



# Geotechnical Earthquake Engineering and Soil Dynamics V

*Numerical Modeling and  
Soil Structure Interaction  
GSP 292*



Papers from Sessions of Geotechnical  
Earthquake Engineering and Soil Dynamics V

Austin, Texas  
June 10–13, 2018



EDITED BY  
Scott J. Brandenburg, Ph.D., P.E.

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GEOTECHNICAL SPECIAL PUBLICATION NO. 292

# GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS V

## *NUMERICAL MODELING AND SOIL STRUCTURE INTERACTION*

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EARTHQUAKE ENGINEERING AND SOIL DYNAMICS V

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EDITED BY  
Scott J. Brandenburg, Ph.D., P.E.  
Majid T. Manzari, Ph.D.



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Published by American Society of Civil Engineers  
1801 Alexander Bell Drive  
Reston, Virginia, 20191-4382  
[www.asce.org/publications](http://www.asce.org/publications) | [ascelibrary.org](http://ascelibrary.org)

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**Errata:** Errata, if any, can be found at <https://doi.org/10.1061/9780784481479>

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ISBN 978-0-7844-8147-9 (PDF)  
Manufactured in the United States of America.

## Preface

This volume is one of four Geotechnical Special Publications (GSPs) containing papers from the Fifth Geotechnical Earthquake Engineering and Soil Dynamics Conference: (GEESDV) held in Austin, Texas during June 10–13, 2018. The GEESDV is the latest event in a series of highly successful conferences held in Sacramento CA (2008), Seattle WA (1998), Park City UT (1988), and Pasadena CA (1978). The conference is organized by the Earthquake Engineering and Soil Dynamics Technical Committee of the Geo-Institute (G-I) of the American Society of Civil Engineers (ASCE) and brings together practicing geo-professionals, researchers, and students from around the world to share the latest advances, engineering applications, and pedagogical approaches in this discipline.

This Geotechnical Special Publication is the outcome of two years of concerted efforts by the conference lead organizers and the members of the “technical program” and “proceedings” committees. All submitted papers were reviewed and accepted by at least two independent peer-reviewers. The final accepted technical papers are organized in the following special publications:

- Volume 1: Liquefaction Triggering, Consequences, and Mitigation
- Volume 2: Seismic Hazard Analysis, Earthquake Ground Motions, and Regional-Scale Assessment
- Volume 3: Numerical Modeling and Soil Structure Interaction
- Volume 4: Slope Stability and Landslides, Laboratory Testing, and In Situ Testing

The Editors would like to express their sincere appreciation to the members of the technical program and proceedings committees as well as the session chairs and reviewers.

### **The Editors,**

Scott J. Brandenburg, Ph.D., P.E., M.ASCE  
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## Acknowledgments

The organizing committee would like to thank the authors, reviewers, session chairs, ASCE staff, and OmniPress staff, without whom this publication would not be possible.

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