GSP 284 | Selected Papers from the Proceedings of Geo-Risk 2017

Geo-Risk 2017

Impact of Spatial Variability, Probabilistic Site Characterization, and Geohazards

Edited by

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GEOTECHNICAL SPECIAL PUBLICATION NO. 284

GEO-RISK 2017

IMPACT OF SPATIAL VARIABILITY, PROBABILISTIC SITE CHARACTERIZATION, AND GEOHAZARDS

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GEO-RISK 2017

June 4–7, 2017
Denver, Colorado

SPONSORED BY

Geo-Institute of the American Society of Civil Engineers

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Published by the American Society of Civil Engineers

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

Errata: Errata, if any, can be found at https://doi.org/10.1061/9780784480717

ISBN 978-0-7844-8071-7 (PDF)
Manufactured in the United States of America.

Preface

Interest and use of probabilistic methods and risk assessment tools in geotechnical engineering has grown rapidly in recent years. The natural variability of soil and rock properties, combined with a frequent lack of high quality site data, makes a probabilistic approach to geotechnical design a logical and scientific way of managing both technical and economic risk. The burgeoning field of geotechnical risk assessment is evidenced by numerous publications, textbooks, dedicated journals and sessions at general geotechnical conferences. Risk assessments are increasingly becoming a requirement in many large engineering construction projects. Probabilistic methods are also recognized in design codes as a way of delivering reasonable load and resistance factors (LRFD) to target allowable risk levels in geotechnical design.

This Geotechnical Special Publication (GSP), coming out of the *Geo-Risk 2017* specialty conference held in Denver, Colorado from June 4-7, 2017, presents contributions in sessions: 1) Impact of Spatial Variability and Site Characterization, and 2) Geohazards.

These contributions to the use of geostatistics and probabilistic methods to model the spatial variability of the ground, to characterize geotechnical sites and to assess the risk of geohazards are very timely, and will provide a valuable and lasting reference for practitioners and academics alike.

The editors would like to thank all of the members of ASCE Geo Institute's Technical Committee on Risk Assessment and Management and the Engineering Practice of Risk Assessment and Management Committee (TC304) of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) for their ongoing support.

All the papers in this GSP went through a rigorous review process. The contributions of the reviewers are much appreciated.

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Acknowledgments

The following individuals deserve special acknowledgment and recognition for their efforts in making this conference a success

- Conference Chair: D.V. Griffiths, Colorado School of Mines, Golden, Colorado, USA
- Conference Co-Chair: Gordon A. Fenton, Dalhousie University, Halifax, Canada
- Technical Program Chair: Jinsong Huang, University of Newcastle, NSW, Australia
- Short-Courses: Limin Zhang, Hong Kong University of Science and Technology
- Student Program co-Chairs: Zhe Luo, University of Akron; Jack Montgomery, Auburn University
- Sponsorships and Exhibits Chair: Armin Stuedlein, Oregon State University

The Editors greatly appreciate the work of Ms. Helen Cook, Ms. Leanne Shroeder, Ms. Brandi Steeves, and Mr. Drew Caracciolo of the ASCE Geo-Institute for their administration of many important conference organizational issues, including management of the on-line paper submissions, the conference web site and sponsorship.

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