

Agenda

Presented by Vincent Fratinardo, P.E., S.E., RRC

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

- Conducting investigation and research
- Determining causation and responsibility
- Learning from failure
- Applying effective QA/QC to avoid failures

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

- Wind and weather
- 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
Livonia, MI - Friday, November 8, 2019

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PO Box 278
Altoona, WI 54720-0278



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.

Evaluate 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 procedure for various types of structures including steel, wood and concrete.

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



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Understand causes and consequences of structural failures

Explore the forensic engineering process

Identify key points in forensic engineering reports

Learn the causes of structural failures

Understand forensic investigations of wood, steel and concrete structures

Review the use of forensic engineering information during the litigation process

Continuing Education Credits

Professional Engineers

7.0 Continuing Ed. Hours

Architects

7.0 HSW CE Hours

7.0 AIA LU|HSW

Contractors

Non-Credit Continuing Ed.



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Vincent F. Fratinardo, P.E., S.E., RRC

Mr. Fratinardo is a civil/structural engineer and roof consultant. His over 20 years of experience includes civil and structural engineering analysis, design, construction administration, field investigation, and project management, and 13 years of experience specific to forensic engineering and the investigation and analysis of building damage and failures. Mr. Fratinardo has designed numerous new buildings, building additions, building renovations, and mechanical platforms and supports. He has designed and analyzed roof, wall and floor framing systems utilizing steel, concrete, masonry, and wood construction. Mr. Fratinardo has vast expertise in commercial, industrial, agricultural, municipal, educational and residential building damage investigations, including on-site investigations after 25 different tornado events, and Hurricanes Irene, Sandy, Matthew, Harvey, Irma, Maria and Florence. He has legal experience in depositions, arbitration hearings and trials. He has prepared and performed numerous continuing education presentations, including on an array of topics in forensic engineering, structural engineering and building codes for HalfMoon Education Inc., in multiple states since 2014. Mr. Fratinardo graduated from Michigan State University with a bachelor of science degree in Civil Engineering, and he also holds a master of engineering degree in Civil Engineering from Texas A&M University. He is a registered professional engineer in multiple states and a licensed structural engineer in Illinois.

Here’s what past attendees had to say about the program and presenter Vince Fratinardo:

“Enjoyed very much.” – *Principal Structural Engineer*

“Very knowledgeable. Clearly enjoys the subject. Good real life examples.” – *Project Manager, Principal Engineer*

“Great Job!” – *Architect*

“Awesome class and great presentation. My first Halfmoon seminar—looking forward to another.”
– *Engineering/Commercial Real Estate*

Seminar Information

Livonia Marriott
17100 Laurel Park Drive North
Livonia, MI 48152
(734) 462-3100

Tuition
\$289 for individual registration
\$269 for three or more registrations.
Included with your registration: Complimentary continental breakfast and printed seminar manual.

Registration
8:00 - 8:30 am
Morning Session
8:30 am - 12:00 pm
Lunch (on your own)
12:00 - 1:00 pm
Afternoon Session
1:00 - 5:00 pm

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 self-study package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public and offers 7.0 continuing education hours/PDHs to professional engineers and 7.0 HSW continuing education hours to architects in all states. Educators and courses are not subject to pre-approval in Michigan.

This course has been approved by the American Institute of Architects Continuing Education System for 7.0 LU|HSW (Provider No. J885). Only full attendance is reportable to the AIA/CES. Visit www.halfmoonseminars.org to view complete AIA/CES information under this course listing.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects.

This seminar offers contractors a non-credit continuing education opportunity. It has not been approved by any state contractor licensing entity with a continuing education requirement.

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.

Additional Learning

Webinar Series

Wetlands Law and Compliance

- **Understanding Wetlands Laws and Enforcement**
Wed., Sept. 25, 2019, 11:00 AM - 1:00 PM CDT
- **Identifying Wetlands and Streams**
Wed., Sept. 25, 2019, 1:30 - 2:30 PM CDT
- **Obtaining Wetland Permits and the Certification Process**
Thurs., Sept. 26, 2019, 11:00 AM - 12:30 PM CDT
- **Trends and Opportunities in Wetland Preservation, Restoration, Creation and Enhancement**
Thurs., Sept. 26, 2019, 1:00 - 3:00 PM CDT

Solar Photovoltaic Project Design and Development

- **Solar Photovoltaic Project Design and Development, Part I**
Wed., October 2, 2019, 11:00 AM - 2:15 PM CDT
- **Solar Photovoltaic Project Design and Development, Part II**
Thurs., October 3, 2019, 11:00 AM - 2:15 PM CDT

Special Inspections

- **Introduction to Chapter 17: Special Inspections**
Thurs., October 10, 2019, 11:00 AM - 12:30 PM CDT
- **Soils and Foundations**
Thurs., October 10, 2019, 1:00 - 2:30 PM CDT
- **Reinforced Concrete and Structural Steel**
Fri., October 11, 2019, 11:00 AM - 12:30 PM CDT
- **ACT Ceiling Grid, Epoxy Anchors, and Fire Penetrations**
Fri., October 11, 2019, 1:00 - 2:30 PM CDT

Component Tolerance Analysis

- **Introduction to Component Tolerance Analysis**
Thurs., October 17, 2019, 11:00 AM - 12:00 PM CDT
- **Dimensional Tolerance Analysis**
Thurs., October 17, 2019, 12:30 - 3:00 PM CDT
- **Application of Dimensional Tolerance Analysis**
Fri., October 18, 2019, 11:00 AM - 2:15 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

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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		
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Complete the entire form. Attach duplicates if necessary.		

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)
Checks: Make payable to HalfMoon Education Inc.
Credit Card: <i>Mastercard, Visa, American Express, or Discover</i>
Credit Card Number: _____
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Email: _____