

Newsletter of the Structural Engineers Association of Oregon

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Linked in

SEAO has a LinkedIn account and can be followed at <u>SEAO</u> <u>LinkedIn Page</u>.

CONNECTIONS

May 2024 Volume 23 Issue 8

Upcoming SEAO Meetings and Events:

Tuesday, May 14, 2024: SEAOSF Trade Show and Mini-Seminars

Trade Show Time: 5 pm to 8 pm Dinner : 6:30 pm Pre-Trade Show Mini-Seminars Times: Start at 11 am—5 pm. See schedule on page 6. for topics and timeline. Location: Monarch Hotel & Conference Center, 12566 SE 93r Avenue, Clackamas, OR Cost: Free to SEAO Attendees PDH Credits Available: Up to 6 See Pages 3 and 6 for more information.

Wednesday, August 7, 2024: SEAO/OACI Golf Tournament

Location: Langdon Farms Golf Club, 24377 Airport Road, Aurora, OR Shotgun Start: 1:00 pm; Social Hour 6:00 pm; Dinner & Awards 6:30-7:30 pm Event is Sold-Out

Wednesday, September 4— Saturday, September 7, 2024: SEAOC Convention & SEA NW Conference

Location: Hyatt Regency at the Oregon Convention Center, Portland, OR See Page 5 for more information.

Tuesday, November 5— Friday, November 8, 2024: 2024 Structural Engineering Summit Location: MGM Grand Hotel, Las Vegas, NV Visit: <u>https://www.ncseasummit.com</u>/ for more information. More information on registration will follow in future newsletters.

Tuesday, November 12, 2024: SEAO Structural Engineering Awards Banquet (SAVE THE DATE)

Get your entries in by June 30, 2024!! See Page 4 for more information. CONNECTIONS is a monthly publication of the Structural Engineers Association of Oregon, published to disseminate current news to our membership and others involved in the profession of structural engineering. The opinions expressed reflect those of the author and, except where noted, do not represent a position of SEAO.

Send membership inquiries to:

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BOARD OF DIRECTORS 2023/2024

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Executive Secretary Jane Ellsworth SEAO Staff Ph: 503.753.3075 jane@seao.org

PRESIDENT'S MAY MESSAGE By: Jared Lewis, PE, SE

Greetings and welcome to May 2024!

This will be my last President's message until September when I pass the baton to Chris Carrol, our incoming President.

If you haven't already, please mark your calendars for the following events affiliated with SEAO:

1. The 2024 SEAO Excellence in Structural Engineering Awards initial qualifications submissions were due **April 30, 2024.** We received

three entries._Our Awards Committee has worked very hard to create the awards program and celebrate our peers for the extraordinary work we all get to do._We believe there is interest in submitting entries for the SEAO Excellence in Structural Engineering Awards. We are going to keep the submission portal open through **June 30, 2024**, so that others may showcase their work to the SEAO community. We look forward to seeing your submittals at all levels of the project criteria. Please direct questions or comments to Brynn Adkins (badkins@tmrippey.com) and JoMarie Farrell (jomarie@equilibriumllc.com).

- 2. SEAO elects a new board each year. If you are interested in participating at the board level, please consider submitting for positions you're interested in when the board positions open in **April**. Look for more information on our website.
- 3. **May 14, 2024** is the annual SEAO Trade Show at the Monarch Hotel. This is an excellent event to gain PDH's, reconnect with other structural engineers, and ask questions from our industry trade partners. See you all there!
- 4. The joint SEAO/ACI golf tournament occurs on **August 7, 2024**, at Langdon Farms. I look forward to seeing many of you there!

We received 75 responses to our member survey. Our next step will be to disseminate the responses and begin work on forming strategic initiatives for developing SEAO's future.

The volunteer board and committee members work diligently on behalf of SEAO members. To that end, the inertia of volunteerism relies upon the collective energies of members and their continuous input and engagement. Maintaining inspiration to continue working on behalf of members is dependent upon a sense that the contribution is received and appreciated. We hope all members find ways to embrace what SEAO offers and the time to participate in the programming, awards, events, and committees critical to serving the mission of SEAO. In that vein, please do all that you can to submit for the Structural Engineering Excellence Awards. Consider participating in our committees. Look for positions to volunteer on the board.

Thank you all in advance for supporting SEAO in any way you are able. SEAO is made stronger through your continued efforts and involvement!

