



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

2024 SEAMi STATEWIDE STRUCTURAL CONFERENCE

DATES / TIMES

Thursday May 16, 2024 from 9:00 AM to 8:30 PM and
Friday May 17, 2024 from 7:45 AM to 4:00 PM

LOCATION

MSU's Kellogg Conference Center at 219 S. Harrison Rd., East Lansing, MI.
All Programs held in Kellogg Big Ten B Room unless noted [directions on p.8]

PROGRAM

THURSDAY MORNING SESSIONS:

- 8:00 AM "Breakfast" Snacks / Coffee during registration
8:55 AM **Welcome and Introduction**
Andrea Reynolds, SEAMi President
9:00 AM **Design and Construction of Las Vegas Sphere** (1.25 hr)
Ms. Jacinda Collins, PE; CastConnex & Steve Reichwein, PE, SE, Severud
10:30 AM **Mass Timber Construction: Products, Performance & Design** (1.00 hr)
Mr. Anthony Harvey, PE; Woodworks
11:30 AM **Break** w/ Exhibitors Big Ten A
12:15 PM **Properly Isolated Machine/Foundation Design** (0.75 hr)
Mr. Dustin Shinaver & Ms. Erin Hoard, Unisorb Installation Technologies
1:00 PM **Frequent and Forgotten: Slips and Falls are the Biggest Problem in Industry** (0.75 hr),
Mr. Jeff Baker, Slipnot
1:45 PM to 2:45 PM **Lunch** in Big Ten A Room w/ Exhibitors (*See Note Below*)

THURSDAY AFTERNOON SESSIONS:

- 2:40 PM **Welcome and Introduction**
Andrea Reynolds; SEAMi President
2:45 PM **NHERI TallWood: World's Tallest Shake Table Test**(1.00 hr)
Mr. Steve Pryor PE, SE; Simpson Strong Tie
3:45 PM **Break** w/ Exhibitors Big Ten A
4:15 PM **Evolution of Structural Masonry** (1.25 hr)
Mr. Tom Elliott, CSI, CDT; IMI
5:30 PM to 7:30 PM **Tour of Mass Timber Building**
Busses 5:30 PM to 5:50 PM Kellogg to STEM Building
Tour 5:55 PM to 7:10 PM Tour (1.25 hr)
Ms. Sandra Lupien, MPP, Director, MassTimber@MSU
Return Busses 7:10 PM to 7:30 PM STEM Building to Kellogg
**See bus instructions on page 8*

7:30 PM to 8:30 PM Dinner and Awards in Big Ten C

A meal will be provided (TBD)

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

After Dinner Happy hour sponsored by Simpson Strong Tie at "The Graduate"

FRIDAY MORNING SESSIONS:

- 7:00 AM Breakfast snacks & coffee during registration
7:45 AM **Welcome and Introduction**
Andrew Twarek, SEAMi President
7:45 AM **“Are You Properly Specifying Materials?”** (1.25 hr)
Mr. Lawrence F. Kruth, PE, Kruth Engineering LLC.
9:00 AM **Movement Joints: The Art and Science** (1.00 hr)
Scott Walkowicz, PE, Walkowicz Consulting Engineers
10:00 AM Break w/ Exhibitors Big Ten A
10:45 AM **Strength Design: Going Beyond 48 Inches on Center and More** (1.25 hr)
Philippe Ledent, PE, Masonry Institute of Michigan
12:00 PM to 1:00 PM Lunch in Big Ten A Room w/ Exhibitors

FRIDAY AFTERNOON SESSIONS:

- 1:00 PM **Welcome and Introduction**
Andrew Twarek; SEAMi President
1:00 PM **Masonry Engineering: Stop Wasting Your Owner’s Money** (1.00 hr)
Scott Walkowicz, PE, Walkowicz Consulting Engineers
2:00 PM Break w/ Exhibitors Big Ten A
2:45 PM **Masonry Details: What Works Best; What Causes Problems** (1.25 hr)
Kyle Lochonic, Davenport Masonry
4:00 End of 2024 conference - **Sign-off**, Andrew Twarek, SEAMi President

UP TO 13.0 CEU/ PDH Available with these Programs and the Tour
PDH Forms for self-reporting will be provided.

Preferred Option to Register and Pay is online through to www.SEAMi.org website. See detailed instructions for online registration on Page 8 or alternatively mail payment by May 6 or at the door. Make checks payable to “SEAMi.”

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

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

Registration fees include attendance at all events, meals and snacks, and exhibit hall access at times noted above. Select the indicated option letter on the website registration page.

