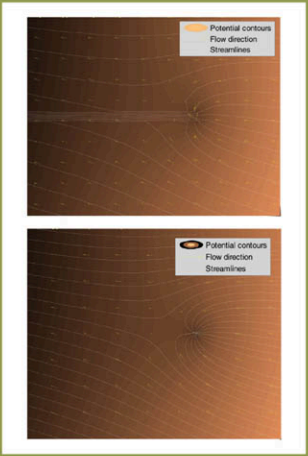
Geoenvironmental Engineering and Geotechnics

Progress in Modeling and Applications



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Edited by *Qiang He*
Shui-Long Shen

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GEOENVIRONMENTAL ENGINEERING AND GEOTECHNICS

PROGRESS IN MODELING AND APPLICATIONS

PROCEEDINGS OF SESSIONS OF GEOSHANGHAI 2010

June 3–5, 2010
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Chinese Institution of Soil Mechanics and Geotechnical Engineering, China

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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.

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