June | 2022

June 2022 EQUILIBRIUM

Newsletter of the
Structural Engineers Association of Washington
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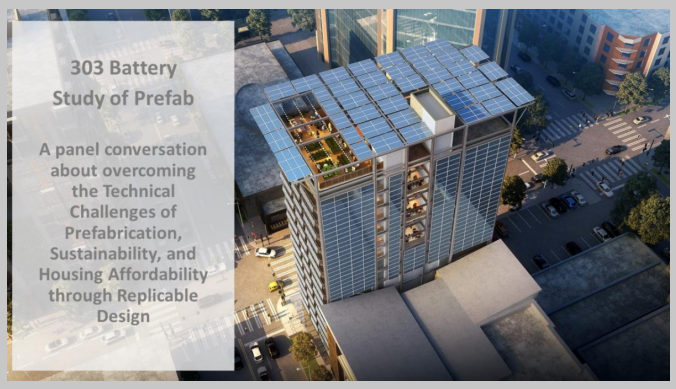
Seattle Chapter Spring Social Preview
"Sustainable Living Innovations"

Date: Tuesday, June 21st, 2022
Time: 5:00 PM - 9:00PM PST
Location: Imperia Lake Union
3119 Eastlake Ave E, Seattle, WA 98102
Click here for directions.

Cost:
SEAW Members - $55
Non- Members & Guests - $75
YMG & Students - $40
SEAW Life & Honorary Members - FREE

Register to Attend: Click here.

Program:
A panel conversation about overcoming the Technical Challenges of Prefabrication, Sustainability, and Housing Affordability through Replicable Design.



Speakers:

Gayle Roberts – Swinerton



Gayle Roberts (she/her) is a Senior Project Manager for Swinerton, an employee-owned company founded in 1888. Gayle brings over 15 years of experience in ground-up construction including multi-family, retail, and office. She is a thought leader for innovation working on complex projects with new technology. She is looking forward to leading the charge for emerging building methods including prefabrication and mass timber.

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Gayle has a Bachelor's in Business Administration from Mesa State College and a BS in Construction Management from the University of Washington. She loves adventure and travel having been to nearly two dozen countries.

Hanna Saed – DCI Engineers



Since joining DCI, Hanna Saed has provided structural engineering support to various commercial office, parking garage, residential, and industrial projects. Hanna routinely interfaces with clients and consults on the Sustainable Living Innovations (SLI) structural option. He is currently managing the SLI 3rd and Battery and 8600 Aurora Avenue projects. His project leadership exemplified his talent in collaborating with contactors, design team members, and the owner. Hanna's project management style is driven by finding efficient design solutions and meeting budget and schedule.

Carrie Cassidy – Sustainable Living Innovations



Carrie is the Chief Construction Officer at Sustainable Living Innovations (SLI), a company that develops, designs, prefabricates, and assembles multi-family residential buildings in the Seattle area. In her role, Carrie directs and leads the construction of highly sustainable, tech-enabled buildings utilizing the patented, panelized building system SLI has developed.

Since joining SLI in March of 2020, Carrie has developed a robust construction team that is working collaboratively with industry partners to develop standardized logistics and building processes that will expedite construction timelines for this unique building type. With the launch of the 303 Battery construction project in early 2021, Carrie's team has been able to further develop their processes with a focus on efficiency and continuous improvement.

Prior to joining SLI, Carrie had a 25-year career with Sellen Construction, filling numerous roles across multiple departments and having a lasting impact on almost every aspect of the company. Her last five years at Sellen were spent as the Vice President of Field Operations where she was integrally involved in the management and development of Sellen's entire field team.

Carrie has a BS in Construction Management from the University of Washington. She loves art and photography and can often be found snapping photos both on and off the construction site.

Next YMG Social Hour Set for June 22

By Jessica Lim, YMG

In May, the SEAW YMG hosted a joint social with the ASCE YMF group at Redhook Brewlab in Seattle. It was fun to meet everyone and enjoy the rare spring sunshine that day. SEAW & ASCE provided food for people and there was shuffleboard in our event space for people to play.

The next SEAW YMG event will be June 22 sponsored by Verco Decking, so keep an eye out for more details on that soon as it'll be a blast!!



The combined SEAW YMG and ASCE YMF chanced a sunny day for their meetup at the Redbook Brewlab in Seattle.

“Lateral System Design of New SoFi Stadium” Recap

By Evan Jordan, YMG

The SEAW Seattle Chapter held a virtual meeting on May 31, keynoted with a presentation entitled “Lateral System Design of the New SoFi Stadium.” The presentation was led by Rafael Sabelli of Walter P. Moore and Zac Vidmar of CoreBrace, LLC. Located in Inglewood, CA, SoFi Stadium is the newest NFL stadium that hosts both the LA Chargers and LA Rams while also serving as an entertainment complex for other events.



