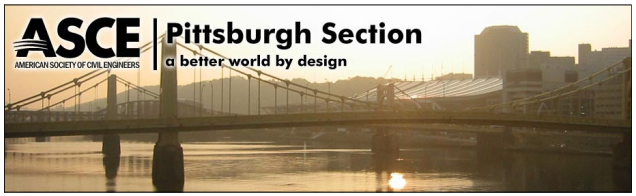
American Society of Civil Engineers: Pittsburgh Section: Geo-Institute



Pittsburgh Section: Geo-Institute

Analysis and Design of Foundation On and In Rock

Last Name First Name Initial

Company/School

Mailing Address

City State Zip Code

Email Address

Phone Number

☐ Pgh. GI Member **($220.00)**

☐ Public Sector Pgh. GI Member **($155.00)**

☐ Non-Member (Pgh. GI) **($255.00)**

☐ Public Sector Non-Pgh GI Member **($220.00)**

☐ Full-Time Student **($100.00)** *(Students must provide transcript)*

(No-shows will be billed at a non-member rate)

Add'l Copies of Proceedings: ___ x $100.00 = _____

Total Amount Enclosed: $_____.00

(Registration will not be processed without payment)

Please detach this form and return by **April 5, 2010** with a check made payable to:

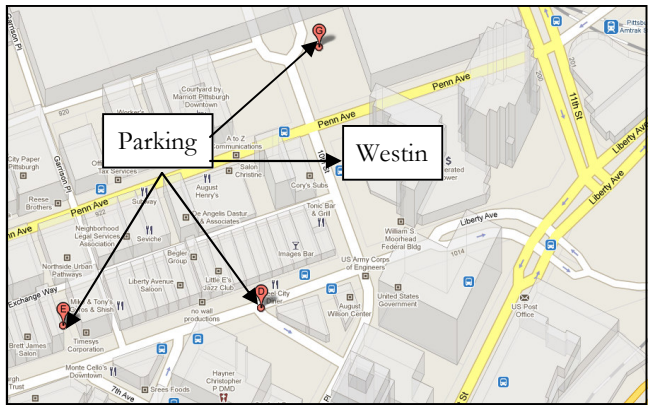
ASCE Geotechnical Engineering Group:

Attn: Shaun Palmer
Foster Plaza III, Suite 200
601 Holiday Dr.
Pittsburgh, PA 15220

ANALYSIS AND DESIGN OF FOUNDATIONS ON AND IN ROCK: SCHEDULE

7:30 to 8:00am	Registration *(Continental Breakfast)*
8:00 to 10:00am	Foundation on Rock & Field Exploration Plan
10:00 to 10:15am	Coffee Break
10:15 to 12:00am	Geophysical Field Methods The Soil—Rock Boundary Uncertainty in Basic Properties of Intact Rocks
12:00 to 12:45am	Lunch
12:45 to 2:45pm	Drilled Shafts into Rock Capacity of Foundations in Discontinuous Rock Capacity of Foundation Sockets
2:45 to 3:00pm	Coffee Break
3:00 to 5:00pm	Uplift of Rock Anchor Foundations Issues Evaluating Capacity of Rock Foundations Foundations In Carbonate Rocks and Karst *(if time permits)*

The seminar fee includes the cost of a continental breakfast, lunch, coffee, and seminar notes. To register for the short course, complete the attached form and mail it along with a check to the address enclosed on the back of this brochure. Cancellations received after the registration date and no-shows will be billed at the non-member rate. If you have any questions, please contact Shaun Palmer via email at: sjpalmer@gfnet.com.



- On-site parking is available at the Westin Hotel

American Society of Civil Engineers: Pittsburgh Section: Geo-Institute Presents a One-Day Short Course titled:

ANALYSIS AND DESIGN OF FOUNDATIONS ON AND IN ROCK

By:

Dr. Fred H. Kulhawy, P.E., G.E., Dist. M.ASCE

Saturday April 10, 2010

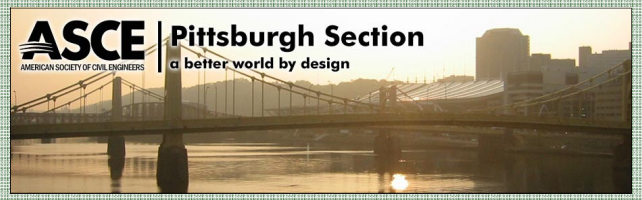
Westin Convention Center

(1000 Penn Ave.)

