

Agenda

Presented by Jarrod C. Burns, M.S., P.E.

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

Understanding the Forensic Engineering Process

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

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

- 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

Ethical Issues in Structural Engineering

- Design responsibilities that are exclusively duties for engineers
- Practicing only in areas of competence
- Adopting new materials/techniques: due diligence
- Duty to disclose potential problems

Structural Forensic Engineering
Austin, TX - Tuesday, March 24, 2020

NON-PROFIT
U.S. POSTAGE PAID
EAU CLAIRE, WI
PERMIT NO. 2016

HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Explain the importance of building codes and code compliance.

Consider the legal, economic and public health impacts of construction failures.

Describe common causes of structural failures, including design errors, material deficiencies, defective construction, and excessive loadings.

Explore forensic examination processes for steel, wood, concrete and masonry structures.

Use forensic engineering information to learn from past engineering and design failures.

Discuss ethical issues, such as the need to practice only in areas of competence and the duty to disclose potential problems during design and construction.



Find us on
Facebook

Structural Forensic Engineering

Austin, TX - Tuesday, March 24, 2020



Understand the causes of structural failures

Explore the forensic engineering process

Examine forensic engineering reports

Learn how to design and construct to prevent failures

Identify ethical issues in structural engineering

Discuss the impact of forensic engineering information on post-failure disputes

Continuing Education Credits

Professional Engineers

7.0 PDHs

Contractors

Non-Credit Continuing Ed.

Architects

7.0 HSW CEPs/CE Hours

7.0 AIA LU|HSW



HalfMoon Education Inc.
WWW.HALFMOONSEMINARS.ORG

AIA
Continuing
Education
Provider

Faculty

Jarrold C. Burns, M.S., P.E.

Mr. Burns is the founding principal of BSC Forensic Services, LLC, and he practices as a structural forensic investigator, holding professional engineer licensure in 25 states and counting. He has a unique background including education, business development, technology development, engineering design, forensic engineering, and teaching. Since 2011, BSC has grown to a nationally-recognized firm under Mr. Burns' leadership with experts licensed throughout the United States in fields such as: structural, civil, mechanical, electrical, mold, industrial hygiene, drones, as well as fire and explosion. Mr. Burns is the author of two patents pending pertaining to forensic investigations, and he has testified in multiple trials, depositions, arbitrations, and/or mediations.

Mr. Burns' forensic experience includes structural design, failure analysis, construction defect, premises safety/injury (including trips and slips), water losses, wind assessments, hail assessments, flooring assessments, foundation performance evaluations (including movement attributed to plumbing leaks), building envelopes, air and water penetration (spray testing), and much more. Mr. Burns and BSC staff under his responsible charge perform inspections on commercial, residential, multi-family, industrial, and government facilities as well as automobile, mechanical, electrical, and plumbing systems routinely.

His experience has also included work as a structural engineer on nationwide projects, as a project manager for a civil engineering firm in Houston and Dallas, Texas, and as an adjunct instructor in the Civil Engineering Department at the University of Houston. Mr. Burns holds a B.S. degree in Civil Engineering from the University of Arkansas and an M.S. degree in Civil Engineering from the University of Texas at Arlington, and he is a past-president of Tau Beta Pi, AR-Alpha.

Seminar Information

Hilton Garden Inn Downtown

500 North Interstate 35
Austin, TX 78701
(512) 480-8181

Tuition

\$299 for individual registration
\$279 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
- 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. It offers 7.0 PDHs to professional engineers in all states. Educators and courses are not subject to preapproval in Texas.

This course offers 7.0 HSW continuing education hours to architects in all states, including 7.0 CEPHs to Texas architects. Educators and courses are not subject to preapproval in Texas.

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

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, 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 course offers a non-credit continuing education opportunity to construction contractors. 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.

Additional Learning

Webinar Series

Ethical Issues for Engineers

- **Complying with Rules of Professional Conduct**
Fri., Feb. 14, 2020, 12:00 - 1:00 PM CST

Foundations in Cold Regions

- **Introduction to Foundations in Cold Regions**
Thurs., Feb. 20, 2020, 11:00 AM - 12:30 PM CST
- **Shallow Foundation Design in Cold Regions**
Thurs., Feb. 20, 2020, 1:00 - 2:30 PM CST
- **Deep Foundation Design in Cold Regions**
Fri., Feb. 21, 2020, 11:00 AM - 12:30 PM CST
- **Foundation Construction in Cold Regions**
Fri., Feb. 21, 2020, 1:00 - 2:00 PM CST

Soil Mechanics and Slope Stability

- **Soil Investigation and Classification**
Tues., Feb. 25, 2020, 11:00 AM - 1:00 PM CST
- **Reviewing Hydraulic and Mechanical Properties of Soils**
Tues., Feb. 25, 2020, 1:30 - 3:00 PM CST
- **Determining and Increasing Bearing Capacity**
Wed., Feb. 26, 2020, 11:00 AM - 1:00 PM CST
- **Determining and Increasing Slope Stability**
Wed., Feb. 26, 2020, 1:30 - 3:00 PM CST

Designing for Climate Resilience

- **Current and Anticipated Climate Effects on Structures and Communities**
Thurs., Feb. 27, 2020, 11:00 AM - 12:30 PM CST
- **Assessing the Impact of Sea Level Rise, Changing Temperature and Changing Weather Patterns**
Thurs., Feb. 27, 2020, 1:00 - 3:00 PM CST
- **Studying the Impact of Extreme Weather**
- **Events on Structures and Communities**
Fri., Feb. 28, 2020, 11:00 AM - 12:30 PM CST
- **Adapting Sites, Outdoor Spaces, New Construction and Existing Buildings to Withstand Extreme Weather Events**
Fri., Feb. 28, 2020, 1:00 - 3:00 PM CST

For more information and other online learning opportunities 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 \$279. 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

Structural Forensic Engineering

Austin, TX - Tuesday, March 24, 2020

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

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$299.00**. Three or more registrants from the same company registering at the same time - **\$279.00** each.

() **I am not attending.** Please send me the self-study package:
☐ Downloadable MP3 Audio/PDF Manual for **\$279.00**.
☐ CD/Manual Package for **\$299.00**. ☐ USB/Manual Package **\$299.00**.
(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: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Signature: _____

Email: _____