



STRUCTURAL ENGINEERS ASSOCIATION OF MICHIGAN (SEAMi)
presents...

2019 SEAMi STATEWIDE STRUCTURAL CONFERENCE

DATE / TIME

Tuesday May 7, 2019 from 7:00 AM to 7:05 PM (see below)
Sign-in: 7:00 AM to 8:00 AM

LOCATION

Conference will be held at MSU's Kellogg Conference Center at 219 S. Harrison Rd., East Lansing, MI. Program held in Kellogg Auditorium [directions on p. 5]

PROGRAM SCHEDULE

MORNING SESSION:

7:00 AM to 8:00 AM: Continental Breakfast

8:00 AM to 9:05 AM: Vector Technologies/ Mr. Erik Thorp (1.0 hr)
Advances in Corrosion Mitigation Systems for Buildings and Parking Structures

9:05 AM to 10:10 AM: AISC T.R. Higgins Lecturer/ Dr. Ronald Zieman (1.0 hr)
Structural Stability: Letting The Fundamentals Guide Your Judgement

10:10 AM to 10:55 AM: Break in the Big 10A Room w/ Exhibitors

11:00 AM to 12:15 PM: Mr. Barry Arnold PE, SE, SECB (1.25 hr)
Ethics: A Practical Guide for the Practicing Engineer

12:15 PM to 1:15 PM: Lunch in the Big 10A Room w/ Exhibitors

AFTERNOON SESSION:

1:15 PM to 1:20 PM: Welcome by Bill Thayer, SEAMi President

1:20 PM to 2:50 PM: The Wood Council / Mr. Archie Landreman (1.5 hr)
Mass Timber Updates and Applications

2:55 PM to 3:20 PM: Break in the Big 10A Room w/ Exhibitors

3:20 PM to 4:50 PM: The Wood Council / Mr. Ricky McLain, PE, SE (1.5 hr)
Wood-Frame Shear Wall and Diaphragm Design

4:55 PM to 6:00 PM: SmithGroup / Ms. Andrea Reynolds, PE, SE: (1.0 hr)
Little Caesars Global Resource Center

6:00 PM to 7:05 PM: Dinner / Awards

A meal will be provided (Menu - Italian Buffet) During dinner SEAMi officers will be introduced and there will be a presentation of awards.

Note: Let us know about any special diet requests for breaks, lunch or dinner (gluten-free, kosher, vegan)

REGISTRATION

Preferred Option to Register & Pay "online": go to SEAMi.org

See detailed instructions for online registration on Page 5 or alternatively

Mail payment by 4/30/19 or at the door. Make checks payable to "SEAMi."

✉ **E-mail:** wthayer@macmillanassociates.com

✉ **Mail checks to:** MacMillan Associates, 714 E. Midland, Bay City, MI 48706

FEES

SEAMi members (current) \$110 (includes NCSEA members)

Non-members \$150

Students \$ 35

Up to 7.25 Continuing Education Hours Available

Advances in Corrosion Mitigation Systems for Buildings and Parking Structures (1.00 hr)

Mr. Erik Thorp (Vector Corrosion Technologies)

Corrosion has presented significant problems to building exteriors and facades, and throughout parking structures. Causes such as water ingress, chloride attack, carbonation, and other problems have created environments that have led to cracking and spalling in numerous buildings and garages. Fortunately, a variety of solutions are now available to mitigate corrosion. These include realkalization, impressed current cathodic protection, and the use of both discrete and distributed galvanic anode systems.

Structural Stability: Letting The Fundamentals Guide Your Judgement (1.00 hr)

Dr. Ronald Zieman, PhD (Bucknell University)

One of the great things about working with structural steel is that most design provisions are based on first principles and fairly predictable experimental test results. This is especially true when assessing structural stability. The primary objective of this lecture is to show how most stability problems can be understood by focusing on the big picture rather than on the details of the seemingly complex mathematics. The presentation will begin by identifying those factors that primarily impact the buckling strength of a system, member, or cross section. Drawing on several example applications, the proper use of today's computational analysis tools will be demonstrated as a means for enhancing engineering judgement. A case will be made for how a fundamental understanding of structural stability is often sufficient for today's steel designers, whether applying the direct analysis method to assess system strength or a column curve to evaluate the strength of a compression member. The lecture will also include an overview of the author's paper "Formulation and Validation of Minimum Brace Stiffness for Systems of Compression Members." Dr. Zieman is AISC's TR Higgins lecturer for 2019-2020.

