Geo-Congress 2019

GSP 313

Soil Erosion, Underground Engineering, and Risk Assessment





Papers from Sessions of the
Eighth International Conference on
Case Histories in Geotechnical Engineering

Philadelphia, Pennsylvania
March 24–27, 2019

EDITED BY Christopher L. Meehan, Ph.D., P.E.
Sanjeev Kumar, Ph.D., P.E.
Miguel A. Pando, Ph.D., P.Eng.
Joseph T. Coe, Ph.D.

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SELECTED PAPERS FROM SESSIONS OF THE EIGHTH INTERNATIONAL CONFERENCE ON CASE HISTORIES IN GEOTECHNICAL ENGINEERING

March 24–27, 2019
Philadelphia, Pennsylvania

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American Society of Civil Engineers

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Preface

From the early days of modern geotechnical engineering, sharing field experience on the performance of geostructures in the form of case histories has driven the advancement of knowledge for the geotechnical profession. Starting in 1984, Professor Shamsher Prakash formalized this tradition, organizing the First International Conference on Case Histories in Geotechnical Engineering. This conference brought together over 190 engineers from 38 countries to share their experiences, learn from each other, and advance the profession. By 2013, the Seventh conference in this series had grown to nearly 320 engineers attending from 53 countries spanning the globe, culminating in symposia to honor the legacy of the late Ralph B. Peck and to honor Clyde N. Baker Jr. But the essence of the conference had not changed: to advance our profession through lessons learned from case histories and shared engineering judgment.

Recognizing the significant role that case histories play in the geotechnical engineering profession, the American Society of Civil Engineers (ASCE) has decided to continue the tradition of this long-standing conference series by merging this conference into its annual Geo-Institute Congress. The result is Geo-Congress 2019: The Eighth International Conference on Case Histories in Geotechnical Engineering, which was held in Philadelphia, Pennsylvania on March 24-27, 2019.

The following pages comprise the ninth volume of ten Geotechnical Special Publications (GSPs) containing papers from Geo-Congress 2019: The Eighth International Conference on Case Histories in Geotechnical Engineering. This conference featured experiences and observations from numerous geoengineering projects and case histories, including recent "MegaProjects." Presented topics are organized into the following conference proceeding volumes:

Volume 1: Embankments, Dams, and Slopes
Volume 2: Earth Retaining Structures and Geosynthetics
Volume 3: Foundations
Volume 4: Earthquake Engineering and Soil Dynamics
Volume 5: Soil Improvement
Volume 6: Geotechnical Materials, Modeling, and Testing
Volume 7: Engineering Geology, Site Characterization, and Geophysics
Volume 8: Geoenvironmental Engineering and Sustainability
Volume 9: Soil Erosion, Underground Engineering, and Risk Assessment
Volume 10: Data, Software, Education, and a Tribute to Ralph Peck

Many individuals are responsible for the content of these published works, all of whom contributed to maintaining the high standards that are set for ASCE's GSPs. An international call for papers and rigorous peer review process yielded 403 accepted

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technical papers, that were presented in 36 podium sessions and numerous poster sessions, in addition to the keynote award presentations, Geo-PITs (Powerful, Informative Talks), and panel sessions. Papers in these volumes were reviewed in accordance with ASCE's GSP standards, with each paper receiving two or more independent, technical peer reviews. Publication in these Proceedings required concurrence by at least two peer reviewers.

This publication series culminates two years of effort by the conference organizing committee whose focus has been to build upon and enhance the success of the past International Conferences on Case Histories in Geotechnical Engineering. On behalf of the conference organizers and the ASCE Geo-Institute, we wish to express our gratitude to all of the session chairs and reviewers for their diligent efforts to make these Proceedings a reality. We also wish to extend our thanks to Geo-Institute staff, whose tireless efforts working with authors, session chairs, and members of the conference organizing committee were instrumental in the conference planning process. Finally, we would like to thank the authors for their contributions to the Proceedings. The papers that have been submitted by our colleagues do a great service to the legacy of the previous "Case Histories in Geotechnical Engineering" conferences, and are of great value to the geotechnical engineering profession.

The Editors,

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Contents

Geotechnics of Soil Erosion

Influence of Shear Strength and Moisture Content on Aeolian Sand Erosion 1
Luis Zambrano-Cruzatty, Alba Yerro, and Nina Stark

A GIS-Based Platform for Bridge Scour Risk Assessment Using the HYRISK Model 11
James Curra, Mehdi Omidvar, and Brent Horine

Using Case Studies of Bridge Scour in Rhode Island to Evaluate Simplified Scour Equations 20
Aaron S. Bradshaw, Wendy K. Laurent, Christopher D. P. Baxter, M. Reza Hashemi, Paul Sauco, Monique LaFrance Bartley, Brian Caccioppoli, and John King

Soil Deformation and Mechanical Behavior Induced by Internal Erosion under Complex Stress States 35
C. Chen and L. M. Zhang

Monitoring Stream Geometry at Headwaters in a Densely Developed Watershed 44
James D. Kugel, Emily E. Carambelas, Andrea L. Welker, and Stanley J. Kemp

Field Performance of Reinforced Dunes for Improving Coastal Resilience 53
Brian Maggi, Christopher Baxter, Annette Grilli, Stephen Licht, Paolo Stegagno, Aaron Bradshaw, and Naser Al Naser

