

Agenda

Presented by Paul A. Bosela and Paul Bosela Jr.

Designing and Constructing to Prevent Failures

- Importance of standards and codes
- Design professional duties and the design process
- Understanding the standard of care
- Legal and economic impacts of failures
- Purpose of forensic engineering

Understanding Causes of Structural Failures

- Lessons learned from historic failures
- Design errors
- Defective construction
- Material deficiencies
- 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

Understanding the Forensic Engineering Process

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

Using Forensic Engineering Information

- Examining the forensic engineering report
- Impact of forensic engineering information on post-failure disputes
- Use of forensic engineering information in mediation, arbitration and litigation
- The forensic engineer as consultant, expert and witness

Structural Forensic Engineering

Columbus, OH - Tuesday, October 30, 2018



Halfmoon Education Inc.
PO BOX 278
Altoona, WI 54720-0278

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Learning Objectives

You'll be able to:

Understand the importance of building codes and standards.

Review lessons learned from historic failures.

Utilize testing protocols and tests in forensic engineering investigations.

Investigate steel, wood, concrete, and masonry structures.

Discuss the use of forensic engineering in mediation, arbitration and litigation.



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Explore how to design and construct structures to prevent failures

Review the causes of structural failures

Learn the process for forensic examination of a variety of different types of structures

Discuss investigation techniques and test protocols

Understand how to use forensic engineering information in your practice

Continuing Education Credits

Professional Engineers

7.0 CPD Hours/PDHs

Architects

7.0 HSW Continuing Ed. Hours

7.0 AIA HSW Learning Units

Construction Contractors

Non-Credit Continuing Ed.



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Faculty

Paul A. Bosela, Ph.D., P.E., ASCE Fellow, *Bosela Forensic Engineering Consultants, LLC*

Dr. Paul Bosela is a professor emeritus of Civil & Environmental Engineering at Cleveland State University and partner in Bosela Forensic Engineering Consultants, LLC. He retired from CSU after 28 years of service, including ten years as department chair. Dr. Bosela has extensive forensic engineering experience in the investigation of structural failures, and he has investigated hundreds of failure cases for private clients, including the determination of the cause and extent of damages to structures, such as roof collapse, foundation failure, beam failure, collapse during construction, building envelope problems, etc. He has served on the American Society of Civil Engineers (ASCE) Forensic Engineering Division (FED), formerly the Technical Council on Forensic Engineering (TCFE) since 1986, including terms as chairman of both the Executive and Education Committees. He has lectured on forensic engineering throughout the U.S., and in Costa Rica, Ecuador, India, Italy, and Great Britain, and he has strived to bring lessons learned from failures into the civil engineering curriculum. Dr. Bosela was a co-editor of the *Proceedings of the 2nd, 3rd and 4th ASCE Forensic Engineering Congresses*, and co-editor of *Failure Case Studies in Civil Engineering: Structures, Foundations and the Geo-Environment (ASCE 2013)*, as well as numerous journal articles and conference presentations.

Paul Bosela Jr., P.E., LEED AP, *Bosela Forensic Engineering Consultants, LLC*

Mr. Bosela is a licensed professional engineer (Ohio and Pennsylvania) and is an accredited professional in Leadership in Energy & Environmental Design (LEED). He has investigated numerous failure cases and/or performance-related problems for private clients and is responsible for determining the cause and extent of damage to structures, including, but not limited to, roof truss failures, roof collapses, foundation failures, storm-related damage, etc. He earned his bachelor's and master's degrees in Civil Engineering from Cleveland State University and previously worked in the construction industry for a prominent construction manager/general contractor on some high-profile projects, such as The Cleveland Museum of Art and the Cleveland Cavaliers Training Facility. In addition, Mr. Bosela worked as a structural engineer providing design and analysis for structural products for the construction sector and as a structural design engineer for sports, commercial and industrial markets. Some of the construction products include, adjustable steel columns, telescoping posts and insulated concrete form (ICF) bracing. For the telescoping posts, he developed a design approach for providing a safe load capacity. Mr. Bosela has also worked with several product evaluation and testing agencies in the U.S. and Canada.

Seminar Information

Quest Conference Center

8405 Pulsar Place
Columbus, OH 43240
(614) 540-5540

Registration
8:00 - 8:30 am
Morning Session
8:30 am - 12:15 pm
Lunch (On your own)
12:15 - 1:15 pm
Afternoon Session
1:15 - 5:00 pm

Tuition

\$279 for individual registration
\$259 for Three or more registrants from the same company at the same time.

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 live lecture presentation is open to the public and offers 7.0 CPD hours/PDHs to professional engineers and 7.0 HSW continuing education hours to architects in all states, except Florida architects. Educators and courses are not subject to preapproval in Ohio.

This seminar is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to the AIA/CES.

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

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

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

Slope Stabilization and Landslide Prevention

- **Analyzing the Stability of Slopes**

Tues., Sept. 25, 2018, 11:00 AM - 2:15 PM CDT

- **Slope Stabilization Methods**

Thurs., Sept. 27, 2018, 11:00 AM - 2:15 PM CDT

Off-grid Photovoltaic Master Class

- **Off-grid Photovoltaic Master Class, Part I**

Wed., Oct. 3, 2018, 11:00 AM - 2:15 PM CDT

- **Off-grid Photovoltaic Master Class, Part II**

Thurs., Oct. 4, 2018, 11:00 AM - 2:15 PM CDT

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

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

Registration

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How to Register		Registrant Information
Online: www.halfmoonseminars.org		Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip: _____ Occupation: _____ Email: _____ Phone: _____
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Complete the entire form. 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)

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Order the CD/Manual Package:

A full recording of this seminar is available for \$289, which includes shipping and handling. This learning method does not qualify for the continuing education credit for Ohio architects or engineers. Please allow five weeks from the seminar date for delivery.