Ethics: A Practical Guide for the Practicing Engineer. (1.25 hr)

Mr. Barry Arnold, PE, SE, SECB (ARW Engineers)

Ethics is an often misunderstood but critical part of successfully practicing structural engineering. A solid understanding of ethical principles is as vital to a successful career as the technical knowledge an engineer may acquire. Unfortunately, in recent years an emphasis on technical skills has forced the topic of ethics into a secondary role where it is seldom discussed, emphasized, or enforced. The purpose of this course is to acquaint the participant with the source and evolution of the Code of Ethics, the application of the Code of Ethics, the benefits of being ethical, and provide tools for assessing if and what corrective action is required

Mass Timber Updates and Applications (1.50 hr)

Mr. Archie Landreman (The Wood Council)

Mass Timber Structural Design: Engineering Modern Timber Structures

This presentation will provide a detailed look at the structural design processes associated with a variety of mass timber products, including glued-laminated timber (glulam), cross-laminated timber (CLT), and nail-laminated timber (NLT). Applications for the use of these products in gravity force-resisting systems under modern building codes will be discussed. Other technical topics will include mass timber floor panel vibration criteria, connection options and design considerations, and an introduction to lateral systems common in mass timber buildings. Mass timber framing components are often left exposed to act as a finish while taking advantage of their aesthetics. As such, they are often required to provide a fire-resistance rating demonstrating their ability to maintain structural integrity in the event of a fire. This session will also discuss structural design of mass timber elements under fire conditions.

Wood-Frame Shear Wall and Diaphragm Design (1.50 hr)

Mr. Ricky McLain, PE, SE (The Wood Council)

This course is intended for structural engineers and building designers seeking an overview of design steps, considerations and detailing best practices related to the wind- and seismic-resistive design of wood-frame diaphragms and shear walls. It provides an overview of relevant 2015 International Building Code (IBC) provisions and American Wood Council (AWC)-referenced standards, a discussion of common design errors, and guidance related to load path continuity. Discussion will cover diaphragm load paths, chords, collectors and openings, as well as shear wall components, construction options, overturning restraint systems and detailing considerations. Design examples will be used to illustrate key principles and code provisions.

Little Caesars Global Resource Center / Ms. Andrea Reynolds, PE SE : SmithGroup (1.00 hr)

Little Caesars Global Resource Center – Nine-story building. Some interesting things is the bracing on the north elevation which is exposed and uses Cast Connex connections, as well, as the east end which is column free with framing that cantilevers off of a 70' long plate girder. There is also a roof canopy on the east end that is cantilevered quite a distance without much back-span and is designed to support window washing and maintenance equipment

Exhibitors available all day long (7:00 to 4:30) : particularly at breaks & lunch

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Instructions for Registration and Payment For Members or Non-Members

1. Go to <https://seami.org/>
2. Under "Upcoming Events" under the Mackinac Bridge click on "2018 SEAMi Spring Conference".
3. On the Event Page, click on "Register" near the bottom of the page.
4. Fill in your e-mail address and then click "Next".
5. Choose your registration type based on your membership affiliation. Click "Next".
6. Fill out your registration information. First Name, Last Name, Company/Organization. Click "Next".
7. Choose if you would like to "Pay Online" (through PayPal).
8. Follow the prompts in PayPal to make your payment.
9. You may pay by check by selecting the "Invoice " tab.
10. Print your invoice and mail it and check to Bill Thayer at the address above in the Registration Section

Directions to Kellogg Center 219 S. Harrison Rd., East Lansing, MI (517) 432-4000

From North (down US 27) Go to I-69, Go east on I-69 until you get to US 127 (about 1.5 mi.) Follow US 127 south to Trowbridge exit (part of I-496 exchange, about 6 miles south of I-69) Follow Trowbridge east one half mile. Turn left (north) on Harrison, go approx 0.8 mi, parking will be on your right and Kellogg Center will be just past the parking facility.

From West (on I-496, accessed from I-96 or I-69) On eastbound I-496 follow signs to Trowbridge as you approach US 127. Once on Trowbridge follow directions noted "from north".

From South (on US 127) Exit on Trowbridge, Approx. 3 mi. north of I-96, follow directions noted "from north"

From East (on I-96 or I-69) I-96 west to US 127 north to Trowbridge; Or I-69 west to US 127 south to Trowbridge; then follow directions noted "from north".