

# Agenda

*Presented by Miltiades Zacas, Ph.D, P.E., M. ASCE*

## Overview of Earth Retaining Systems

- MSE wall systems evaluation
- Description of MSE wall systems - components
- MSE wall selection issues/project considerations
- Soil reinforcement
- MSE wall system design properties

## Design of MSE Walls

- Lateral earth pressure
- External stability
- Internal stability
- Global stability
- MSE wall design example

## Construction of MSE Walls and Relevant Issues

- MSE walls with complex geometry
- Contracting methods and specifications

## Quality Assurance and Geotechnical Monitoring

## Case Histories

### Can't Attend? Order the CD/Manual Package:

An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

**Mechanically-Stabilized Earth Walls (MSEWs)**  
Augusta, ME - Friday, November 16, 2018

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## Learning Objectives

### You'll be able to:

**Examine** components of mechanically-stabilized earth wall (MSEW) systems.

**Learn** about types of MSEW systems and discuss wall selection issues.

**Discuss** internal, external and global stability of MSEW.

**Explore** the construction of mechanically-stabilized earth walls.

**Review** case histories and examples of mechanically-stabilized earth wall projects.



# Mechanically-Stabilized Earth Walls (MSEWs)

*Augusta, ME - Friday, November 16, 2018*



**Explore** components of mechanically-stabilized earth wall systems

**Review** contracting methods and specifications

**Examine** internal and external stability of mechanically-stabilized earth walls

**Discuss** quality assurance and geotechnical monitoring

## Continuing Education Credits

**Professional Engineers**  
7.0 PDHs

**Architects & Landscape Architects**  
7.0 HSW Continuing Ed. Hours\*  
7.0 AIA HSW Learning Units  
7.0 LA CES HSW PDHs

**Floodplain Managers**  
7.0 ASFPM CECs

**Contractors**  
Voluntary Continuing Ed.

**\*Not mandatory in Maine**



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# Faculty

## Miltiades Zacas, Ph.D, P.E., M. ASCE

Dr. Zacas has over 35 years of experience in geotechnical investigation, design and consultancy on various projects in Maine and internationally (Greece, Saudi Arabia, Somalia and Colombia). While in Greece, Dr. Zacas served for 14 years as managing partner of Pangaea Consulting Engineers, Ltd., a geotechnical engineering company based in Athens. He served as consultant for tunnel projects for the Greek Ministry of Public Works and Environment and for dam projects for the Greek Ministry of Irrigation and Agriculture. He is geotechnical engineering consultant for FGS/CMT, inc. (Bangor, Maine) for the design and management of geotechnical projects. Dr. Zacas is faculty associate at the Civil and Environmental Engineering Department of the University of Maine and teaches courses in geotechnical engineering and sustainability in engineering.

Dr. Zacas’ diverse experience in geotechnical engineering includes services in a variety of projects such as bridges, dams, tunnels, harbors, highways and buildings. He has authored or co-authored numerous articles published in journals and seminars/ conferences/symposia proceedings.

In 2018 he co-founded Sustainability Solutions Inc. in Maine, and he is in charge of the sustainability for the engineering and infrastructure section of the company.

# Seminar Information

|                                                                                               |                                                                             |                                                                                   |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>Homewood Suites by Hilton</b><br>377 Western Avenue<br>Augusta, ME 04330<br>(207) 480-2050 | Registration<br>8:00 - 8:30 am<br><br>Morning Session<br>8:30 am - 12:15 pm | Lunch (On your own)<br>12:15 - 1:15 pm<br><br>Afternoon Session<br>1:15 - 5:00 pm |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------|

## Tuition

**\$279** for individual registration

**\$259** for three or more simultaneous 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](http://www.halfmoonseminars.org).

## How to Register

- Visit us online at [www.halfmoonseminars.org](http://www.halfmoonseminars.org)
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

**Cancellations:** Cancel at least 48 hours before the start of the seminar (CDT), 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 CD/manual package. You may also send another person to take your place.

