameter Effects on Dynamic Properties of Transmission Line
Bo Chen, and Jin Zheng

Practical Method for Seismic Design of Base Isolated Shear Building Based on Chinese Codes
Jian-Ping Wang, and Jin Zheng

Seismic Mitigation of Machinery Building by Using Piezoelectric Moment Controller
Jin Zheng, and Bo Chen

Wind-Induced Responses and Dynamic Mitigation of Television Tower with Friction Dampers
Bo Chen, Jin Zheng, and Wei-Lian Qu

Semi-Active Control of Suspension Structures by Changing the Length of Booms
Wen-Wu Lan, Bin-Ning Wei, Xiu-Ning Peng, and Shu-Ying Wei

Experimental Study on Vertical Properties of a New Kind of Multi-Dimensional Earthquake Isolation and Mitigation Device
Zhao-Dong Xu, and Qing Tu
Semi-Active Direct Velocity Control Method for Dynamic Response of Spatial Reticulated Structures

Dai Zhou, Yan Bao, Cheng Huang, and Yao-Jun Zhao

Research on Seismic Reduction of the Spherical Reticulated Mega-Structure

Yong-Jun He, Xu-Hong Zhou, and Mei Jiang

GDEE-Based Stochastic Control Strategy of MR Damping Systems

Jie Li, Yong-Bo Peng, and Jian-Bing Chen

Dynamic Behavior of Portal Frame Structures with Tapered Members

Xuan-Neng Gao, Chuan-Qi Wang, and Kun Li

Real Modal Analysis of Flexible Base Energy Dissipated Structures

Yong-Feng Du, and Hui Li

Research on Structural Health Monitoring of Open Type Wharf on Piles

Chang-Hong Huang, Zhuo-Bin Wei, and Qi-Bin Zhang

Seismic Design of Structure with Supplemental Viscous Dampers Based on Improved Capacity Spectrum Method

Bo Li, and Xing-Wen Liang

Experimental Investigations on Seismic Behavior of a Longitudinal Energy Dissipation Braced Frame

Xiang-Hong Sun, San-Qing Su, and She-Liang Wang

Performance Analysis of Vibration Reducing on Spherical Lattice Shell with Buckling-Restrained Brace

Xiu-Li Wang, and Jing Hu

Study on Feed Forward-Feedback Compound Control for High-Tech Platform

Qin Huang, and Hong-Jun Liu

The SHM System of Guangzhou New TV Tower and the Benchmark Problem for SHM of High-Rise Structures

Yong Xia, Yi-Qing Ni, Jan-Ming Ko, Wei-Yang Liao, and Hua-Bin Chen

Earthquake Response Control and Dynamic Tests Research on Bridge and Building Complex Structural System

Wen-Guang Liu, Wen-Fu He, Da Huo
Experimental Study of the Dynamic Behaviour of High Damping Rubber Bearing Isolator
Yong Yuan, Shi-Shu Xiong, and Jie Fu

Full-Scale Test of Friction Damper for Cable Vibration Mitigation
Hai-Jun Zhou, and Li-Min Sun

A New LQG Based Decentralized Control Algorithm for Large-Scale Structures
Ying Lei, Yin Lin, and Z.H. Liu

The Nonlinear Time-History Analysis of High-Rise Steel Frame Structure with Viscoelastic Dampers Considering P-Δ Effect
Ye-Hua Wang, Yun Zhou, Da-Yang Wang, and Xue-Song Deng

11. Reliability, Durability Maintenance, Management, Life-Cycle Cost Analysis

Chaotic Dynamics Analysis of Response Surface Method for Structural Reliability
You-Liang Ding, Ai-Qun Li, and Yang Deng

Partial Factor Method for Durability Design of Concrete Structures under the Criterion of Carbonation Life
Hai Liu, Ji-Tao Yao, and Yu-Yue Qin

Reliability Appraisal of Monolayer Steel Structural Work-Shop Based on State Analysis
Yong-Li Zhang, Di-Tao Niu, and Nan Zhao

Reliability Analysis for Stiffening Girder Deflection of a Self-Anchored Suspension Bridge
Sheng-Yong Li, and Bao-Chun Chen

Accelerated Durability Research on Concrete Structure: Main Contents and Methods
Yun-Feng Li, and Li Xu