Internal Erosion and Piping Evolution in Earth Dams Using an Iterative Approach 67
Fadi Saliba, Ronald Bou Nassar, Naji Khoury, and Yara Maalouf

Erosion Mechanism of Claypan Soils in Southeastern Kansas 76
Mark A. Mathis II, Tri V. Tran, Stacey E. Tucker-Kulesza, and Gretchen F. Sassenrath

Experimental and Analytical Studies on the Root Reinforcement Effect of a Grass Species, *Spartina alterniflora* 86
Sujan Baral, Jay X. Wang, Shaurav Alam, and William B. Patterson

Observation of Piping Erosion Initiation in a Centrifuge Model 97
William Ovalle-Villamil and Inthuorn Sasanakul

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Risk Assessment and Management

Landslide Susceptibility Updating Considering Real-Time Observations **107**
H. J. Wang and L. M. Zhang

Geo-Hydro Forensic Investigation of an Earthen Dam Failure **114**
Christopher J. Brown, Raphael Crowley, and Nick Hudyma

Quantitative Coseismic and Precipitation-Induced Landslide Risk Mapping for the Country of Lebanon **127**
William Pollock, Joseph Wartman, Grace Abou-Jaoude, and Alex Grant

George B. Stevenson Dam Rehabilitation—The Importance of Uncertainty and Confidence Evaluation in Quantitative Risk Assessments (QRA) Using Risk-Informed Decision Making (RIDM) Process **136**
Scott A. Raschke, Gregory S. Paxson, and Edward Raptosh

An Adaptive Kriging-Based Approach with Weakly Stationary Random Fields for Soil Slope Reliability Analysis **148**
Mehrzad Rahimi, Zeyu Wang, Abdollah Shafieezadeh, Dylan Wood, and Ethan J. Kubatko

Geotechnical Risk Assessment and Back Analysis of Ground Movements Induced by Tunnel and Open-Cut Excavations **158**
Mihail E. Popescu, Andrew J. Schwarz, and Naser Elsbihi

Geohazards, Extreme Weather Events, and Climate Conditions—The Development of FHWA Guidance **167**
Brian H. Zelenko, Khalid T. Mohamed, and Betsy Godfrey

Excavation-Induced Structural Responses Due to Inherent Spatial Variability of Soils **176**
Zhe Luo, Biao Hu, and Youwen Wang

Fuzzy Reliability Analysis for Elastic Settlement of Surface Footing **183**
Rajarshi Pramanik, Dilip K. Baidya, and Nirjhar Dhang

Predicting Multiple Hazards under Extreme Rainstorms **193**
S. Y. Zhou, L. M. Zhang, and P. Shen

Underground Engineering and Construction

Through-Soil Wireless Communication System for Embedded Geotechnical Instrumentation **200**
Omar Baltaji, Sijung Yang, Youssef M. A. Hashash, and Andrew Singer

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Time-History Analysis of Earth Pressure Test on Soil Arching Effect Caused by Deep-Buried Tunneling in Soft Soil.....209
Shujia Liu, Tinghui Bai, Shoming Liao, Pangyong Shen, Yun Gu, and Zhanwei Bai

Shallow Tunnel Not Aligned with the Geostatic Principal Stress Directions.....214
Osvaldo P. M. Vitali, Tarcisio B. Celestino, and Antonio Bobet

Photogrammetry for the Characterization of Rock Masses: Two Case Histories for Slopes and Caverns.....223
Fulvio Tonon

Jet Grouting for Excavation Support, Underpinning, and Groundwater Control for the Construction of Sewage Treatment Plant Tanks 230
Russell W. Preuss, Daniel V. Cacciola, and Carlos Medina

Overcoming Challenges for the Parallel Thimble Shoal Tunnel Site Investigation 241
Amanda Wachenfeld, Scott Kibby, Frank Perrone, and Jose Ballesta

Foundation Challenges for a Multi-Level Parking Structure in Boulder-Laden Fill: A Case Study 255
A. Bhatt, D. C. Pitts, S. K. Bhowmik, and J. L. Willmer

Effect of Segregation on the Geotechnical Properties of a Hydraulic Backfill.....269
Jean Béket Dalcé, Li Li, and Pengyu Yang

Case Study: Geotechnical Instrumentation and Monitoring of Alaskan Way Viaduct Replacement Project.....277
Zhangwei Ning, Loic Galisson, and Philip Smith

Correlating EPB Chengdu Metro Settlement Data with Analysis Predictions in Sandy Cobble Stratum 287
Xin Liao, Qingfeng Wang, Liang Feng, Xiyong Wu, Deping Guo, Yingwei Xi, and Jiannan Chen

A Numerical Investigation of SSCB Analysis and the Possibility of Applying Arching Inducement Techniques 297
I. M. Ezz, S. A. Y. Akl, and M. El-Kholy

Monitoring-Assisted Large-Diameter Shield Tunneling Control in Soft Ground: A Case Study of Bund Tunnel Project 306
Xuehui Zhang, Xi Jiang, Wei Chen, Dilu Xu, Guodong Cai, and Yun Bai

Overview of Typical Excavation Failures in China 315
Ye Lu and Yong Tan

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