	Two Day	Thurs Only	Fri Only
Members	\$190 Select A	\$135 Select B	\$135 Select C
Non-members	\$300 Select D	\$175 Select E	\$175 Select F
Undergrad Students	\$75 Select G	\$40 Select H	\$40 Select J

Member rate is available to members of other NCSEA Member Organizations or staff. Log in to your SEAMi website account, or email for a registration code.

Lodging is available separately at the Kellogg Conference Center or local hotels. See instructions on page 8.

MSU’s Kellogg Conference Center at 219 S. Harrison Rd., East Lansing, MI.
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“Design and Construction of Las Vegas Sphere” (1.25 hr)

Ms. Jacinda Collins, PE; CastConnex and **Mr. Steve Reichwein, PE, SE,** Severud Associates

Design and Construction of the Las Vegas Sphere

The MSG Sphere at the Venetian is an 18,000-seat state-of-the art multimedia venue in Las Vegas containing the world’s highest resolution LED screen (engulfing the entire seating bowl) and a beamforming audio system, both of which will deliver a uniquely immersive experience for showgoers. Additionally, the sphere will be fully clad in about 60 miles of LED puck strands, which will fully illuminate the 600,000 square-foot exterior envelope and allow for advertising, as well as enhance any outdoor experience. The 515-foot diameter semi-spherical venue structure is entirely enclosed within an exosphere, which itself is the largest spherical structure on Earth, rising some 366-feet from its foundations. The presentation will focus on the design and construction of the venues main superstructure, dome roof arch system, suspended grillage system, and the exosphere, with particular emphasis on how the use of parametric design and structural steel enabled the construction of this venue and its unique aspects.

“Mass Timber Construction: Products, Performance and Design” (1.00 hr)

Mr. Anthony Harvey, PE; Woodworks

Due to their high strength, dimensional stability and positive environmental performance, mass timber building products are quickly becoming materials of choice for sustainably minded designers. This presentation will provide a detailed look at the variety of mass timber products available, including glue laminated timbers (glulam), cross laminated timber (CLT), nail laminated timber (NLT), heavy timber decking and other engineered and composite systems. Applications for the use of these products under modern building codes will be discussed and examples of their use in U.S. projects reviewed. Mass timber’s ability to act as both structure and exposed finish will also be highlighted, as will its performance as part of an assembly, considering design objectives related to structural performance, fire resistance, acoustics and energy efficiency. Other topics will include detailing and construction best practices, lessons learned from completed projects and trends for increased use of mass timber products in the future.

“Properly Isolated Machine / Foundation Design” (0.75 hr)

Mr. Dustin Shinaver, Ms. Erin Hoard, Unisorb Installation Solutions

Essentials to consider in order to provide a properly isolated machine foundation design.

This session will focus on the importance of knowing the specific site conditions and what criteria are needed to design a properly isolated machine foundation. We will discuss why this information is important, how it is used and processed, and what results can be expected. Key topics will include:

- Vibration Survey
- Machine OEM specifications (machine weight, vibration tolerance, machine & foundation interface drawings).
- Unisorb design criteria.
- Unisorb vibration isolation solutions.

“Frequent and Forgotten: Slips and Falls are the Biggest Problem in Industry” (0.75 hr)

Mr. Jeff Baker, Slipnot

When designing manufacturing facilities, flooring is frequently overlooked. Yet, 10% of surfaces in a manufacturing plant are considered high-risk for slips and falls. Facilities that house food and beverage, automotive, and chemical manufacturing operations use ingredients and equipment that increase that risk. Common fixes like Slippery When Wet signs, tape, and diamond plate can make it more dangerous.

“NHERI TallWood: World’s tallest shake table test and the development of a resilient LFRS* for Mass Timber buildings” (1.0 hr)

Mr. Steve Pryor, PE, SE, Simpson Strong Tie

**: lateral force resisting system*

Discussion of the NHERI Shake Table located in San Diego, CA and demonstration of its use (via video recording).

“Evolution of Structural Masonry” (1.25 hr)

Mr. Tom Elliott, CSI, CDT; IMI

Masonry has been an important component in structural systems since the beginning of time. This presentation will review the construction of structural masonry buildings from the late 1800's to today with an emphasis on how current masonry materials when combined with recent code changes and trained craftworkers - can lead to more efficient structural masonry designs.

“Tour of MSU STEM Building (Largest and Most Prominent Mass Timber Project in Michigan)” (1.25 hr)

Ms. Sandra Lupien, MPP, Director, MassTimber@MSU Michigan State University

Tour Michigan State University's STEM Teaching and Learning Facility, a 121,000-SF mass timber structure and the first significant use of cross-laminated timber (CLT) in the state. The facility consists of two mass timber wings flanking the north and south ends of the long-decommissioned Shaw Lane Power Plant, which was also revitalized and repurposed. The wings feature three stories of glulam post-and-beam construction with steel diagonal bracing, CLT floor and roof decks, and CLT walls in the egress stairs.