# Additional Learning

## Webinar Series

### Stormwater Management Systems

- **Basics of Stormwater Regulations and Requirements, Including New EPA Regulations**  
Thurs., Oct. 4, 2018, 11:00 AM - 12:00 PM CDT
- **Working with the Regulator**  
Thurs., Oct. 4, 2018, 12:30 - 2:00 PM CDT
- **Site Planning and Choosing Best Management Practices**  
Fri., Oct. 5, 2018, 11:00 AM - 12:00 PM CDT
- **Long-term Stormwater Management Practices**  
Fri., Oct. 5, 2018, 12:30 - 2:00 PM CDT

### Floodplain Mapping and Regulation

- **Floods, Floodplains and Introduction to Floodplain Management**  
Wed., Oct. 10, 2018, 11:00 AM - 12:30 PM CDT
- **Flood Maps and Flood Zones**  
Wed., Oct. 10, 2018, 1:00 - 2:30 PM CDT
- **Elevations in the National Flood Insurance Program (NFIP) and Floodplain Regulation**  
Thurs., Oct. 11, 2018, 11:00 AM - 12:30 PM CDT
- **Practical Floodplain Management**  
Thurs., Oct. 11, 2018, 1:00 - 2:30 PM CDT

### HEC-RAS Webinar Series

- **Hydraulic Principles and Applications**  
Thurs., Oct. 18, 2018, 11:00 AM - 1:00 PM CDT
- **Working with the HEC-RAS User Interface**  
Thurs., Oct. 18, 2018, 1:30 - 3:00 PM CDT
- **Water Surface Profiling**  
Fri., Oct. 19, 2018, 11:00 AM - 1:00 PM CDT
- **Steady Flow Surface Profile Demonstrations**  
Fri., Oct. 19, 2018, 1:30 - 3:30 PM CDT

### Construction Cost Estimating

- **Introduction to Cost Estimating**  
Thurs., Oct. 25, 2018, 11:00 AM - 12:30 PM CDT
- **Cost Components – A Closer Look at the Estimates**  
Thurs., Oct. 25, 2018, 1:00 - 3:00 PM CDT
- **Cost Estimate Organization and Examples**  
Fri., Oct. 26, 2018, 11:00 AM - 1:00 PM CDT
- **Cost Estimating Topics**  
Fri., Oct. 26, 2018, 1:30 - 3:00 PM CDT

For more information and other online learning opportunities visit:  
[www.halfmoonseminars.org/webinars/](http://www.halfmoonseminars.org/webinars/)

## Continuing Education Credit Information

This seminar is open to the public and offers 7.0 PDHs to professional engineers in all states and 7.0 HSW continuing education hours to architects and landscape architects in most states. Educators and courses are not subject to preapproval for Maine engineers. Continuing education is not mandatory for Maine architects and landscape architects.

This program has been approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 7.0 HSW PDHs. Only full attendance can be reported to the AIA/CES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED No. 35), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for architects and landscape architects in New York.

The Association of State Floodplain Managers has aproved this seminar for 7.0 CECs for certified floodplain managers.

This seminar also offers a non-credit continuing education opportunity to contractors, but it has not been approved by any state contractor licensing entity.

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.

### Can’t Attend? Order the CD/Manual Package:

An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

# Registration

## Mechanically-Stabilized Earth Walls (MSEWs)

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|                                                                                          |                                                                                                                                                                     |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>How to Register</b>                                                                   | <b>Registrant Information</b>                                                                                                                                       |
| <b>Online:</b><br><a href="http://www.halfmoonseminars.org">www.halfmoonseminars.org</a> | Name: _____                                                                                                                                                         |
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| <b>Phone:</b><br>715-835-5900                                                            | Occupation: _____                                                                                                                                                   |
|                                                                                          | Email: _____                                                                                                                                                        |
|                                                                                          | Phone: _____                                                                                                                                                        |
| <b>Fax:</b><br>715-835-6066                                                              | <b>Additional Registrants:</b>                                                                                                                                      |
|                                                                                          | Name: _____                                                                                                                                                         |
|                                                                                          | Occupation: _____                                                                                                                                                   |
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| <b>Complete the entire form.</b> Attach duplicates if necessary.                         |                                                                                                                                                                     |
|                                                                                          | Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred. |
|                                                                                          | ( )  I need special accommodations. Please contact me.                                                                                                              |

## Tuition

( ) **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.

( ) **I am not attending.** Please send me the CD manual package for **\$289.00**. (S&H included. Please allow five weeks from seminar date for delivery)

**Checks:** Make payable to HalfMoon Education Inc.

**Credit Card:** *Mastercard, Visa, American Express, or Discover*

Credit Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CVV2 Code: \_\_\_\_\_

Cardholder Name: \_\_\_\_\_

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