Thank you, Jared Lewis 2023/2024 SEAO President



SEAO COMMITTEES

<u>CODE ADVISORY COMMITTEE</u> Seismic Jonathan Knudtsen

Jonathan Knudtsen jknudtsen@wje.com

Wind *OPEN CHAIR*

Snow Load Andy Stember andy@jasenginc.com

Code *Eric Watson* eric@miller-se.com

Vintage Building OPEN CHAIR

Special Inspections *Eric Watson* eric@miller-se.com

Sustainability *Jo Ann Offill* joffill@mcknze.com

STRUCTURAL ENGINEERS EMERGENCY RESPONSE (SEER) David Tarries David.tarries@portlandoregon.gov

PROGRAM COMMITTEE

Awards *Brynn Adkins* badkins@tmrippey.com

Golf Tournament OPEN CHAIR

Conferences *Kevin McCormick* kevin@miller-se.com

ADVOCACY COMMITTEE Website

Website Seth Thomas seth.thomas@kpff.com

Engineers Week *Michelle Juarez* michelle@miller-se.com

Young Member Forum *Eric Esqueda & Emma Olds* YMF.seao@gmail.com

SE3 Annabel Shephard shep.annabel@gmail.com

CONTINUING EDUCATION <u>COMMITTEE</u> Seminars Andy Stombor

Andy Stember andy@jasenginc.com

MEMBERSHIP COMMITTEE

Newsletter *JoMarie Farrell* jomarie@equilibriumllc.com

Roster Jane Ellsworth jane@seao.org

DELEGATES

NCSEA & WCSEA/NWC David Linton dlinton@mcknze.com

Seth Thomas (Alternate) seth.thomas@kpff.com

2024 SEAOSF TRADE SHOW & MINI-SEMINARS TUESDAY, MAY 14, 2024, 5:00 PM-8:00 PM

This event is free to membership. Register to secure your spot and dinner. The 2024 SEAOSF (Scholarship Foundation) trade show will be held on May 14, 2024 at the Monarch Hotel at 12566 SE 93rd Avenue in Clackamas, Oregon. There will be pre-show mini-seminars and vendor booths in the exhibitor hall during the trade show.

Schedule of Events:

- Pre-Show Mini-Seminars in the Columbia Room: 11:00 am to 5:00 pm
- Trade Show in the Main Exhibitor Hall: 5 pm to 8:00 pm
- Dinner in the Main Exhibitor Hall: 6:30 pm

SEAOSF will also be holding a raffle during the trade show to raise money for the SEAOSF scholarships. Donations to the raffle are greatly appreciated. Donations will be announced at the raffle and in the newsletter for additional name exposure.

See page 5 for mini-seminar schedule. Please note that a free snack will be available during the seminars.

PDH Credits Available: 1 PDH for attending the trade show and 1 PDH for each mini -seminar attended (maximum total of 6 PDHs). Make sure to sign the attendance form at each mini-seminar to receive your credits.

Please register by May 10th for the trade show so that we can get an accurate count for the dinner. To register for the trade show, please visit: <u>Tradeshow</u> <u>SEAO</u>

SEAO BOARD OF DIRECTORS UPCOMING ELECTION 2024-2025

It is that time of year that SEAO looks to establish a new Board that will serve during the 2024-2025 year.

SEAO is largely fueled by the volunteer efforts of our members on committees and the leadership board. If you have interest in serving your structural engineering community and helping to provide information that assists in educational and networking opportunities that SEAO provides, please contact Jared Lewis at jared@catenaengineers.com.

This year's election is looking to fill the following positions:

- Vice President
- Secretary
- Treasurer
- Director (non-P.E.) (2-year service)

2024 SEAO EXCELLENCE IN STRUCTURAL ENGINEERING AWARDS SUBMIT PROJECT ENTRIES BY JUNE 30, 2024

We need entries!! SEAO has reopened the website Award Submission form and extended the deadline to combine past year's applications. Projects must have been completed in 2021, 2022, or 2023. Members may complete and submit their entries on the SEAO website until June 30, 2024.

Award categories include:

- New Buildings Under \$10M
- New Buildings \$10M to \$40M
- New Buildings Over \$40M
- Renovation/Retrofit
- Special Use Structures

The awards banquet will be held on **Tuesday, November 12, 2024**. Visit <u>https://www.seao.org/committees/advocacy/awards-committee</u> to see the Awards Committee web page and to begin your submission(s). Don't forget to login to access the web-site to start your submission. For ease on the submission process, you can start, stop, and save your work as you create your submission. Eligibility requirements include:

- 1. Project must have completed construction during the calendar years of 2021, 2022, or 2023.
- 2. At least one member of the design team, research team, or a principal of the firm responsible for entry must be a member of SEAO.
- 3. Entries may be of any size, type, and location.
- 4. Projects may be submitted into one category only. SEAO reserves the right to reassign the category, should it meet the criteria for more than one category.
- 5. Each company may submit up to two projects per category (10 projects total).