“Are You Properly Specifying Materials?” (1.25 hr)

Mr. Lawrence F. Kruth, PE, Kruth Engineering LLC.

When you specify materials by referencing ASTM specifications, are you sure that you're making the right choices? With the many ASTM specifications available in steel building construction, it can be a challenge to stay current with standard material production practices. This webinar will review which ASTM specifications are standard in steel building design and construction for structural shapes, plate products, fastening products, and other products. Specify steel materials with confidence on your next job, and reduce RFIs!

“Movement Joints: The Art and Science” (1.00 hr) and

“Masonry Engineering: Stop Wasting Your Owner's Money”, (1.00 hr)

Mr. Scott Walkowicz, PE, Walkowicz Consulting Engineers

Masonry Movement Joints – The Art and Science. Clay and concrete masonry require different types of joints for different movement. Cladding masonry and engineered or infill/back-up masonry typically require joints for different reasons and in different locations. This presentation addresses code requirements, basic calculations and presents concepts for joint locations by architects and engineers.

Masonry Engineering – Stop Wasting Your Owner's Money. Masonry has great capacity to serve as both structure and envelope for your projects. This session shares concepts for best usage of masonry's capabilities while avoiding redundant costs and problems that can result from less well conceived design and detailing.

“Strength Design: Going Beyond 48 Inches on Center and More” (1.00 hr);

Mr. Philippe Ledent, PE, Masonry Institute of Michigan

With the adoption process of the 2021 Michigan Building Code underway, this presentation will familiarize participants with the strength design methodology in the 2016 TMS 402 Building Code Requirements for Masonry Structures. This presentation will include recommendations and examples for unreinforced masonry (URM), which is permitted in Michigan specifically for interior walls, and will include recommendations and examples for reinforced masonry. Relating to reinforced masonry, participants will gain knowledge of minimum prescriptive code requirements and opportunities to efficiently design masonry wall systems by increasing the spacing of reinforcement.

“Masonry Details: What Works Best, What Causes Problems” (1.25 hr)

Mr. Kyle Lochonic, Davenport Masonry

Presentation of drawing details with discussion of what is problematic and how to make it more constructible. Presentation with pictures and some real world examples.

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



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



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 **peikko**[®]

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



A block of rooms is reserved (but not prepaid) for participants (attendees, speakers or exhibitors) in our event. These are limited so don't delay if you wish to stay "on-site". If no longer available there are local hotels that are reasonably close, contact us for additional information and a "back-up" block of rooms (see note below).

The room block release is **April 16, 2024**. Reservations made after the group room block release date will be subject to room and rate availability. **(For Members , Non-Members, Speakers or Exhibitors)**

Online Reservation Instructions

For 24-hour access to booking, we encourage guests to book online by following the instructions below:

1. Go to <http://www.kelloggcenter.com>
2. Click on the "Reservations" link at the top of the page
3. Select "Book Now Online" link
4. Enter arrival, departure, rooms, and number of adults and children
5. Select "More Options" and enter your **Group Code: 2405STRUCT**
6. Click "Check Availability"

For special requests, reservations outside of the conference dates, or reservations after the room block release date, please call our reservations department at 800-875-5090.

Phone Reservation Instructions

1. Call 800-875-5090 and refer to the **Group Code: 2405STRUCT** or **Block Name: Structural Engineers Association of Michigan**
2. Representatives are available Monday through Friday 7:30am-7:00pm

Additional Accommodations: An additional block of rooms at a discounted rate will be available at "The Graduate" hotel, 133 Evergreen Ave., East Lansing. 517-348-0900. (approx. .6 miles) You must use this link by April 15 to book: [Structural Engineers Association of MI Overflow Block - Graduate East Lansing](#)

Bus and Tour Instructions: The tour is from 5:55PM until 7:10PM in the New MSU STEM Building We will form 4 tour groups and load busses immediately after the Structural Masonry Session ending at 5:30 PM. There will be 2 busses and loading will occur at the covered driveway entrance of the conference center. We will disembark as close to the STEM Building as possible, then tour and do the reverse to return reloading busses at 7:10PM and arriving for dinner in BIG 10 C at 7:30 +/-.

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

- From North** (down US 27) Take I-69 East until you reach 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 approximately 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) Follow signs on Eastbound I-496 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; then 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".