

Agenda

Presented by Michael J. Drerup, P.E.

Examining the Role of Forensic Engineering

- Causes and consequences of structural failures
- Importance of good design
- Impact of codes and standards
- Legal and economic impacts of failures
- Results and consequences of forensic engineering

Understanding the Forensic Engineering Process

- Documenting the failure
- Conducting investigation and research
- Test protocols and tests
- Determining causation and responsibility
- Learning from failure

Preparing the Forensic Engineering Report

- Identifying the report's purpose and its audience
- Examining content
- Organizing the report
- Evaluating sample reports

Understanding Causes of Structural Failures

- Material deficiencies
- Design errors
- Construction errors
- Excessive loadings
- Deterioration and degradation

Forensic Examination of Structures

- Investigation of steel structures
- Investigation of wood structures
- Investigation of concrete structures
- Investigation of masonry and building facades
- Load testing and instrumentation of existing structures

Using Forensic Engineering Information in Litigation

- Examining the nature of post-failure conflicts and disputes
- Understanding the use of forensic engineering information in arbitration, litigation and mediation
- Presenting forensic engineering information as an expert witness
 - Expert witness qualifications
 - Offering testimony as an expert witness

Structural Forensic Engineering
Fort Lauderdale, FL - Thursday, November 15, 2018

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Learning Objectives

You'll be able to:

Understand the importance of good design and the impact of codes and standards as tools to minimize structural failures.

Discuss how forensic research and investigation can be used to determine the causes of failures.

Understand the format and content of forensic engineering reports.

Identify the causes of structural failure including material deficiencies, deterioration, and design and construction errors.

Compare forensic investigation procedures for various types of structures including steel, wood, and concrete.

Discuss the use of forensic engineering information during the litigation process.



Structural Forensic Engineering

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Understand causes and consequences of structural failures

Learn the causes of structural failures

Explore the forensic engineering process

Understand forensic investigations of wood, steel and concrete structures

Identify key points in forensic engineering reports

Review the use of forensic engineering information during the litigation process

Continuing Education Credits

Architects

7.5 Florida HSW CE Hours
6.5 AIA HSW Learning Units

Engineers

6.5 FL Area of Practice CE Hours



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Michael Drerup, P.E., F.ASCE, has nearly 20 years of structural engineering and building technology experience, with an emphasis on the performance, maintenance, repair, and retrofit of existing buildings and structures. He has planned and directed field and laboratory studies to evaluate the performance and durability of a variety of building systems, components, and materials, including structural systems, facades, and flooring. Mr. Drerup often works closely with specialists in other disciplines to assemble and manage teams tailored for larger and more complex assignments. He has also investigated numerous damage claims resulting from a variety of natural and man-made causes, including earthquakes, weather events, explosions, fire, impact, construction activities, and defective design or construction. Mr. Drerup has served as an expert witness in numerous cases, and he has testified at deposition, trial, and mediation.

Mr. Drerup has served on ASCE’s Technical Council on Forensic Engineering for 13 years, and recently completed his term as Council chair. During that time, he has led the development of continuing education seminars for engineers and architects, chaired ASCE’s Fifth Congress on Forensic Engineering in Washington, DC, and served on the steering committee for the Sixth Congress in San Francisco. Mr. Drerup has also represented ASCE internationally, including two sponsored trips to forensic engineering conferences in India, and collaboration with the Institution of Forensic Engineers in the United Kingdom. He has served as a reviewer for ASCE’s *Journal of Performance of Constructed Facilities* for more than 10 years, and he was guest editor for a special topic issue on non-destructive evaluation of existing buildings and infrastructure. Mr. Drerup regularly publishes and presents on a range of topics including technical issues, professional practice, and architectural and engineering history.

Testimonials from Recent HalfMoon Education Seminars Taught by Michael Drerup:

- “Well presented with numerous examples” – *Engineer*
- “Very passionate about subject matter” – *Engineer*
- “Good speaker, knowledgeable” – *Civil Engineer*
- “It was a very great and informative class” – *Architect/Engineer*

Seminar Information

**Courtyard Fort Lauderdale North/
Cypress Creek**
2440 West Cypress Creek Road
Fort Lauderdale, FL 33309
(954) 772-7770

Tuition
\$279 for individual registration
\$259 for three or more registrations.
Each registration includes a 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
- Call customer service at 715-835-5900

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 CD/manual package. You may also send another person to take your place.



Continuing Education Credit Information

This seminar is open to the public and offers 7.5 continuing education hours to architects and 6.5 continuing education hours for professional engineers in all states.

HalfMoon Education is an approved continuing education provider for Florida architects (Provider No. 0001388; License No. PVD394), and this course is approved for 7.5 continuing education hours. The American Institute of Architects has approved this event for 6.5 HSW Learning Units (Provider No. J885).

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.

HalfMoon Education is deemed an approved continuing education sponsor for New York architects via the AIA and is an approved continuing education sponsor for engineers in Indiana, Louisiana, Maryland, New Jersey, New York (NYSED Sponsor No. 35), North Carolina, and North Dakota.

Attendance will be monitored and reported, as required. 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.

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 visit:
www.halfmoonseminars.org/webinars/

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

Structural Forensic Engineering

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How to Register	Registrant Information Name: _____ Company/Firm: _____ Address: _____ City:_____State: _____ Zip_____ Occupation: _____ Email: _____ Phone: _____ Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____ 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.
Online: www.halfmoonseminars.org	
Phone: 715-835-5900	
Fax: 715-835-6066	
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278	
Complete the entire form. Attach duplicates if necessary.	

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 August 4, 2017 for delivery)

Checks: Make payable to HalfMoon Education Inc.

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

Credit Card Number: _____
Expiration August 4, 2017: _____ CVV2 Code: _____
Cardholder Name: _____
Billing Address: _____
City:_____ State:_____ Zip: _____
Signature: _____
Email: _____