Appraising the Reliability of Single-Storey industrial Buildings by Grey Clustering Approach and Fuzzy Comprehensive Evaluation
Jian-Ping Gao, Hong-Yan Yin, and Jun Zheng

Durability Environmental Regionalization for Concrete Structure
Yan Wang and Di-Tao Niu
Study on Diffusion Performance of Chloride Ions in Existing Concrete under Strong Tidal Environment

Jun Zhi Zhang, Jian-Ze Wang, and Hai-Zhen Huang

Fuzzy Comprehensive Evaluation of Durability of Reinforced Concrete Structure in Cold Region

Qian-Hui Xiao, and Di-Tao Niu

Research of Reliability Calibration and LRFD of Steel Highway Bridge

Kun Li, and Kai-Chang Sun

Reliability Analysis of Load-Bearing Capacity of CFT-Encased Steel Columns

Yi-Bin He, A-Lin Xiao, Li-Chun Peng, Shan-Bo Yang, and Yong-Qing Wen

The Prediction of Long-Term Crack Width in Reinforced Concrete Beams

Di Hu, Wen-Hui Yuan, and Qing-Xian Lu

Seismic Reliability Analysis of Lifeline Networks

Wei Liu, and Jie Li

Study on Evaluating Judgment Method for Reinforcement of Existing Levee Based on the Risk Analysis

Yan-Hong Gao, and Jun-Zhi Zhang

Approach of Management Planning in Constructing High-Quality Cross-Sea Bridge

Quan-Ke Su, and Jin-Wen Zhang

Study on the Forecasting of Surplus Service Life of Carbonation in Fire-Damaged Concrete Structure

Zhi-Wu Yu, Wei Zi, and Xiao-Jie Liu

12. Structural Rehabilitation, Retrofitting and Strengthening

Seismic Upgrading of Shear-Critical RC Frames Using CFRP-Confined Beam Haunches

Bu Wang, and Pu Wang

Experimental Investigation on Seismic Behaviour of RC Beam-Column Joints Retrofitted BY CFRP Sheets

Bu Wang, Xiang-Li Guo, and Pu Wang

Study on Flexural Behavior of RCT-Beams Strengthened with Wire Cable Mesh and Polymer Mortar

Bo-Quan Liu, Guo-Hua Xing, Hua Huang, Tao Wu, and Ben-Yan Lu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Study on Bonded Behavior between GFRP and Concrete</td>
<td>1409</td>
</tr>
<tr>
<td>at Given Conditions</td>
<td></td>
</tr>
<tr>
<td>Qing-Xuan Shi, Yuan-Zhan Liu, Dan-Ying Gao, and Qiu-Wei Wang</td>
<td></td>
</tr>
<tr>
<td>Strength Analysis of Retrofitted RC Coupling Beam with Bolted Side</td>
<td>1415</td>
</tr>
<tr>
<td>Steel Plates</td>
<td></td>
</tr>
<tr>
<td>Yong Zhu, and Yun Zhou</td>
<td></td>
</tr>
<tr>
<td>Performance Analysis of the Structure Type Conversion</td>
<td>1420</td>
</tr>
<tr>
<td>Cheng-Zhong Zhang, Qian-Ying Ma, and Di-Tao Niu</td>
<td></td>
</tr>
<tr>
<td>Test Investigation of RC Beam Strengthened with CFRP under Quadratic</td>
<td>1426</td>
</tr>
<tr>
<td>Loads</td>
<td></td>
</tr>
<tr>
<td>Yan-Peng Zhu, Wen-Chuan Teng, Jian-Jun Zheng, and Dan-Dan Zhao</td>
<td></td>
</tr>
<tr>
<td>An Experimental Study of RC Beam Strengthened with Pre-Stressed CFP</td>
<td>1434</td>
</tr>
<tr>
<td>Bang-Yun Long, Guang-Lin Yuan, and Dan-Yu Zhu</td>
<td></td>
</tr>
<tr>
<td>Crack and Damage Repairing in Concrete Using Adhesives Released</td>
<td>1439</td>
</tr>
<tr>
<td>Internally from Hollow Capsules</td>
<td></td>
</tr>
<tr>
<td>Ya-Chuan Kuang, and Jin-Ping Ou</td>
<td></td>
</tr>
<tr>
<td>Critical Yielding Length Model for Predicting Midspan Debonding in</td>
<td>1445</td>
</tr>
<tr>
<td>FRP Flexural Strengthened RC Beams</td>
<td></td>
</tr>
<tr>
<td>Jian-Guo Dai</td>
<td></td>
</tr>
<tr>
<td>13. Model Updating, Identification and Damage Detection</td>
<td></td>
</tr>
<tr>
<td>Identification of Dynamic Vehicular Axle Loads Using</td>
<td>1453</td>
</tr>
<tr>
<td>Super-Position Technique and Influence Line</td>
<td></td>
</tr>
<tr>
<td>Lu Deng, and Chan-Sheng Cai</td>
<td></td>
</tr>
<tr>
<td>Operational Modal Analysis Using Correlation-Based Arma Models</td>
<td>1459</td>
</tr>
<tr>
<td>Chun-Xiao Bao, Xin-Qun Zhu, Hong Hao, and Zhong-Xian Li</td>
<td></td>
</tr>
<tr>
<td>Variable Modal Parameter Identification Using an Improved HHT</td>
<td>1465</td>
</tr>
<tr>
<td>Algorithm</td>
<td></td>
</tr>
<tr>
<td>Chun-Xiao Bao, Xin-Qun Zhu, Hong Hao, and Zhong-Xian Li</td>
<td></td>
</tr>
<tr>
<td>Modelling and Detecting of Additional Mass in Pipes by the Spectral</td>
<td>1471</td>
</tr>
<tr>
<td>Element Method</td>
<td></td>
</tr>
<tr>
<td>Ying Wang, Xin-Qun Zhu, Hong Hao, and Jin-Ping Ou</td>
<td></td>
</tr>
</tbody>
</table>
Identification of Prestress Force in Concrete Beams by Finite Element Model Updating

