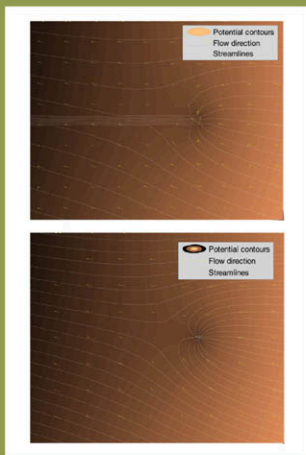


Geoenvironmental Engineering and Geotechnics

PROGRESS IN MODELING AND APPLICATIONS



Geotechnical Special Publication No. 204

Edited by

Qiang He
Shui-Long Shen

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GEOTECHNICAL SPECIAL PUBLICATION NO. 204

GEOENVIRONMENTAL ENGINEERING AND GEOTECHNICS

PROGRESS IN MODELING AND APPLICATIONS

PROCEEDINGS OF SESSIONS OF GEOSHANGHAI 2010

June 3–5, 2010
Shanghai, China

HOSTED BY
Tongji University
Shanghai Society of Civil Engineering, China
Chinese Institution of Soil Mechanics and Geotechnical Engineering, China

IN COOPERATION WITH
Alaska University Transportation Center, USA
ASCE Geo-Institute, USA
Deep Foundation Institute, USA
East China Architectural Design & Research Institute Company, China
Georgia Institute of Technology, USA
Nagoya Institute of Technology, Japan
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The University of Kansas, USA
The University of Tennessee, USA
Vienna University of Natural Resources and Applied Life Sciences, Austria

EDITED BY
Qiang He
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Published by the American Society of Civil Engineers



Library of Congress Cataloging-in-Publication Data

Geoshanghai International Conference (2010)

Geoenvironmental engineering and geotechnics: proceedings of the GeoShanghai 2010 International Conference, June 3-5, 2010, Shanghai, China / edited by Qiang He, Shui-Long Shen.

p. cm. -- (Geotechnical special publication ; 204)

Includes bibliographical references and index.

ISBN 978-0-7844-1105-6

1. Engineering geology--Congresses. 2. Environmental geotechnology--Congresses. 3. Soil permeability--Congresses. I. He, Qiang, 1972- II. Shen, Shui-Long. III. American Society of Civil Engineers. IV. Title.

TA703.5.G4595 2010

624.1'51--dc22

2010012104

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

www.pubs.asce.org

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ISBN 978-0-7844-1105-6

Manufactured in the United States of America.

Preface

Geoenvironmental Engineering and Geotechnics: Progress in Modeling and Applications selects 39 papers that represent the latest developments in the application of soil, rock, and groundwater mechanics in geotechnical engineering modeling and practice.

All the selected papers were presented at the GeoShanghai Conference, sponsored by the Geo-Institute of the American Society of Civil Engineers, held in Shanghai, China, June 3-5, 2010. The papers are selected from the following three technical sessions: *Geoenvironmental Engineering*; *Geotechnics*; and *Seepage and Porous Mechanics*. This conference provided a venue for both practitioners and researchers to showcase recent advances and discuss future directions in geotechnical engineering.

In the *Geoenvironmental Engineering* section of this GSP, studies on the engineering properties of reused waste materials in geotechnical application are presented, illustrating the close linkage between geotechnical engineering and sustainability. A number of papers provide insight into the impact of environmental contaminants on the geotechnical properties of geomaterials, demonstrating the importance of environmental factors in geotechnical applications. This section also highlights the latest understanding of groundwater contamination and remediation using cutting-edge interdisciplinary approaches integrating engineering modeling, biology, chemistry, and hydrogeology. The section of *Geotechnics* showcases new experimental evidence and theoretical developments in the strength and deformational behavior of soil. This section also presents development in a series of practical geotechnical problems such as stability analysis of slopes and risk analysis of landslides. Finally, the latest advances in the characterization and modeling of groundwater flow in geological formations of diverse geotechnical properties are highlighted in the section of *Seepage and Porous Mechanics*.

Each paper published in this ASCE Geotechnical Special Publication was evaluated by two or more reviewers and the editors. All published papers are eligible for discussion in the *Journal of Geotechnical and Geoenvironmental Engineering*, and are also eligible for ASCE awards.

We would like to acknowledge the quality and timely peer reviews provided by the reviewers listed below. Without their professional contributions, this publication would not be possible.

Heather J. Brown, Middle Tennessee State University, USA
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Guizhi Zhu, Swiss Federal Institute of Technology Zurich, Switzerland
Songye Zhu, Hong Kong Polytechnic University, Hong Kong

In producing this GSP, the editors would also like to acknowledge the assistance of Donna Dickert and Carol Bowers at ASCE Geo-Institute. In addition, the editors would like to extend their great appreciation to Professors Yongsheng Li, conference chair of GeoShanghai, Maosong Huang, Imad Al Qadi, and Baoshan Huang, who were instrumental in organizing the GeoShanghai Conference.

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