Preface

The 4th GeoShanghai International Conference was held on May 27–30, 2018, in Shanghai, China. GeoShanghai is a series of international conferences on geotechnical engineering held in Shanghai every four years. The conference was inaugurated in 2006 and was successfully held in 2010 and 2014, with more than 1200 participants in total. The conference offers a platform of sharing recent developments of the state-of-the-art and state-of-the-practice in geotechnical and geoenvironmental engineering. It has been organized by Tongji University in cooperation with the ASCE Geo-Institute, Transportation Research Board, and other cooperating organizations.

The proceedings of the 4th GeoShanghai International Conference include eight volumes of over 560 papers; all were peer-reviewed by at least two reviewers. The proceedings include Volumes 1: Fundamentals of Soil Behavior edited by Dr. Annan Zhou, Dr. Junliang Tao, Dr. Xiaoqiang Gu, and Dr. Liangbo Hu; Volume 2: Multi-physics Processes in Soil Mechanics and Advances in Geotechnical Testing edited by Dr. Liangbo Hu, Dr. Xiaoqiang Gu, Dr. Junliang Tao, and Dr. Annan Zhou; Volume 3: Rock Mechanics and Rock Engineering edited by Dr. Lianyang Zhang, Dr. Bruno Goncalves da Silva, and Dr. Cheng Zhao; Volume 4: Transportation Geotechnics and Pavement Engineering edited by Dr. Xianming Shi, Dr. Zhen Liu, and Dr. Jenny Liu; Volume 5: Tunneling and Underground Construction edited by Dr. Dongmei Zhang and Dr. Xin Huang; Volume 6: Advances in Soil Dynamics and Foundation Engineering edited by Dr. Tong Qiu, Dr. Binod Tiwari, and Dr. Zhen Zhang; Volume 7: Geoenvironment and Geohazards edited by Dr. Arvin Farid and Dr. Hongxin Chen; and Volume 8: Ground Improvement and Geosynthetics edited by Dr. Lin Li, Dr. Bora Cetin, and Dr. Xiaoming Yang. The proceedings also include six keynote papers presented at the conference, including “Tensile Strains in Geomembrane Landfill Liners” by Prof. Kerry Rowe, “Constitutive Modeling of the Cyclic Loading Response of Low Plasticity Fine-Grained Soils” by Prof. Ross Boulanger, “Induced Seismicity and Permeability Evolution in Gas Shales, CO2 Storage and Deep Geothermal Energy” by Prof. Derek Elsworth, “Effects of Tunneling on Underground Infrastructures” by Prof. Maosong Huang, “Geotechnical Data Visualization and Modeling of Civil
Infrastructure Projects” by Prof. Anand Puppala, and “Probabilistic Assessment and Mapping of Liquefaction Hazard: from Site-specific Analysis to Regional Mapping” by Prof. Hsein Juang. The Technical Committee Chairs, Prof. Wenqi Ding and Prof. Xiong Zhang, the Conference General Secretary, Dr. Xiaoqiang Gu, the 20 editors of the 8 volumes and 422 reviewers, and all the authors contributed to the value and quality of the publications.

The Conference Organizing Committee thanks the members of the host organizations, Tongji University, Chinese Institution of Soil Mechanics and Geotechnical Engineering, and Shanghai Society of Civil Engineering, for their hard work and the members of International Advisory Committee, Conference Steering Committee, Technical Committee, Organizing Committee, and Local Organizing Committee for their strong support. We hope the proceedings will be valuable references to the geotechnical engineering community.

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<th>Affiliation</th>
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<td>Tongji University, China</td>
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<td>Virginia Tech, USA</td>
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<tr>
<td>Jianfu Shao</td>
<td>Université des Sciences et Technologies de Lille 1, France</td>
</tr>
<tr>
<td>Jonathan Stewart</td>
<td>University of California, Los Angeles, USA</td>
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<tbody>
<tr>
<td>Fayun Liang</td>
<td>Tongji University, China</td>
</tr>
<tr>
<td>Bin Ye</td>
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<td>Tongji University, China</td>
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<tr>
<td>Jie Zhou</td>
<td>Tongji University, China</td>
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</tbody>
</table>
Contents

Theoretical and Numerical Study of Rock Behavior

A Method of Surface Subsidence Prediction for Compressed Air Energy Storage in Salt Rock ........................................... 3
Zirui Cheng and Bin Ye

