

Agenda

Designing and Constructing to Prevent Failures

C. Hemmatyar

- 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

C. Hemmatyar

- Lessons learned from historic failures
- Design errors
- Defective construction
- Material deficiencies
- Excessive loadings
- Deterioration and degradation
- “Acts of God”

Understanding the Forensic Engineering Process

C. Hemmatyar

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

New Techniques for Infrastructure Investigation

C. Adams

- Use of drones
- Digital twinning

Ethical Issues in Structural Engineering

C. Hemmatyar

- 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

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Forensic Engineering of Infrastructure: Preventing and Addressing Failures

Live, Interactive Webinar - Wednesday, September 18, 2024

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



Learning Objectives

You'll be able to:

Analyze lessons learned from historic failures.

Understand the causes of structural failures.

Examine ethical issues in structural engineering.

Discuss performing due diligence when adopting new materials and techniques.

Explain how design professionals' standards of care and building codes contribute to the prevention of structural failures.



HalfMoon Education Inc.,
Your LIVE Education Leader Presents

Forensic Engineering of Infrastructure: Preventing and Addressing Failures

Live, Interactive Webinar - Wednesday, September 18, 2024



Understand the design professional duties and the design process to prevent failures

Examine the lessons learned from historic failures

Learn about the process of conducting investigations

Get familiarized with new techniques for infrastructure investigation using drones and digital twinning

Discuss ethical issues in structural engineering

Continuing Education Credits

Professional Engineers
6.0 PDHs

Architects
6.0 HSW CE Hours
6.0 AIA LU | HSW

International Code Council
.6 CEUs (Building)



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Webinar Information

Online - Wednesday, September 18, 2024

Log into Webinar
8:30 - 9:00 am CDT

Break
12:45 - 1:15 pm CDT

Morning Session
9:00 am - 12:45 pm CDT

Afternoon Session
1:15 - 4:00 pm CDT

Tuition

\$339 for individual registration.

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Faculty

Casey K. Hemmatyar

President, Pacific Structural & Forensic Engineers Global (PSFEG)

As a structural and civil engineer and expert forensic consultant with nearly four decades of experience, Mr. Hemmatyar has provided extensive expert services for defendants and plaintiff attorneys on numerous construction litigation matters throughout the United States. He has been retained as an expert by the US Government and private law firms on single and class-action lawsuits at both State and Federal levels. Mr. Hemmatyar's understanding of core engineering and legal concepts has enabled him to effectively assist a wide range of clientele. He brings diversified experience in structural and civil engineering design, and in forensic engineering, investigation, and evaluation. Mr. Hemmatyar also conducts research and has assisted in development of building codes and standards and has supervised construction of domestic and international projects. His experience includes special structures, and new buildings as well as modifications, alterations, seismic/hurricane retrofits, and upgrades to existing structures. Mr. Hemmatyar has provided failure analysis, expert consultation, structural forensic investigation, and damage assessment services for many litigation and insurance-related matters. He actively presents continuing education lectures to audiences of engineers, architects, and contractors on topics of structural and forensic engineering throughout the United States. Mr. Hemmatyar has been the principal structural engineer on projects for clients such as NASA and several other high-profile agencies. Currently, he directs PSFEG and has served as director for SEAOSC in 2011-2013. Mr. Hemmatyar has been interviewed by public media including the History Channel (documentary episode: "Collapse of Ancient Structures") and Reuters (Mexico City school collapse).

Chuck Adams

CEO, 1UP Aerial Drone Services, headquartered in Golden, CO

Mr. Adams is CEO of 1UP Aerial Drone Service, which sells drones and sensors, and provides expert consultation & aerial services to a range of industries, including engineering, commercial real estate, land development, construction, insurance, forensic science, surveying. Mr. Adams is an FAA Part 107 certified pilot, and a tenured information technology and cloud industry veteran who has spent more than 25 years in the high-tech industry.



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Credit Information

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The American Institute of Architects Continuing Education System has approved this course for 6.0 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .6 CEUs in the specialty area of Building (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

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Additional Learning

Basics of Structural Steel Design and Construction

- Tuesday, August 20, 2024 | 8:30 am - 4:30 pm CDT

Designing and Constructing Net-Zero Energy Homes

- Friday, August 23, 2024 | 8:30 am - 4:00 pm CDT

Flood-Resistant Design and Construction

- Monday, August 26, 2024 | 9:00 am - 4:30 pm CDT

2024 International Building Code: Administration and Enforcement

- Tuesday, August 27, 2024 | 12:00 - 4:30 pm CDT

Complying with Commercial Provisions of the 2021 International Energy Conservation Code

- Tuesday, August 27, 2024 | 9:00 am - 4:30 pm CDT

Structural Engineering Calculations for Wood Construction

- Tuesday, August 27, 2024 | 10:00 am - 1:15 pm CDT

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