We especially encourage small firms to submit their projects. Remember to submit as much technical information as possible. The judges are looking for your engineering challenges and creative structural ideas. We want to see what you have been working on! Start thinking about a project or projects you want to submit for consideration or visit the link above to begin your submission(s).

ASK A QUESTION, GET AN ANSWER

Do you have a code question you would like to ask the Wind Committee or Snow Committee?

SEAO is pleased to provide a simple way for Q&A's with technical committees. Email questions to <u>jane@seao.org</u>, and SEAO will direct your question to the appropriate committee chair for a response.

Questions and their answers will be made anonymous and available to the membership on the website <u>www.seao.org</u>. Committees include: Seismic, Wind, Snow, Code, Vintage Building, and Special Inspections.

2024 SEAOC CONVENTION & SEANW CONFERENCE LEARNING FROM THE PAST, BUILDING THE PRESENT, SHAPING THE FUTURE SEPTEMBER 4–7, 2024

HYATT REGENCY AT THE OREGON CONVENTION CENTER, PORTLAND, OREGON

SEAOC and the 2024 SEAOC Convention Committee are happy to announce that SEAOC's signature annual event this year will be September 4—7, at the Hyatt Regency at the Oregon Convention Center in Portland—our first-ever convention in this beautiful and dynamic city. This year's Convention Committee from SEAONC, our Northern California association, is working in partnership with the structural engineering associations of the Pacific Northwest, and this year's 2024 SEA Northwest Conference will be part of this year's convention. The Technical Program will include concurrent technical sessions, an opening plenary presentation by Dr. Erica Fischer from Oregon State University, and a special closing plenary session featuring a panel of distinguished members of the SEAOC College of Fellows.

Exhibitor Booths – Available now! Contact <u>SEAOC2024@seaoc.org</u> to reserve your spot! Sponsorship Opportunities – Available now! Contact <u>SEAOC2024@seaoc.org</u> for available opportunities.

Key Dates:

- Event Website and Registration Launch: 5/6/2024
- Early Bird Registration through: 5/24/2024
- Hotel Rooms Available to Book: 5/6/2024

YOUNG MEMBER FORUM (YMF) UPDATE

Last month's trivia event had 3 teams participate and even a few individuals. Everyone got to enjoy some good food and drinks while we tested our structural engineering knowledge.

We've also got a joint happy hour coming up soon with AIA's EPC group on May 16th from 5:30-7:30 pm. Location was going to be at Von Ebert in the Pearl, but it has closed, so a new location will be announced in our monthly email coming from <u>ymf.seao@gmail.com</u>, (check your spam folders). If you want to join the YMF mailing list, please email us at our gmail address.

NEW MEMBERS

SEAO would like to welcome our newest members:

John Evans—Pillar Consulting Group Andrew Hodge—Mackenzie James Bela—Oregon Earthquake Awareness Timothy Rippey—T.M. Rippey Consulting Engineers William Rosenblatt—Wiss, Janney, Elstner Associates



11:00 AM – 12:00 PM SR Contractors

Stabilization for URM Buildings

SR Contractors is a leading specialty contractor in seismic stabilization for URM buildings. Leveraging their patented installation and design methods, SR Contractors uses an innovative, cost effective, and lightweight product known as SR Foam. Originally developed for seismic applications, SR Foam has evolved to address a wider array of challenges, including bracing failing basement walls and veneer attachment. During this seminar, you'll discover the diverse applications and compelling benefits of SR Foam. We'll provide a comprehensive overview of the design methodologies underpinning its use, both in mandatory code-compliant projects and voluntary seismic upgrade initiatives. (1 PDH).

12:15 PM - 1:15 PM

Lindapter

Innovative Steel Connections

Over 85 years, Lindapter has pioneered the design and manufacture of innovative structural steel clamping systems and HSS blind fasteners, enabling faster steel construction. The Girder Clamp System is used for quickly connecting steel sections. The Hollo-Bolt is an expansion bolt used to fasten to HSS (hollow structural sections) and on blind connections. Both of these have been evaluated and recognized by ICC-ES for all Seismic Design Categories (A through F). Lindapter connections reduce or eliminate the need for time consuming drilling or welding in the field thus reducing time and labor costs. (1 PDH)

1:30 PM - 2:30 PM

Contech

FRP Special Inspection, Contractor Considerations, and Finish Options

Don Ellsworth, former co-founder of Contech Services, will discuss these items and how they directly affect parts of the designers FRP specification and subsequent contractor pricing. (1 PDH)