Ying Wang, Xin-Qun Zhu, Hong Hao, and Jin-Ping Ou

Prestressing Force Detection by Dynamic Method

Rui-Ge Li, and Yao-Ting Zhang

An Investigation of the Reliability of Ambient Vibration Tests for Extracting Structural Vibration Properties

Hong Hao, Xin-Qun Zhu, and Andrew J Deeks

FE Model Updating of a Spoke Type Cable-Membrane Structure Based on Static Measurement

Long Wang, Bo Wu, and Fan Wang

Study on Suspension Structure Parameters Based on Random Analysis Method

Wen-Wu Lan, Bin-Ning Wei, Xiu-Ning Peng, and Shu-Ying Wei

Crack Localization in Beam Structures Using the Curvature of the First Anti-Resonant Frequency Curve

Dan-Sheng Wang, Dan-Yan Shen, and Hong-Ping Zhu

Study on Classification System of Connections for 1 to 4 Stories Steel Frames

Yuan-Qing Wang, Yi-Zhou Zhang, Gang Shi and Yong-Jiu Shi

Data-Based Hysteretic Performance Identification for a Nonlinear Structure Equipped with MR Damper

Ren Zhou, Bin Xu, Jia He, and Sami F. Masri

Structural Parameter Identification Approach Based on Arma and Neural Network Model

An-Su Gong, and Bin Xu

Test Validation of a Damage Detection Method for a Beam Using Macro-Strain from Long-Gauge FBG Sensors

Chong-Wu Liu, Bin Xu, and Sami F. Masri

A Comparison of Techniques for Identifying Soil Dynamic Properties

Jun Chen, Guan-Yu Zhao, Xiao-Yu Qi, and Jie Li
A Hybrid Method for Damage Detection in Composite Beams Embedded with Piezoelectric Layers
Wei Yan, and Li-Li Yuan

Finite Element Analysis on Seismic Behavior of Complicated High Rising Structure
Yun Zou, and Xi-Lin Lu

Study on the Concrete Damage Evolvement and Damage Detection in R.C Beams by Wavelet Analysis
Gang Xue, Zhen-Hua Dong, and Jin-Liang Tian

Model Updating for a Long Span Steel Skybridge
Xin Zhao, Sun-Hua Hua, Zheng-Yi Min, Zhang-Rong Hai, Chen Wei, and Shen-Xu Dong

Modeling and Application of GPR Detection Technology in Reinforced Concrete Defects Testing
Wen-Ge Tu, Li-Qing Chen, and Fang-Long He

Cable Tensioning in Cable-Stayed Bridges by Combination Method
Wei Wang and Wei-Lian Qu

