

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

**APPLICATIONS OF  
GEOTECHNICAL  
INSTRUMENTATION**

\_\_\_\_\_  
Last name First name Initial

\_\_\_\_\_  
Company / School

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
City State Zip Code

\_\_\_\_\_  
Email Address

\_\_\_\_\_  
Phone Number

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

Pgh. GI Member/Public Sector \$175.00

Full-Time Student \$90.00

Non-Member (Pgh. GI) \$195.00

**Total Amount Enclosed: \$ \_\_\_\_\_ .00**

(Registration will not be processed without payment)

Please detach this form and return by Oct.

19, 2012 with a check made payable to:

**ASCE Geotechnical Engineering  
Group:**

Attn: Michael Schumaker

Venture Engineering & Construction

1501 Reedsdale St., Suite 1501

Pittsburgh, PA 15233.

**APPLICATIONS OF  
GEOTECHNICAL  
INSTRUMENTATION**

7:30 to 8:00 AM Registration

(Continental Breakfast)

8:00 to 8:30 Introduction

8:30 to 9:45 Basic Concepts of Instruments

9:45 to 10:00 Coffee Break

10:00 to 11:00 Systematic Approach to  
Geotechnical Instrumentation

11:00 to 12:00 Hardware-Groundwater &  
Deformation

12:00 to 12:45 PM Lunch Buffet

12:45 to 1:00 Discussion

1:00 to 2:00 Hardware for Total Stress, Load  
and Strain Monitoring

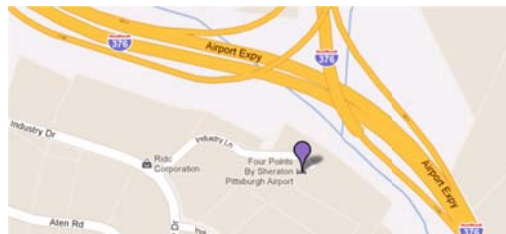
2:00 to 3:00 Execution Steps

3:00 to 3:15 Coffee Break

3:15 to 4:15 Future Trends and Final Review

4:15 to 4:45 PM Q&A / Discussion

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 Kevin Brissette via email at [kmbatvpz@zoominternet.net](mailto:kmbatvpz@zoominternet.net).



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

**APPLICATIONS OF  
GEOTECHNICAL  
INSTRUMENTATION**

By: Mr. Barry Christopher, PhD, PE  
Mr. Allen Marr, PhD, PE

**Saturday, November 3, 2012**  
Four Points, Sheraton Pittsburgh Airport  
1 Industry Lane  
Pittsburgh, Pennsylvania

**7:30 AM to 5:00 PM**

8 PDH's eligible for attendees  
(NY not eligible)



**GEO-  
INSTITUTE**  
**Pittsburgh Chapter**

## **APPLICATIONS OF GEOTECHNICAL INSTRUMENTATION**

### **The Subject and Course**

This one day course is designed to provide participants with the necessary knowledge and skills to plan, select, and implement instrumentation programs in geotechnical features for construction monitoring and performance verification. The course will discuss measurement tools, including recommendations for a systematic and complete approach to planning monitoring programs. The course presents recommendations for selecting proper instrumentation for various types of construction. Tasks covered include calibration, maintenance and installation of instrumentation, collection of data, processing and presentation of collected data, interpretation of processed data, and reporting of results.

### **The Instructors**

Barry Christopher, PhD, PE, M ASCE

Dr. Christopher is an independent geotechnical engineering consultant specializing in: geotechnical instrumentation, reinforced soil, geosynthetics application and design and other ground improvement technologies. He has authored numerous technical papers on these subjects including six design manuals for the U.S. Federal Highway Administration (FHWA). He is a certified National Highway Institute instructor and teaches 6 geotechnical courses including "Geotechnical Instrumentation."

Dr. Christopher has over 30 years of geotechnical engineering experience and is a registered Professional Engineer in six U.S. states. He has a BSCE from the University of North Carolina at Charlotte, a MSCE from Northwestern University, and a Ph.D. from Purdue University. He has chaired several national and international professional committees and continues to be active on a number of committees including the ASTM, TRB and the North American and International geosynthetic societies (NAGS/IGS).

Allen Marr, PhD, PE, NAE, M ASCE

Dr. Marr is a geotechnical engineer with specialized expertise in the design of large earthwork facilities, ground improvement and performance monitoring. Among his significant contributions to engineering are the development of techniques for monitoring the stability, movement and pressure in earthworks projects using sensors, wireless communications, automated analysis and visualization of data. By developing sensing, monitoring, measurement and analysis technologies, Dr. Marr has enabled full-scale construction projects to be built more safely and efficiently, at lower cost.

In 1982, Dr. Marr founded Geocomp Corporation, a firm that makes automated testing equipment and remote monitoring systems for civil engineering applications. In 1990, he founded GeoTesting Express, an independent testing laboratory that provides materials testing and consulting services to the civil engineering and construction industries. His many contributions have been widely published and he serves on a number of professional

society committees and boards. Dr. Marr holds a Bachelor of Science degree in Civil Engineering from the UC Davis College of Engineering as well as a Master's and Ph.D. in Civil Engineering from the Massachusetts Institute of Technology.

### **Course Outcomes:**

Upon completion of the course, participants will be able to:

- Recognize effective uses of geotechnical instrumentation;
- Identify benefits of instrumentation;
- Identify typical instrumentation programs for common geotechnical structures;
- Recognize role of instrumentation and how it is used for answering key geotechnical questions;
- Identify available instruments and where to find additional information and assistance;
- Plan an instrumentation program in a systematic way;
- Examine practical methods to collect and use data from instrumentation; and
- Perform an evaluation of the need for and potential benefits of geotechnical instrumentation on a project.