Geotechnical Special Publication No. 232

IACGE 2013

Challenges and Recent Advances in Geotechnical and Seismic Research and Practices



Proceedings of the Second International Conference on Geotechnical and Earthquake Engineering



EDITED BY Jianping Hu, Jianlin Ma, Jorge Meneses, Tong Qiu, Xiong (Bill) Yu, and



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CHALLENGES AND RECENT ADVANCES IN GEOTECHNICAL AND SEISMIC RESEARCH AND PRACTICES

PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERENCE ON GEOTECHNICAL AND EARTHQUAKE ENGINEERING

October 25-27, 2013 Chengdu, China

SPONSORED BY

The International Association of Chinese Geotechnical Engineers The Chinese Academy of Engineering, Division of Civil, Hydraulic, and Architecture Engineering The Geo-Institute of the American Society of Civil Engineers

> EDITED BY Jianping Hu Jianlin Ma Jorge Meneses Tong Qiu Xiong (Bill) Yu Xiangwu (David) Zeng





Published by the American Society of Civil Engineers

Library of Congress Cataloging-in-Publication Data

International Conference on Geotechnical and Earthquake Engineering (2nd : 2013 : Chengdu, China)

IACGE 2013 : challenges and recent advances in geotechnical and seismic research and practices : proceedings of the second International Conference on Geotechnical and Earthquake Engineering, October 25-27, 2013, Chengdu, China / sponsored by the International Association of Chinese Geotechnical Engineers, the Chinese Academy of Engineering, Division of Civil, Hydraulic, and Architecture Engineering, the Geo-Institute of the American Society of Civil Engineers ; edited by Jianping Hu, Jianlin Ma, Jorge Meneses, Tong Qiu, Xiong (Bill) Yu, Xiangwu (David) Zeng.

pages cm -- (Geotechnical special publication; no. 232)

Includes bibliographical references.

ISBN 978-0-7844-1312-8 (pbk.) -- ISBN 978-0-7844-7797-7 (PDF)

1. Geotechnical engineering--Congresses. 2. Earthquake engineering--Congresses. I. Hu, Jianping, 1972- II. International Association of Chinese Geotechnical Engineers. III. Zhongguo gong cheng yuan. Tu mu shui li yu jian zhu gong cheng xue bu. IV. American Society of Civil Engineers. Geo-Institute. VI. Title: Challenges and recent advances in geotechnical and seismic research and practices. VII. Title: Proceedings of the second International Conference on Geotechnical and Earthquake Engineering, October 25-27, 2013, Chengdu, China.

TA710.A1I4728 2013 624.1'51--dc23

2013028467

American Society of Civil Engineers 1801 Alexander Bell Drive Reston, Virginia, 20191-4400

www.pubs.asce.org

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Preface

This Geotechnical Special Publication contains selected technical papers of the 2nd International Conference on Geotechnical and Earthquake Engineering organized by the International Association of Chinese Geotechnical Engineers (IACGE) and the Chinese Academy of Engineering, Division of Civil, Hydraulic and Architecture Engineering. The conference covers a broad field of topics in geotechnical and geotechnical earthquake engineering, including soil dynamics and earthquake engineering, foundation engineering and pile testing, excavation and shoring, embankments and retaining walls, tunnels and underground structures, dams and levees, slopes and landslides, expansive soils and loess, geology and rock mechanics, ground improvement techniques, geotechnical numerical modeling and computation, and geotechnical support technologies during construction.

About four hundred abstracts were received in response to the Call for Papers. The abstracts were reviewed by the organizing committee and as a result three hundred and fifty invitations were extended to prepare and submit full-length papers. A total of three hundred and twenty full-length papers were received in response to these invitations and one hundred and seventy papers out of the total were written in English.

The papers written in English were reviewed following the same procedures and technical standards of the ASCE Geotechnical Special Publications. Each paper must have received two positive reviews to be accepted and must have revised to conform to the mandatory revisions of the reviewers. A number of papers went through more than one cycle of review and revision. Standard editorial review forms and checklists were utilized to maintain uniform technical standards of the papers. As a result, one hundred and thirty papers were accepted for the conference and ninety-two papers were selected to be included in this ASCE Geotechnical Special Publications. All the papers selected for the Geotechnical Special Publications are eligible for discussion in the ASCE Journal of Geotechnical and Geoenvironmental Engineering and for ASCE award nominations.