A New Method for Estimating Rock Fracture Toughness $K_{IC}$ from Strength Parameters ........................................... 12
Jun Liu, Qi Zhang, Guoliang Dai, and Xiao Wang

A Numerical Study on Mechanical Behavior of Pre-fissured Sandstone Under Triaxial Compression by Three-Dimensional Distinct Element Method ........................................... 21
Wenkai Zhu, Mingjing Jiang, Lei Li, and Tao Li

An Investigation of the Pseudo-steady State Approach to Modelling Inter-porosity Flow in Fractured Geomaterials ................. 30
Lee J. Hosking and Hywel R. Thomas

Analytical Prediction of Stresses Around Non-circular Tunnels Excavated at Shallow Depth ........................................... 39
Hua Ning Wang, Guang Shang Zeng, and Ming Jing Jiang

Calibration of a Distinct Element Model for Rock Considering the Residual Strength .................................................. 48
Lei Li, Mingjing Jiang, and Fang Liu

Characteristics of Hydraulic Fracture in Heterogeneous Rock with Distributed Hard Inclusions ........................................... 57
Ming Li, Li Liang, and Yunyun Fan

Damage-Based Cohesive Modelling for Fractures Initiation and Propagation Around a Deep Tunnel in Quasi-brittle Rocks ........ 65
Edoardo Trivellato, Amade Pouya, Minh-Ngoc Vu, and Darius Seyedi
Investigating Effects of Fracture Aperture and Orientation on the Behaviour of Weak Rock Using Discrete Element Method 74
Xiangyu Zhang, Behzad Fatahi, and Hadi Khabbaz

Numerical Investigation of the Dynamic Response of Tunnel Structure and Surrounding Rock Mass to Seismic Loads Based on DEM Simulation 82
Jie Mei, Lei Yang, Weimin Yang, Shucai Li, Yujing Jiang, Bo Zhang, and Kongling Guo

Numerical Simulation on Acoustic Emission of Composite Stratum 91
Jianxiu Wang, Yansheng Deng, and Linbo Wu

Research on Construction Simulation and Early Warning Method of High Steep Rock Slope 99
De-yong Wang, Yong-ping Wang, Hai-hong Mo, and Ping-shan Chen

Theoretical Analysis of Gas Hydrate Dissociation in Sediment 109

Time-Dependent Failure of Marble Under Long-Term Loading 117
Ning Liu, Chunsheng Zhang, Weijiang Chu, and Pingzhi Chen

Experimental Study of Rock Behavior

A Comparative Study of Grout Placement in a Rock Joint 129
Jiaxing Zhang, Xiangjun Pei, Yixuan Sun, and Haiying Huang

Effect of Injection Rate on Micro-seismicity Due to the Hydraulic Fracturing of Granite 137
Inderdeep Grewal, Bing Q. Li, and Bruno Gonçalves da Silva

Experiment and Numerical Simulation on Contact and Breakage of Marble Particles 145
Jian Zhou, Shicai Yu, Jin Zhang, and Cheng Zhao

Experiment on the Failure Process of Jointed Rock Specimen Under Compression and Numerical Test 158
Hao Zhou, Yang Song, Qimin Wang, Weishen Zhu, and Yanqing Men

Experimental Investigations of Rock Dynamical Characteristics Under Cyclic Loading 166
Xiaozhang Lei, Jianfeng Liu, Lu Zheng, Lu Wang, and Hui-ning Xu

Experimental Study on Elastovisco-Plastic Rheological Properties of Saturated Limestone Under Multi-level Load and Unload Cycles 176
Yanlin Zhao, Liming Tang, GuoMing Cheng, Qiang Liu, and Senlin Xie
Experimental Study on Physical and Mechanical Properties of Iron Tailing Materials ........................................ 187
Jianting Du, Liming Hu, Dantong Lin, and Lin Zhang

Experimental Study on the Rheological Property of Compacted Clay and Its Influence on the Stress and Deformation of the Core-Wall Dam .................................................. 195
Zhi-zhou Geng, Kai Xu, Zhiqiang Wu, and En-yue Ji

Influence of Different Loading Angles with Respect to the Stratification on Tensile Strength of Black Shale .................. 204
Xiao-shan Shi, Jing-rui Niu, Da-an Liu, Tie-wu Tang, Bonan Wang, and Weige Han