Pittsburgh, Pennsylvania

7:30am to 5:00pm

8 PDH's eligible for attendees



GEO INSTITUTE of ASCE

Analysis and Design of Foundations On and In Rock

The Subject and Course

The behavior of foundations on and in rock masses is not as well known as the behavior of foundations on and in soil masses. In fact, most textbooks on foundation engineering skirt the issue or have only a token chapter on the subject. The very few specialty texts on the subject focus more on geology and construction than on analysis and design. The result is that most designers are forced into conservative design that relies on codes and simple rules. On larger projects, load testing will be pursued to develop a cost-effective design. However, there really is a sound body of knowledge on the subject. Under the sponsorship of EPRI and others, significant research has been conducted at Cornell to assess rock masses and rock foundations in a realistic manner, including the uncertainties involved. All of these results are scattered widely in the literature.

In this short course, much of this technology is presented within a consistent, coherent, and practical framework so that one can build upon basic geologic knowledge to develop the proper tools to evaluate foundations on and in rock masses. The general topics covered include the following: overview of foundations on rock, field exploration-rock drilling-core logging-RQD, geophysical exploration, the soil-rock boundary, uncertainty in basic rock properties, behavior of shafts in rock under various loading modes, foundations in discontinuous rock, sockets, uplift anchors, overall design issues, and more.

For this course, comprehensive notes are used that facilitate technology transfer. These include organized copies of the course presentation materials and supplemental readings to provide further details. The course duration is one day.

The Instructor

Dr. Fred H. Kulhawy, P.E., G.E., Distinguished Member ASCE
Consulting Geotechnical Engineer and Professor Emeritus, Cornell University
Ithaca, New York, USA

Dr. Kulhawy is an internationally-acclaimed educator, consultant, and researcher, who has received numerous prestigious awards for his work from ASCE, ADSC, CGS, IEEE, and others, including election to Distinguished Membership of ASCE, the ASCE Karl Terzaghi Award and Norman Medal, and the CGS Meyerhof Award. He is Professor Emeritus in Geotechnical Engineering and Geology at Cornell, and he has lectured widely, giving over 1350 presentations around the world. His teaching and research has focused on foundations, soil-rock-structure interaction, reliability, soil and rock behavior, and geotechnical computer applications. As a consultant, he has had extensive experience on six continents, with much of his experience dealing with foundation engineering and soil/rock property evaluation. In research, he has pioneered on many fronts, most notably with drilled foundations and property evaluation since the mid-1970s. His research and practice on these topics constitutes a majority of this course.

Course Objectives

- Learn about rock mass evaluation and modeling from use of geologic principles to proper rock mass modeling, and much more
- Learn how to think and evaluate "geologically".
- Learn about proper calculation models for rock masses, and their variability and uncertainty.

The Geo-Institute

The Geo-Institute (GI) is a specialty organization focused on the geo–industry interested in improving the environment, mitigating natural hazards, and economically constructing engineered facilities. Our organization enhances a geo-professional's career development through technology transfer via specialty conferences, journals and practice-oriented publications; educational programs; networking and coalition-building; and leadership on emerging issues. Locally, the GI's Pittsburgh Chapter hosts numerous events throughout the course of the year. The Chapter strives to provide a venue for speakers with topics of interest to members on both a global and local scale. Traditionally, the program year is a mix of world-renowned speakers, such as the Terzaghi and Seed Lecturers, and engineers with ties to local/regional projects of note. However, the speakers and topics describe only a portion of the GI experience. GI events are also a forum for geotechnical professionals to discuss technical and policy issues; they are networking events where peers make contacts and learn more about the region's geo-industry; and they are opportunities for younger professionals to interact with some of the more prominent local figures in geotechnical engineering in an informal environment.

For more information

Contact: Shaun Palmer
Vice-Chairperson
(412) 922-5575 (Phone)
sjpalmer@gfnet.com (email)