Data-Fusion Damage Identification Method Based on Wavelet Packet Decomposition and Weighted-Average
Shao-Fei Jiang, and Yun-Liang Xu

Structural Damage Identification Method Based on Rough Set and Probabilistic Neural Network
Shao-Fei Jiang, and Juan Yao

Identification of Instantaneous Frequencies of Time-Varying Structures Based on Wavelet Ridges
Chao Wang, and Wei-Xin Ren

14. Bridge Engineering, Wind Engineering and Observation

Study on Longitudinal Wind Speed Spectrum Based on Field Measurement
Yi-Qing Xiao, Li-Xiao Li, Chao Li, and Qiu-Sheng Li

Analysis and Comparison on the Wind Stability of Cable-Supported Bridges
Xin-Jun Zhang, and Chao-Bing Zhang
Identification of Aerodynamic Models of Bridge Decks from Numerical Simulation
Zhi-Wen Zhu, You-Xiang Li, Zhao-Xiang Wang, and Zhen-Qing Liu

Mechanics Performance of Super Long-Span Cable-Stayed Bridges Using CFRP Cables
Xin-Jun Zhang, and Ling-Long Dong

Multi-Scale FE Modeling Technique and ITS Application on Steel Box Girder of Runyang Suspension Bridge
Hao Wang, Ai-Qun Li, Qi-fei Chen, Tong Guo, and Chen Wang

Three-Dimensional Non-Linear Vibration Analysis of a Cable
Xiao-Bao Zuo, Ai-Qun Li, and Sun Wei

Aseismatic Analysis of the Steel Structure of Tianjin Bengbu Bridge
Yuan-Qing Wang, Hui-Ting Chen, Zhen-Xue Zhang, Yong-Jiu Shi, and Ji-Qin Li

Finite Element Analysis of Large-Tonnage Bracing Member of Bengbu Bridge of Tianjin Haihe River
Yuan-Qing Wang, Ji-Sheng Xing, Yun-Sheng Li, Yong-Jiu Shi, Jin-Qin Li, and Zhen-Xue Zhang

FEA on Loading Capacity of Large Tonnage Compression-Shear Pad Bearing Used in Bengbu Bridge of Tianjin Haihe River
Yuan-Qing Wang, Jun Xiong, Yong-Jiu Shi, Yun-Sheng Li, and Ji-Qin Li

The Study on Structural Design and Accuracy Control of Emergency Track Beam for Straddle Monorail Transit
Yun-Kun Huang, Er-Yu Zhu, and Yang Lu

Behaviors of Super-Long Span Cable-Stayed Bridge with Ultra High Performance Concrete (UHPC) Girder
Zhi Fang, Feng-Hong Fan, and Sheng-Hua Tang

Coupling Mechanism of Wind-Vehicle-Bridge System for Long Cable-Stayed Bridges
Yong-Le Li, Ming-Jin Zhang, Bin Wang, and Kai Zhao

Dynamic Responses of Long Span Continuous Steel Truss Arch Bridge under Running High-Speed Train
Xiao-Zhen Li, De-Jun Liu, and Yan Zhu
Dynamic Responses of Long-Span Continuous Rigid Frame Bridge Subjected to Running Highway Vehicles

Yan Zhu, Limin Zhang, and Xiao-Zhen Li

15. High Performance Materials and Smart Materials and Structures

Mechanical Properties of High-Performance Concrete Mixed into Steel Slag Powder

Yun-Feng Li, and Cheng-Ming Gao

Moisture Content, Strength and Fracture Energy of Concrete

Tie-Jun Zhao, Zhi-Wei Sun and Peng Zhang

Experimental Research on Compressive Strength and Deformation of Self-Compacting Concrete at High Temperature

Jin Tao, Xian Liu, Yong Yuan, and Luc Taerwe

Effects of Hybrid Fibers on Splitting Tensile Strength and Compressive Strength of High Performance Concrete

Dong-Tao Xia, Guang-Zheng Xia, Li-Hua Xu, and Yin Chi

Collapse Analysis of Reticulated Shell Subjected to Fire Attack

Jin Zheng, and Bo Chen

Tests and Design of Aluminum Flexural Members

Ji-Hua Zhu, and Ben Young

Study on the Role of Polypropylene Fiber in Preventing Explosive Spalling of HPC at Elevated Temperatures

