

American Society of Civil Engineers
Pittsburgh Section: Geo-Institute

**Stability of Natural and Man-Made Slopes:
Analysis, Shear Strengths, Testing,
Stability Methods, and Stabilization**

Last Name, First Name, Middle Initial

Organization / School

Mailing Address

City State Zip Code

Email Address

Phone Number

Pgh. GI Member \$200.00

Full-Time Student \$75.00

Non-Member (Pgh. GI) \$225.00

Total Amount Enclosed: \$ _____.

Registration will not be processed without payment. The Geo-Institute highly encourages individuals to register online. Registrations may also made by mail. Please detach this page and send to the following address by March 25, 2016 with a check made payable to **ASCE Geotechnical Engineering Group**.

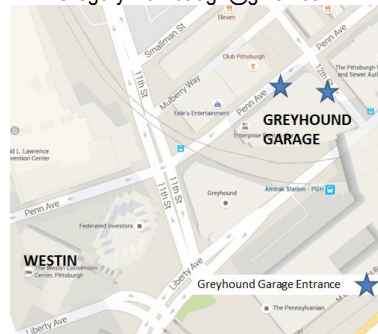
Attn: Greg Rumbaugh, P.E.
MSHA Roof Control Division
626 Cochrans Mill Road, Building 44
Pittsburgh, Pa 15236

Registration is available online at www.asce-pgh.org until March 25, 2016

**Stability of Natural and
Man-Made Slopes**

7:15 - 8:00	Registration/Continental Breakfast
8:00 - 8:10	Welcome and Introductions
8:10 - 8:45	Critical Cross-Section and Failure Surface
8:45 - 9:30	2D and 3D Stability Methods
9:30 - 9:45	BREAK
9:45 - 11:00	Selection and Types of Drained and Undrained Shear Strengths
11:00 - 12:00	Principle of Effective Stress in Unsaturated Soils
12:00 - 1:00	LUNCH
1:00 - 1:45	Unsaturated Slope Stability Analyses for Hillslopes
1:45 - 2:30	Slope Stabilization and Reinforcement Techniques
2:30 - 2:45	BREAK
2:45 - 4:30	Slope Case Histories
4:30 - 5:00	Summary and Panel Discussion

The seminar fee includes the cost of parking, a continental breakfast, lunch, coffee and an electronic copy of the seminar notes. Validated parking is available in the Greyhound parking garage located approximately 1 block down Grant Street. Additional information will be sent via email the week of the event. To register for the short course, please complete this form and mail it along with a check to the address on the left. Cancellations received after March 25, 2016 and no shows will be billed. If you have any questions, please contact Greg Rumbaugh at (412)352-3330 or via email at Gregory.Rumbaugh@gmail.com.



ASCE Geo-Institute
Pittsburgh Section Chapter
and the Embankments, Dams,
and Slopes Technical
Committee Presents a
One-Day Short Course:

**Stability of Natural and
Man-Made Slopes: Analyses,
Shear Strengths, Testing,
Stability Methods, and
Stabilization**
(7.5 Professional Development Hours)

Presented by:

Dr. Timothy D. Stark – University of Illinois at
Urbana-Champaign

Dr. Ning Lu – Colorado School of Mines

Mr. Matt Morris – Gannett Fleming

Mr. Eric Gottheld – Mine Safety and
Health Administration

Saturday, April 2, 2016

Westin – Convention Center
1000 Penn Avenue
Pittsburgh, Pennsylvania 15222

Check-in begins: 7:15 a.m.
Course: 8:00 a.m. – 5:00 p.m.

Registration due by March 25, 2016

Stability of Natural and Man-Made Slopes: Analyses, Shear Strengths, Testing, Stability Methods and Stabilization

Why You Should Attend:

After completing this course, you should:

- Have a knowledge of current geotechnical engineering practices for slope stability investigations and applicable shear strengths, shear strength testing, and static and seismic stability analyses for natural and man-made slopes
- Selection of drained v. undrained shear strengths for stability analyses
- Understand the measurement of selection of the drained peak, fully softened, and residual shear strengths for use in stability analyses
- Understand the importance and application of cohesion values and stress dependent strength envelopes in stability analyses
- Become more proficient in reviewing and analyzing slope stability problems

Course Instructors

Timothy D. Stark, Ph.D., P.E., has been a Professor of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign since 1991. His research interests include the static and seismic stability of natural and man-made slopes, three-dimensional slope stability analyses, shear strengths for slope stability analyses, and earthquake-induced liquefaction and post-liquefaction strength of cohesionless soils. Dr.

Stark has received a number of awards for his research, teaching, and service activities including the 2015 James M. Hoover Lecturer, Iowa State University; Thomas A Middlebrooks Award from the American Society of Civil Engineers (ASCE), 2013 and 1998; Associated Editor of the Year by ASCE Journal of Geotechnical and Geoenvironmental Engineering, 2011; Best Scholarly Paper from Journal of Legal Affairs of ASCE, 2011; R. M. Quigley Award from the Canadian Geotechnical Society, 2003; R.S. Ladd ASTM Standards Development Award from the ASTM, 2013, 2011, and 2002; Walter L. Huber Research Prize from ASCE, 1999.

Ning Lu, Ph.D., is a Professor of Civil Engineering at Colorado School of Mines and an international expert on stresses and stability of unsaturated porous media. His primary research interest is relating and combining basic soil physical phenomena, e.g., fluid flow, chemical transport, heat transfer, stress, and deformation, to understand various engineering problems, such as underground nuclear waste isolation, residential house foundation damage by expansive clays, and, most recently, precipitation-induced shallow landslides. He has co-authored numerous papers and two textbooks titled "Unsaturated Soil Mechanics" (John Wiley and Sons, 2004) and "Hillslope Hydrology and Stability" (N. Lu and J. W. Godt, Cambridge University Press, 2012). He teaches regularly on mechanics and hydrology of variably saturated porous media and vadose zone hydrology and landslides. Dr. Lu has received a number of awards for his research, teaching, and service activities including the Norman Medal and Croes Medal from the ASCE in 2007 and 2010, respectively.

Matthew Morris, P.G., is a Senior Associate with Gannett Fleming, Inc. located in Pittsburgh, PA. Mr. Morris holds a M.S. in Engineering Geology from Kent State University and a B.S. in Geology and Earth Science from Clarion University. He is Past President of the Association of Environmental and Engineering Geologists. Since joining Gannett Fleming in 1999, Mr. Morris has worked on a variety of transportation, dam, and other infrastructure projects across the United States. He has project experience in most engineering geology and geotechnical engineering subject areas, but specializes in rock and soil slope stability evaluation and mitigative design. Mr. Morris has been integrally involved in rock slope and landslide stabilization projects for the PennDOT, Ohio Department of Transportation, Arizona Department of Transportation, Army Corps of Engineers, Port Authority of Allegheny County and many private clients.

Eric J. Gottheld, P.E., M.ASCE, is a Senior Civil Engineer in the Mine Waste and Geotechnical Engineering Division of MSHA's Pittsburgh Technical Support. Mr. Gottheld has over 20 years of experience in civil engineering and over 14 years of experience at MSHA. He joined MSHA after gaining valuable experience at D'Appolonia in Monroeville, PA. Mr. Gottheld received his B.S. in Civil Engineering and M.S. with emphasis in geotechnical engineering from the University of Pittsburgh. Mr. Gottheld has both prepared and reviewed engineering design plans for coal waste dams. Areas of special interest include seismic and short-term stability of upstream construction. He has investigated highwall failures and landslides at mines, and assisted in preparing draft guidance for surface mine ground control plans.