

Agenda

Presented by Malay Ghose Hajra, Ph.D., P.E., ENV SP

Soil Investigation and Characterization

- Properties of soil
- Origin of soils
 - Formation of soils
 - Types of soil deposits
 - Field soil investigation techniques
 - Laboratory soil investigation methods
 - Soil classification

Evaluation of Soil Shear Strength

- Soil shear failure mechanisms
Evaluation of failure envelope
Soil shear strength types
- Drained
 - Undrained
 - Residual

Slope Stabilization Theory

- Natural and engineered slopes
Basic concepts of slope stability
Types of slope failures
Slope stability analysis methods
Impact of surface water and groundwater

Slope Stabilization Methods

- Unloading
Buttressing
Drainage
Compaction
Reinforcement
Soil improvement
Surface protection
Rock slope stabilization

Slope Stability of Shorelines and Drainage Channels

- Preserving streambeds
Maintaining shoreline
Case studies

Soil Shear Strength and Slope Stabilization

New Orleans, LA - Friday, August 9, 2019



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Learning Objectives

You'll be able to:

Learn about field and laboratory techniques for soil investigation and classification.

Explore soil shear failure mechanisms.

Study natural and engineered slopes, and discuss slope stability analysis methods.

Examine slope stabilization methods including reinforcement and soil improvement.

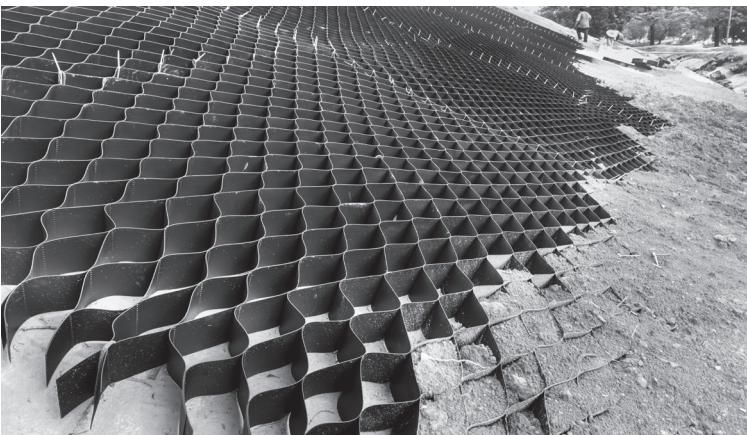
Review slope stability of shorelines and drainage channels.



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Examine slope stabilization methods including reinforcement and soil improvement

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Continuing Education Credits

Professional Engineers

6.5 PDHs

Architects & Landscape Architects

6.5 HSW CEHs
6.5 AIA HSW Learning Units
6.5 LA/CES HSW PDHs

Floodplain Managers

6.5 ASFPM CECs

Geologists

Non-credit Continuing Ed.

Contractors

Non-Credit Continuing Ed.



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Malay Ghose Hajra, Ph.D., P.E., ENV SP

Dr. Malay Ghose Hajra is an associate professor in the Civil and Environmental Engineering department at the University of New Orleans (UNO) in Louisiana. He is a registered professional engineer (P.E.) in multiple states including Louisiana.

Dr. Ghose Hajra completed his Ph.D. degree from Kansas State University in 2001 followed by a post-doctoral assignment at the Microscale Physiochemical Engineering Center at the University of Akron in Ohio. During the next ten years, he was employed as a consulting geotechnical engineer working on and managing several hundred geotechnical design and construction projects in Louisiana, Texas, and Mississippi. These projects dealt with complex foundation and pavement systems in unpredictable and changing subsurface soil conditions. The engineering analyses also included deep foundation recommendations for highway bridges, slope stability and seepage analyses for levees and embankments, and settlement estimates of soft compressible alluvial coastal deposits.

Seminar Information

Pan American Conference and Media Center

601 Poydras Street, 11th Floor
New Orleans, LA 70130
(504) 200-5730

Tuition

\$289 for individual registration
\$269 for three or more registrations.

Included with your registration: Complimentary continental breakfast and printed seminar manual.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
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Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.



Continuing Education Credit Information

This seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects in most states, including Louisiana. Educators and courses are not subject to preapproval in Louisiana. HalfMoon Education is an approved continuing education sponsor for Florida engineers.

This seminar offers 6.5 HSW CEHs to Louisiana landscape architects. Educators and courses are not subject to preapproval.

This course is approved by the American Institute of Architects for 6.5 HSW Learning Units (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. The Louisiana State Board of Architectural Examiners accepts programs approved by the American Institute of Architects. Only full attendance can be reported to the AIA/CES and LA/CES.

Halfmoon Education is an approved continuing education provider for Florida professional engineers (Provider No. 0004647). This course qualifies for 6.5 Area of Practice continuing education hours.

The Association of State Floodplain Managers has approved this event for 6.5 CECs.

This seminar offers a non-credit continuing education opportunity to geologists.

This course offers a non-credit continuing education opportunity for construction contractors. It is not approved in any state with a contractor continuing education requirement.

His professional experience also includes working with multiple Department of Transportation (DOT) agencies, US Army Corps of Engineers (USACE), and Louisiana Coastal Protection and Restoration Authority (CPRA) in the analyses and design of new Hurricane and Storm Damage Risk Reduction Systems (HSDRRS) and coastal restoration and protection projects in south Louisiana.

At UNO, Dr. Ghose Hajra’s academic research interests are in the areas of geotechnical and foundation engineering, coastal restoration and coastal protection, energy foundations, in-situ and laboratory characterization of coastal sediment deposits, and sustainable coastal infrastructure systems. He teaches undergraduate and graduate level courses on Geotechnical Engineering and Foundation Design, Coastal Geotechnics, Shear Strength and Slope Stability, and Sustainability Principles for Engineers. He is a member of American Society of Civil Engineers (ASCE), ASCE Geo-Institute’s Engineering Geology and Site Characterization Committee, Deep Foundations Institute (DFI), and Institute for Sustainable Infrastructure (ISI).

Additional Learning

Webinar Series

Industrial Stormwater

- **Understanding the Federal Industrial Stormwater Program**
Thurs., June 27, 2019, 11:00 AM - 12:30 PM CDT
- **Examining Stormwater Pollutants and the Development of Total Maximum Daily Loads (TMDLs)**
Thurs., June 27, 2019, 1:00 - 2:00 PM CDT
- **Creating Stormwater Pollution Prevention Plans (SWPPPs)**
Fri., June 28, 2019, 11:00 AM - 12:00 PM CDT
- **Implementing Best Management Practices (BMPs), Sampling and Reporting**
Fri., June 28, 2019, 12:30 - 2:00 PM CDT

For more information visit:
www.halfmoonseminars.org/webinars/

Can’t Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!
Audio recordings of this seminar are available for purchase starting at \$269. See registration panel for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration
Soil Shear Strength and Slope Stabilization

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Tuition

- () **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.
- () **I am not attending.** Please send me the self-study package:
 - ☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.
 - ☐ CD/Manual Package for **\$289.00**.(S&H included. Please allow five weeks from seminar date for delivery)

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