2:45 PM – 3:45 PM Fyfe

Design and Specifying Considerations for Externally Bonded FRP Strengthening Systems

Starting in 1988, Fyfe was the first FRP manufacturer of externally bonded strengthening systems to achieve building code approval and to be qualified by the Department of Transportation throughout the United States. This started the application of composites in the civil/structural industry yet there was little to no guidance or industry standards on how to incorporate FRP strengthening into project drawings and specifications. Fast forward 30-years and composite strengthening has become a much more regular tool for many engineers, but there remains a lack of consistency related to specifications. Fyfe's primary goal is the success of specifying FRP strengthening on projects is in respect to consistent designs, competitive bidding, and quality construction. This seminar will discuss basic design topics for FRP systems and review key points that should be included and enforced in a project FRP specification. (1 PDH)

4:00 PM - 5:00 PM Pekko

Hybrid Structures

This course defines mass timber slim-floor structures with the advantages of incorporating these assemblies in building design. The program will examine the emerging industry standards and performance attributes for slim floors, enabling the professional to select the best system for specific design criteria. (1 PDH)

ADVERTISING SPACE AVAILABLE

SEAO is pleased to provide full page advertising to members for \$500 and to non-members for \$600. That is the price to run the ad the entire year from September to August. If you'd like to advertise, please contact Jane at jane@seao.org.

May 9, 2024, 10 am—11 am Pacific Time (FREE) <u>4th Annual SE Excellence Awards Webinar Series: Forensic/</u> <u>Renovation/Retrofit/Rehabilitation Structures > \$20 Million: TSX</u> <u>Broadway and Palace Theater Redevelopment</u>

Speakers: J. Benjamin Alper, P.E., S.E., Principal at Severud Associates, and Cawsie Jijina, P.E., MASCE Principal at Severud Associates Times Square in New York is known for many things, including its Broadway Theaters, luxurious hotels, trendy retail, great entertainment venues, and flashy billboards. With TSX Broadway, the project contains all these items in one building. But, what makes TSX Broadway exceptional is not just that it contains all the elements of Times Square in one location, but it is the way in which existing elements were shifted and juxtaposed with new elements, that makes this Entertainment complex and hotel tower a unique structural engineering feat, culminating in the raising of the raising of the existing historic Palace Theater. (1 PDH)

May 14, 2024, Noon to 1 pm Pacific Time (Fee for Webinar) Cantilever Column Systems

Speaker: Laura Whitehurst, S.E., Holmes New Zealand

In this presentation we will discuss the overview of design of different cantilever column systems as lateral force resisting systems, including steel and concrete. You will learn about when a cantilever column system might be used, what the differences are between different cantilever column systems, and design considerations for cantilever columns systems. (1 PDH)

May 15, 2024, 10 am—11 am Pacific Time (Fee for Webinar) Champlain Towers South—WJE Collapse Investigation

Speakers: Matthew Fadden, Ph.D., P.E., Associate Principal at WJE In the early morning of June 24, 2021, the eastern half of the 12story Champlain Towers South Condominium collapsed, killing 98 residents of the 40-year-old building in Surfside, Florida. WJE was retained by attorneys representing the condominium association to determine the cause of the collapse and provide litigation support. Based on document review, field investigation, material testing, and analysis, we determined that the collapse was initiated by punching shear failures in the pool deck slab, which failed columns at the south face of the building, leading to the collapse. (1 PDH)

May 29, 2024, 10 am—11 am Pacific Time (FREE) Atomic Habits for Engineering Professionals: Secrets that Boost Productivity & Profits by BQE

Speaker: Steve Burns, FAIA, Well-Designed Firm & BQE

In the bestselling book Atomic Habits, James Clear illustrates that the key to unlocking significant improvements in our lives lies in small, incremental changes, emphasizing systems over goals for sustained progress. This webinar explores how integrating technologies into our daily routines, guided by Clear's four laws of behavior change (make it obvious, attractive, easy, and satisfying), can transform our work processes and engineering firm's culture. By adopting a mindset shift towards seeing ourselves not just as design professionals, but as innovators, we align technology with our identity, ensuring its seamless adoption. Join the founder of The Well-Designed Firm and former Chief Creative Officer of BQE Software, Steven Burns, FAIA, as he shares actionable insights on fostering a culture that embraces experimentation and learning, illustrating how these atomic habits can compound to achieve remarkable growth. Discover how to leverage these principles to propel your firm forward by letting automation and technology handle the heavy lifting, saving you hours per week! Continuing education credit will be provided by BQE to attendees after the webinar. If you have any questions, please contact Courtney Little at <u>courtneyl@bge.com</u>. (1 PDH)