Xian Liu, Yong Yuan, Guang Ye, Jin Tao, and Li-Min Lu

Study on Restoring Force Characteristics of the SRHSHPC Frame Columns

Liang Zhang, Shan-Suo Zheng, Lei Li, Lei Zeng, Shun-Li Che, and Bin Wang

Flexural Capacity Calculation of SRHSHPC Columns with Eccentric Compression Loading

Shan-Suo Zheng, Liang Zhang, Bin Wang, Lei Li, and Wei-Jun Zhang

Limit Value of Axial Compression Ratio for SRHSHPC Columns Considering Interfacial Bond-Slip Behavior

Shan-Suo Zheng, Chun-Hua Peng, Bin Wang, Lei Li, Zhen-Dong Ping, and Wei Wang

Study on the Force Transfer of SRHSHPC Frame Joints

Shan-Suo Zheng, Pei-Qin Wang, Lei Li, Hong-Ren Zhang, Bin Wang, and Wei Wang
Research on The Mechanical Behavior and Normal Section Failure Mode of Reactive Powder Concrete Slab ................................................................. 1802
Yan-Ling Zhang, Zhong-Ming Hou, and Gui-Ping Yan

Study on the Steel Behavior of Simply Supported Steel-Reactive Powder Concrete Composite Beams ................................................................. 1808
Zhong-Ming Hou, Yan-Ling Zhang, and Gui-Ping Yan

Axial Compression Ratio Limit of High Performance Concrete Shear Wall in Performance Based Seismic Design ......................................................... 1814
Ming-Ke Deng, Xing-Wen Liang, and Ke-Jia Yang

Curvature Ductility Analysis of High Performance Concrete Shear Wall ................................................................. 1820
Ming-Ke Deng, Xing-Wen Liang, and Xin Li

Simplified Inverse Method for Determining Uniaxial Tensile stress Curve of Strain Hardening Cementitious Composites (SHCC) ......................................................... 1826
Li Tian, Jing-Ru Chen, Tie-Jun Zhao, and Song Gao

Study on the Physical and Mechanical Properties of Crumb Rubber Recycled Aggregate Concrete ................................................................. 1830
Yue Li, Zhao-Xing Han, Min Wang, Yu-Sheng Wu, and Zhi-Qiang Zhang

The Chloride Ion Penetrability in Recycled Aggregate Concrete with Mineral Admixtures ................................................................. 1835
Ting Du, Lie-Bin Fang, Zhong-Xin Liu, Zhi-Qiang Zhou, and Jie Liu

Size Effect of Concrete Prismatical Compressive Strength ................................................................. 1843
Jie Su, and Zhi Fang

Study and Application of Shape Memory Alloys Dampers in Seismic Resistant of the Shear Wall Structure of Large Space at Low Part ................................................................. 1848
He Meng, She-Liang Wang, Xiang Zhao, and Kun Yang

Carbon Fiber (CF) Conductive Concrete for Roadway Deicing System ................................................................. 1855
Zuo-Fu Hou, and Sheng-Liang Hu

Nonparametric Modeling of Magnetorheological Damper ................................................................. 1860
Zhi-Gang Huang, Bin Xu, Zach Feinstein, and Shirley J. Dyke

Numerical Simulation Analysis of Seismic Isolation Structure Using SMA Wire-Laminated Rubber Combined Bearings ................................................................. 1866
Hai-Qing Liu, Xue-Qing Wang, Yan-Bin Cui, and Jinping Ou
# 16. Earthquake Engineering and Earthquake Resistant Design