Limit Strain Method for Determining Long-Term Strength Based on Isostrain-Rate Creep Curve ................................ 212
Zhen Wang, Mingrong Shen, Qingzhao Zhang, Linlin Gu, and Zejun Luo

Effects of Normal Stress and Clay Content on the Frictional Properties of Reservoir Rocks Under Fully Saturated Conditions ........... 220
Mengke An, Fengshou Zhang, Lianyang Zhang, and Yi Fang

Microscopic Experimental Study on Failure Mechanism of Rock-Like Material with Flaw Pairs Under Uniaxial Compression ........... 232
Cheng Zhao, Jialun Niu, Chunfeng Zhao, and Rui Zhang

Modeling Micro-crack Coalescence in Marble Containing a Single Flaw Under Uniaxial Compression .......................... 242
Dan Huang and Xiao-qing Li

Research on Confining Pressure Effect on Mesoscopic Damage of Rock Salt Based on CT Scanning .............................. 254
Lu Wang, Jianfeng Liu, Huining Xu, and Yangmengdi Xu

Shear Behavior of Rock Joints Under CNS Boundary Condition ..... 263
Caichu Xia, Qiangfeng Yu, Yang Gui, Xin Qian, Xiaoqing Zhuang, and Songbo Yu

Combined Tension-Shear Experimental Study of Rock Failure .... 275
Shouding Li, Linanan Liu, Xiao Li, Jingyun Guo, Jianming He, and Yanhui Liu

Study on Crack Repair of Tunnel Segment by Electrochemical Deposition Method .................................................. 284
Hehua Zhu, Xin Wang, Zhengwu Jiang, and Qing Chen

Study on the Rock Damage Characteristics Based on SEM Test .... 297
Yimeng Zhou, Cheng Zhao, Chunfeng Zhao, and Junfei Xie
The Influence of Water Absorption Increment on Infrared Radiation Characteristics of Rammed Earth .................................. 305

Applications of Rock Mechanics and Case Studies

A Dynamic Rock Mass Classification Method for TBM Tunnel ........... 319
Ya-dong Xue, Xing Li, Zhen-xing Diao, Feng Zhao, and Han-xiang Zhao

Karst Development and Hydrogeological Characteristics of Typical Limestone Formations in Guizhou, China ................. 329
Zhong-Mei Wang and Liang-Bo Hu

Stability of Large-Scale Rock Cavern Complex at the 800-Year Feifengyan Quarry .................................................. 338
Xiaolong Deng, Lihui Li, Yufang Tan, Beixiu Huang, Zhifa Yang, Gaimei Guo, and Tianbin Li

Mechanical Analysis of Removable Blocks During TBM Tunnelling in Blocky Rock Masses in View of TBM-Block Interaction ........ 346
Shuaifeng Wang, Zixin Zhang, and Xin Huang

Modeling and Inversion of Complex 3D Geologic Field Stress and Its Application in Rockburst Evaluation .......................... 352
Quanjie Zhu, Jinhai Liu, Linsheng Gao, Zhihua Chen, and Xiaohui Liu

Numerical Simulation Analysis of Layered Slope Landslide Mechanism in Open Pit Mine .......................... 364
Zhigang Tao, Wenshuai Han, Mengnan Li, and Xiaohui Zheng

The Stability of Open-Pit Slope in Permafrost Regions Under Global Warming ................................................. 375
Guofeng Li, Ning Li, and Naifei Liu

Thermal Stress Effect on Fracture Integrity in Enhanced Geothermal Systems .................................................. 388
Chao Zeng, Wen Deng, Chenglin Wu, and Matt Insall

Mechanical Characteristics and Control Technology of Floor in Gob-Side Entry Retaining .................................. 397
Ying Xu and Le Shen

Author Index .................................................................. 409
About the Editors

Lianyang Zhang received his PhD in Geotechnical Engineering from MIT and currently holds the Delbert Lewis Distinguished Professorship at the University of Arizona.

Bruno Goncalves da Silva earned his PhD and MSc from MIT with a concentration in Geotechnical Engineering, and a BSc from Instituto Superior Tecnico, Portugal, with a focus in Structural Engineering. He is currently an Assistant Professor in the New Jersey Institute of Technology.

Cheng Zhao received his PhD from Nagasaki University with a concentration on Geotechnical Engineering. He has been a member in the Department of Geotechnical Engineering at the Tongji University since 2010 and is currently an Associate Professor.