The paper review would not have been possible without the help of a group of lead reviewers, who, on behalf of the Technical Committee, organized and in some cases conducted the review of a group of papers. The editors would like to acknowledge the invaluable contribution of the following lead reviewers:

Fu, Haiying Mok, Chinman Mao, Jianqiang Wu, Xingxu Yu, Xiong (Bill) Zhang, Jianjin Zhu, Ming Hu, Jianping Qiu, Tong Ma, Jianlin Yan, Li Zeng, Xiangwu (David) Zhang, Jichun Liu, Jinyuan Meneses, Jorge Shang, Julie Yan, Liping Zhang, Jianhai Zhou, Depei

This publication would not have been possible without the dedication and professionalism of the paper reviewers. The names of these highly qualified reviewers are listed in the followings. For any additional reviewers whose names were inadvertently missed, we offer our sincere apologies.

Andrei, Dragos Arnold, Arnold Bergado, Dennes Cao, Laifa Chen, Xingnian Conkle. Chris Cook, Michael O. C-T. Carlos Cui, Zhen-Dong Darson, Ethan Deng, Lijun Dodds, Andy Dong, Xuejiang Ebrahimi, Ali Eitthoeft, Alan Escandon, Richard F. Fahmy, Ahmed Fanyu, Fanyu Franke, Kevin Fu, Haiving Gao. Bo Gao, Quan Gao, Yue Ge, Louis Guptill, Paul D. He, Liangcai Hsiao, Evan Hu, Jianping Hu, Jianying Huang, Jerry Huo, Yili Jaeger, Robert Joshi, Rutuparna Kim. Byungmin Kim, Sangmin Laifa, Laifa Lam, Carlos Lee, Joon K Lemmer, Robert Li, Chunling Li, Feng Li, Longqi

Li, Xiang Song Li, Yuru Liang, Oingguo Liao, Yun Lin, Peiyuan Lin. Sean Liu, Chi-Tseng Liu, Chunyang Liu, Fang Liu. Hua Liu, Jinyuan Liu, Pinghui Liu. Yaoru Liu, Ying Liu. Zhen Lu. Dechun Lu, Jinchi Lukkarila, Chad Luo, Xiangqi Ma. Jianlin Maki. Ian Mao, Jiangiang Matasovic, Neven Meneses, Jorge Mohamedelhassan, Eltayeb Mok, Chinman Motamed, Ramin Nadeswaran, Vallipuram Nguyen, Thang Peivuan, Peivuan Peng, Shuquan Pradel, Daniel Oin, Jin Qiu, Tong Rugg, Scott Salifee, Ali Salloum, Tareq Shafiee, Ali Shang, Julie Shenthan, T. Sivathasan, Siva Su. Bei

Sui, Wanghua Sura, Joseph Tan. Phalkun Tang, Xiaochao Tao, Junliang Tareq, Tareq Torsiello, Michael Varatharai. Rai Vincente, Earnest Wainaina, Njoroge Wang, Chen Wang, Jay Wang, Ning Wang, Zhi-Liang Williams, Adam S. Wu, Xingxu Xiao, Ming Yan. Li Yan, Liping Yang, Hong Yao, John Yi, Fred Ying, Zongze Yu, Xiong (Bill) Yuan Jiabei Yuan. Lei Yuan, Xuanxun Zeng, Xiangwu (David) Zhang, Jianhai Zhang, Jianjin Zhang, Jichun Zhang, Min Zhang, Ru Zhang, Xiong Zhong, Peng Zhou, Cheng Zhou, Depei Zhou, Xiaojun Zhou, Youwei Zhu, Fanyu Zhu, Ming

We are thankful to the Southwest Jiaotong University, HydroChina Chengdu Engineering Corporation, Sichuan University, China Railway Eryuan Engineering Group, China Railway Southwest Research Institute, and Changjiang River Scientific Research Institute for hosting this conference. Thanks are also extended to Robert Schweinfurth, ASCE Geo-Institute Director, for his coordination and enthusiastic support to this conference. The editors also acknowledge the assistance of Ms. Donna Dickert at ASCE Geo-Institute in the final production of this Geotechnical Special Publication. Finally, we would like to express our sincere appreciation to all the authors for their significant contributions to the success of the conference.

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June 26, 2013

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