Agenda

Presented by James D'Aloisio, P.E., SECB, LEED AP

Designing and Constructing to Prevent Failures
- Building codes - History and relevance
- Design standards
- Contemporary, archaic, and uncommon structural systems
- Hierarchy of authority
- Design engineering vs. forensic engineering

Understanding Causes of Structural Failures
- Lessons learned from historic failures
- Design errors
- Defective construction
- Material deficiencies
- Excessive loading
- Improper usage or modification
- Deterioration and degradation
- Combination of causes

Understanding the Forensic Engineering Process
- Definition of forensic engineering
- Documenting the failure
- Conducting investigation and research
- Test protocols and measurements
- 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
- Investigation of foundation failures
- Load testing and instrumentation

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
- NSPE Code of Ethics for Engineers
- Ethical dilemmas

Structural Forensic Engineering
Live, Interactive Webinar - Wednesday, April 28, 2021

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

Learning Objectives

You'll be able to:

Discuss the importance of design standards and building codes.

Understand causes of structural failures, including defective construction, material deficiencies, and excessive loading.

Understand the forensic engineering process, including documenting failures, conducting investigation and research, and determining causation and responsibility.

Utilize forensic investigative techniques for steel, wood, and concrete structures.

Discuss the use of forensic engineering information in litigation.

HalfMoon Education Online Learning

Structural Forensic Engineering

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Design and construct to prevent structure failures

Explain the causes of structural failures, including design and construction errors

Discuss the forensic examination of structures

Learn about using forensic engineering information in litigation

Explore ethical issues in structural engineering

Continuing Education Credits

Professional Engineers
7.0 PDHs

Architects
7.0 HSW CE Hours

AIA
7.0 LU|HSW

International Code Council
.7 CEUs (Building)

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Faculty

James D'Aloisio, P.E., SECB, LEED AP *Principal with Klepper, Hahn & Hyatt in Syracuse*

Mr. D'Aloisio is a principal with Klepper, Hahn & Hyatt, a structural engineering, landscape architecture, and building envelope services firm in East Syracuse, New York. A graduate of Rensselaer Polytechnic Institute, Mr. D'Aloisio is a registered professional engineer in New York and Massachusetts, and he has been certified by the Structural Engineering Certification Board (SECB) since its inception in 2007. He is a member and past president (1997-1998) of the American Society of Civil Engineers (ASCE) Syracuse Section, and he is a member of the American Institute of Steel Construction (AISC), the American Concrete Institute (ACI), the National Society of Professional Engineers (NSPE), and the Structural Engineers Association of New York State (SEAoNY). Mr. D'Aloisio is a member of ASCE/SEI's Frost-Protected Shallow Foundations Committee, the Structural Condition Assessment of Existing Buildings Committee, and the Sustainability Committee, and he is a member of Committee ACI 318-N. He is a trained infrared thermographer. Mr. D'Aloisio received the Order of the Engineer at Syracuse University in 1997. His 30-plus years' experience as a consulting structural engineer has primarily involved the design of new building structures, additions, and modifications, and analyses, assessments, and investigations of structures and facades. Specialties include detailing to minimize structural thermal bridging, the use of alternative structural systems and design approaches that can reduce the CO_2 emissions of structures and foundations. Mr. D'Aloisio has been involved in numerous special inspection projects, including developing statements of special inspections, performing inspections, and facilitating discrepancy resolutions. He has also performed over 150 structural forensic investigations, and he has presented over 300 times.

Webinar Information

Log into Webinar
8:00 - 8:30 am EDT

Break
12:00 - 12:30 pm EDT

Morning Session
8:30 am - 12:00 pm EDT

Afternoon Session
12:30 - 4:30 pm EDT

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Additional Learning

Engineered Lumber Design and Construction
- Wed, Mar 17, 2021|8:30 am - 5:00 pm CDT

Introduction to Green Infrastructure
- Wed, Mar 17, 2021|11:00 am - 2:30 pm CDT
- Thurs, Mar 18, 2021|11:00 am - 2:30 pm CDT

Residential Provisions of the International Energy Conservation Code (IECC)
- Wed, Mar 17, 2021|8:30 am - 5:00 pm CDT

Drones in Construction
- Mon, Mar 22, 2021|10:00 am - 4:50 pm CDT

Preventing and Addressing Construction Defects and Failures
- Tues, Mar 23, 2021|11:00 am - 2:15 pm CDT
- Wed, Mar 24, 2021|11:00 am - 3:15 pm CDT

Passive House: Planning and Design
- Tues, Mar 23, 2021|8:30 am - 4:30 pm CDT

Designing for Climate Resilience
- Thurs, Mar 25, 2021|11:00 am - 2:45 pm CDT
- Fri, Mar 26, 2021|11:00 am - 2:45 pm CDT

Slope Stabilization and Landslide Prevention
- Fri, Mar 26, 2021|8:30 am - 3:30 pm CDT

Composite Steel, Concrete and Mass Timber Buildings
- Fri, Mar 26, 2021|9:00 am - 4:25 pm CDT

Handling Ethical Issues in Construction Contracting
- Fri, Mar 26, 2021|10:00 - 11:00 am CDT

Complying with Fair Housing Act Accessibility Requirements
- Tues, Mar 30, 2021|8:30 am - 4:45 pm CDT

Special Inspections under the International Building Code Chapter 17
- Tues, Mar 30, 2021|9:00 am - 4:00 pm CDT

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Registration

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How to Register

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