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Thank You to Our “Virtual” Event Key and Online Proceedings Sponsor
Conference Introduction

Roberto Lopez, P.E.
Malcolm Drilling Co. Inc. | Program Chair

11:05 a.m.- 11:30 a.m.

Incorporating Deep Foundations in Limit-Equilibrium Slope Stability Analyses: Revisiting Fundamentals and Seismic Applications

Ben Turner, Ph.D., P.E.
Dan Brown and Associates, PC

Deep foundations are commonly used to prevent or stabilize existing landslides, deriving resistance to slope movement through embedment in bearing material below the slide plane. A variety of design methods are used in practice to incorporate piles into limit-equilibrium method slope stability analysis, some of which fail to adequately capture the pile resistance mechanism or correctly identify the critical pile failure mode, leading to false interpretation of factors of safety. Of particular concern is the common practice of assigning the shear strength of the pile material, e.g., the shear strength of concrete or steel multiplied by the cross sectional area of the pile, as a resisting force in slope stability analyses. Without performing separate laterally-loaded pile analyses, this approach fails to identify whether shear failure is in fact the controlling pile mechanism; more often than not, analyses show that the pile would actually fail in flexure prior to shear. As a result, the shear strength approach may drastically overestimate the pile contribution to stability, inflating the calculated factor of safety.

Software Presentations:
The following providers will analyze the problem using a variety of methods, present the solutions, and engage the audience in a detailed Q&A session:

11:30 a.m.- 12:00 p.m.

Augusto Lucarelli, P.E.
Itasca Consulting Group, Inc.

12:00 p.m.- 12:30 p.m.

Garry Gregory, Ph.D., P.E., D.GE
GREGORY GEOTECHNICAL

1:00 p.m.- 1:15 p.m.

Sina Javankhoshdel, Ph.D., P.Eng.
Rocscience, Inc.

1:15 p.m.- 1:45 p.m.

Jeff Lam, M.Eng., P.Eng.
Rocscience, Inc.

1:45 p.m.- 2:10 p.m.

Murray Fredlund, Ph.D., P.Eng
Bentley Systems, Inc.

Closing Remarks

Roberto Lopez, P.E.
Malcolm Drilling Co. Inc. | Program Chair

2:10 p.m. - 2:15 p.m.
ENGINEERING CONSULTING SERVICES

REMEDIATION DESIGN SERVICES

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- Design of landslide stabilization using deep foundations
- Practical construction solutions
- Instrumentation of deep foundations

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THE ROCSCIENCE SLOPE STABILITY SUITE

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Join Sina Javankhoshdel and Jeff Lam from the Rocscience Team for the Software Discussion panel at 11:30AM EST on August 5th, 2020
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