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Resistance of + - shaped Columns Subjected to Different Fire Exposure Cases</td>
<td>1875</td>
</tr>
<tr>
<td>Yu-Ye Xu, Quan-Feng Wang, Yi Luo, and Ting-Yi Xue</td>
<td></td>
</tr>
<tr>
<td>Effect of Earthquake Duration and Sequences of Ground Motions on Structural Responses</td>
<td>1881</td>
</tr>
<tr>
<td>Oyarzo-Vera Claudio, and Chouw Nawawi</td>
<td></td>
</tr>
<tr>
<td>Design Procedure and Seismic Performance of the Partially unbonded Prestressed Precast Concrete Frame</td>
<td>1887</td>
</tr>
<tr>
<td>Xun Chong, and Shao-Ping Meng</td>
<td></td>
</tr>
<tr>
<td>Seismic Fragility Analysis for RC Frames</td>
<td>1893</td>
</tr>
<tr>
<td>Hai-Yan Zhang</td>
<td></td>
</tr>
<tr>
<td>Simplified Analysis for Overpressure on Walls of the closed Cuboid Due to Its Inner-Explosion</td>
<td>1899</td>
</tr>
<tr>
<td>Li Tian, Zhong-Xian Li, and Qing Zhou</td>
<td></td>
</tr>
<tr>
<td>Site Characterization Evaluation in Perth Metropolitan Area Using Microtremor Array Method</td>
<td>1906</td>
</tr>
<tr>
<td>Jonathan Zhong-Yuan. Liang, Hong Hao, Ying Wang, and Kai-Ming Bi</td>
<td></td>
</tr>
<tr>
<td>Study on Seismic Performance Levels and Allowable Deformation Values of SRC Structures</td>
<td>1912</td>
</tr>
<tr>
<td>Qiu-Wei Wang, Qing-Xuan Shi, Liu-Jiu Tang, and Jin-Jie Men</td>
<td></td>
</tr>
<tr>
<td>2-D Seismic Fragility Analysis and Structural Type Effect of a Multi-Span Subway Station</td>
<td>1917</td>
</tr>
<tr>
<td>Hai-Tao Yu, Zhi-Yi Chen, and Yong Yuan</td>
<td></td>
</tr>
<tr>
<td>Seismic Design of Monolayer Cable Net in Point-Supporting Glass Structure of National Network Administration Center</td>
<td>1923</td>
</tr>
<tr>
<td>Yong-Jiu Shi, Yong Li, Yuan-Qing Wang, Yi Luo, and Li-Li Wu</td>
<td></td>
</tr>
<tr>
<td>Displacement Based Seismic Assessment and Design for Buildings in Low-to-Moderate Seismicity Regions</td>
<td>1929</td>
</tr>
<tr>
<td>Yong Zhu, and Ray kai Leung Su</td>
<td></td>
</tr>
<tr>
<td>Seismic Response of Laneway Considering Traveling Waves Effects</td>
<td>1935</td>
</tr>
<tr>
<td>Hai-Qing Liu, Jin-Li Wang, and Xue-Qing Wang</td>
<td></td>
</tr>
</tbody>
</table>
Seismic Performance of Moment Connections between Coldformed Steel Sections
Gen-Tian Zhao, Ming Chen, Xing Wan, and Lei Xu

The Study on Seismic Performance of Fa-Wang Pagoda in Xian You Temple
Jun Su, and Da-Feng Gao

17. Structure Performance in Fire, under Explosion and Other Man-Made Hazards

Behavior of Concrete Filled Steel Cubular Frame in Fire
Li-Xin Zheng, Xiao-Xiong Zha, and Shuang Wang

Load Resistance Ratio of Light Weight Steel-Concrete Composite Beams Subjected to Standard Fire
Xiao-Yong Mao and Xiao-Ying Gao

Analysis on Global Mechanics Properties of Large-Space Steel Structures under Fire Conditions
Yong-Jiu Shi, Yin Bai, and Yuan-Qing Wang

Three Dimensional Thermal Resistance Element for Simulating Heat Transfer across Interfaces
Yong-Jun Liu, Lian-Guang Jia, Yan-Sheng Song, and Shi-Yun Xiao

Analytical Formula of the Characteristics of the Top and Seat Angle Connection under High Temperature in Fire
Xin-Tang Wang, Xue-Jiao Wang, and Xiao-Yao Zheng

Research on the Thermal Response of Restrained Axially Compressed Steel Column under Fire
Xiao-Yao Zheng, Xin-Tang Wang, and Yong Ding

Analysis of Critical Damage of Thin Plate Subjected to Contact Explosions
Jian He, Zhen-Peng Liao, Ming Chen, and Jing Zhang

Performance of Rubberized High Strength Concrete after Fire
Li-Juan Li, Wei-Feng Xie, Zhi-Ze Chen, Ying-Qin Chen, Hui-Xiang Lu, and Rui-Hua Wan

Structural Response of RC Spatial Frame with Specially-Shaped Columns at Elevated Temperature
Bo Wu, and Yatao Jing

The Study of Ultimate Bearing Capacity of Overlapped Chs K-Joints
Xing-Ping Shu, Shao-Ning Zhu, Zheng-Rong Zhu, and Hao Zou