June 4, 2024, 10 am—11 am Pacific Time (Fee for Webinar) <u>The Parametric Genome—A Structural Approach</u>

Speaker: Steve Reichwein, P.E., S.E., Associate Principal, Severud Associates

Data has become an essential tool for decision making in today's modern world, across all industries. Clients are looking to engineers in all fields to deliver them the information necessary to make key business decisions and develop building designs. In the field of structural engineering, the presented data may vary; it may be structural steel tonnage for various floor framing configurations and column spacings, it may be economy scale applied to a repetitive connection type, it may be structural optimization for lateral drift or serviceability of a high-rise, or it may literally be anything else. The potential uses of data derived from computational, or computer-aided, algorithmic design are virtually limitless.

Computer-aided algorithmic design allows us, as designers, the ability to run millions (or even billions) of simulations to collect meaningful data. How this data is collected and presented is up to the user, but the ability to automatically run these simulations is there through the use of today's computational power. During the presentation, we are going to touch on a few specific uses of algorithmic aided design; these examples are as follows:

- 1. Simple optimized parametric structural truss
- 2. Simple optimized parametric structural steel bay designed for gravitational forces
- 3. Drift and strength optimization of structural members in a high -rise commercial tower
- 4. Strength and deflection optimization of a parametric long-span dome roof
- 5. Strength, deflection, and economy of scale optimization of a parametric geodesic sphere

The possibilities of parametric design are relatively endless, and we feel that all projects and firms, no matter how small or large, may benefit tremendously from this type of analysis and design methodology presented; the examples and topics will vary from simple to complex and offer unique opportunities for everyone in the audience to benefit from. (1 PDH)

There are also recorded webinars that can be purchased for professional development hours (PDHs) online at <u>Calendar - NCSEA</u>

KURT FISCHER STRUCTURAL ENGINEERING Structural Engineer Portland, OR

Kurt Fischer Structural Engineering (<u>www.kfseng.com</u>) is looking for entry-level or experienced structural engineers to join our Portland office. KFSE provides innovative and creative solutions for the built environment. We are looking for passionate and ambitious structural engineers to join our versatile, progressive, and experienced firm. Current projects include: historic non-ductile concrete and URM seismic rehabilitation, civic, mid-rise residential building, podium residential apartment and mixed use complexes, luxury singlefamily residential, affordable housing, and a mid-rise luxury hotel.

We highly value our employees and strive to foster a positive and energetic work environment by providing engineers with the tools, resources, and mentoring to further their knowledge and career. There is ample opportunity for upward mobility within our firm, and we invite you to talk with us about exciting opportunities at KFSE.

KPFF CONSULTING ENGINEERS Structural Engineer

Eugene, OR

KPFF is seeking a highly skilled and experienced Structural Engineer with a minimum of 6 years of experience to join our existing civil engineering practice in Eugene, Oregon and grow our structural engineering group there. The group will work closely with, and be supported by, our structural division in Portland. The successful candidate will lead our structural engineering efforts, meeting with potential clients, providing technical expertise, project management, and mentorship to a team of engineers.

If you are passionate about structural engineering and looking for a rewarding opportunity to lead and grow with a dynamic team, we encourage you to apply on <u>www.kpff.com/</u> <u>careers</u> where you can select "Explore Positions" and filter for Eugene, OR.

KPFF is an Equal Opportunity/Affirmative Action Employer committed to hiring a diverse and talented workforce.

Contact/send resumes to: LT@kfseng.com

STANTEC Structural Engineer Portland, OR

As a Structural Engineer your role is to work with general supervision on multiple projects, and on larger projects under the guidance of a Senior Structural Engineer. You will perform evaluations, analyses, calculations, design drawings, recommendations, and specifications for engineered systems.

- Perform detailed structural analysis and design for Water and Wastewater Treatment Plants, Reservoirs, and other Hydraulic Containment Facilities
- Design, analyze and specify primarily reinforced concrete, masonry and structural steel systems and buildings
- Lead an engineering Team responsible for the preparation of documentation in various structural phases including conceptual design, detailed design, and construction support.
- Strong knowledge of structural systems, means and methods, materials, and industry standards
- Requires experience using structural engineering/finite element analysis software
- Bachelor's degree required; Professional Engineer license required

For more information, visit: <u>https://stantec.jobs/portland-or/structural-engineer/82BAC940B0AF482992B87C6C7BBDD9B6/job/</u>



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