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# *SOIL DYNAMICS AND EARTHQUAKE ENGINEERING*

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June 3–5, 2010  
Shanghai, China

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# Preface

This special publication contains 43 technical papers cover a variety of topics of interest to soil dynamics and earthquake engineering. These papers are classified into three groups. The first group of papers is on the *dynamic soil-structural interactions* under seismic loads. The topics of papers cover important issues such as the dynamic responses of earth dams, pile and pile groups, soil nailing, tunnel, landfills and shallow foundations. A theme paper provides a thorough analyses and discussion on the seismic responses of high earth dam observed during the recent Wenchuan earthquake, one of the most catastrophic earthquakes. Due to the large number of papers in this group, this group is arranged into two subgroups in this book. The second group of papers is on the *dynamic properties of soils and rocks*. These papers include both experimental study and numerical simulations of the soil dynamic properties. A few papers describe the study of soil dynamic behaviors under special loading path and saturation conditions. The third group of papers is on the *seismic zoning and earthquake hazard assessment*. These include the use of different testing methods and analyses algorithms to assess the seismic hazards for certain regions or for specific engineering structures.

Each paper published in this ASCE Geotechnical Special Publication (GSP) was evaluated by two or more reviewers and the editors. The authors of the accepted papers have addressed all the reviewers' comments to the satisfaction of the editors. All published papers are eligible for discussion in the Journal of Geotechnical and Geoenvironmental Engineering, and are also eligible for ASCE awards.

The papers in this publication were presented during the GeoShanghai International Conference held in Shanghai, China, June 3 – 5, 2010. This conference was hosted by Tongji University, Chinese Institution of Soil Mechanics and Geotechnical Engineering and the Shanghai Society of Civil Engineering, China in cooperation with ASCE Geo-Institute, Transportation Research Board of National Academics, East China Architectural Design & Research Institute Co., LTD., Deep Foundations Institute, University of Kansas, University of Illinois at Urbana-Champaign, Vienna University of Natural Resources and Applied Life Sciences, Nagoya Institute of Technology, Georgia Institute of Technology, University of Newcastle, Alaska University Transportation Center, University of Tennessee.

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and provided important guidance during the organization of the Soil Dynamics Track. We wish to thank the chair of Technical Coordination council of ASCE Geo-Institute, Prof. Kevan Sharp, and the council members for their support to the Publication of the GSPs as proceedings of this conference. Thanks are also due to Donna Dickert at ASCE and Carol Bower at ASCE Geo-Institute.

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