The new SoFi Stadium in Inglewood, CA, was the subject of the May Seattle Chapter Technical Meeting.

The primary lateral structure boiled down to four main unique systems: the roof structure, roof columns and their foundations, the deep excavation for the bowl and mechanically stabilized earth (MSE), and the bowl structure.

The roof was designed as a series of long-span trusses supported by highly tensioned cables. The intense reactions from these cables form a compressed ring at their support points which surrounds the stadium’s bowl. Additional trusses and cables span over the remaining footprint of the complex and are then supported by cantilevering columns formed of precast, prestressed segments. The roof is decoupled from the columns through seismic isolators. The foundations for these columns utilize extended grade beams that develop the lateral load deep into the soil. MSE was provided to accommodate the deep excavation required for the bowl, and a seismic gap (“seismic moat”) as wide as twelve feet was engineered between the bowl structure and retaining wall.

The bowl structure itself was designed as its own independent truss-based system, and it required a substantial quantity of buckling-restrained braces (BRBs) to resist the severe earthquake forces common in southern California. BRBs are different from normal braced frame systems because they behave similarly in both tension and compression thus creating reliable hysteretic response for energy dissipation. Over 1,000 BRBs were used on the project with areas up to thirty-five square inches. Most of these connections were bolted and hidden in back-of-house spaces or through other architectural means. Pinned connections were used in architecturally exposed areas for aesthetic enhancement. The large quantity of BRBs with different connection types required immense coordination between CoreBrace and Walter P. Moore’s design team that was completed through diligent communication and creative spreadsheet implementation.

The presentation offered an insightful glance into the lateral system of one of the nation’s newest and most visited buildings. SoFi Stadium serves as a highly visible structure that will serve to inspire ourselves and aspiring younger engineers to push the boundaries of what is possible in our profession.

Join the Outreach Committee!

By Kyle Johnson, Outreach Committee

The Structural Engineers Association of Washington formed the Outreach Committee in Spring 2016 to forge relationships with schools and organizations to promote structural engineering in the community. We organize several volunteer opportunities throughout the year including field trips, student competitions, STEM Expos, afterschool programs, and more. So far in 2022, we have participated in 5 events and engaged over 250 students.



The Outreach Committee has been helping students at Mountlake Terrace High School build (and break!) balsa wood bridges for years! Join the Outreach Committee to mentor students all around Washington

Check out our volunteer opportunities on the **SEAW Outreach Committee** website, sign up for our mailing list to be notified of new events as we post them, or join our team to get involved with the committee. Now is a great time to get involved on the committee as we start planning for the next school year. We are currently in need of more involvement on the committee from the Spokane, South Central, and Southwest chapters. If you or someone from your firm would be interested in joining the committee or would like to learn more, please reach out to Kyle Johnson at **kyle.johnson@coffman.com**.

SEAW Nominees win PSEC Engineer of the Year Awards

By Ed Huston, Awards Committee

SEAW congratulates Katherine Kuder, Ph.D., P.E., Susan Chang, Ph.D., P.E., and Lee Marsh, Ph.D., P.E. on having been chosen by The Puget Sound Engineer Council as Engineers of the Year for 2022. They, along with the other PSEC Engineers of the Year, were honored at the PSEC Awards Banquet on May 14 at the Museum of Flight.

Dr. Kuder, a professor at Seattle University, was chosen as the 2022 Academic Engineer of the Year. SEAW nominated Dr. Kuder for this award based on her support of students by being the SEAW-SU student liaison, her success at leading SU students in winning several NCEES national competition awards, and her work on concrete-based materials.



Kai Ki Mow, the 2022 SEAW Seattle Chapter Engineer of the Year, announced Susan Chang, the 2022 Governmental Engineer of the Year, at the PSEC Awards Banquet in May.

Susan Chang, who works for the Seattle Department of Construction and Inspection, was chosen as the 2022 Governmental Engineer of the Year. SEAW nominated Dr. Chang for this award based on her work in local seismic safety. Dr. Chang has been instrumental in the early adoption of seismic basin effects and the seismic multi-period spectrum. The ASCE Seattle Section co-sponsored Dr. Chang's nomination. Kai Ki Mow, who also works for the Seattle Department of Construction and Inspection, introduced Dr. Chang.

Lee Marsh works for BergerABAM and WSP and was chosen as the 2022 WSPE Professional Engineer of the Year for his leadership and lifetime of achievements in structural engineering. The ASCE Seattle Section nominated Dr. Marsh, and SEAW co-sponsored that nomination.

The Seattle Chapter SEAW Engineer of the Year Committee makes nominations for the Spring PSEC annual awards and selects the SEAW Seattle Chapter Engineer of the Year. The committee consists of a chair and the last five recipients of the SEAW award. The Seattle Chapter President is an ex-officio member of the committee. The Seattle Chapter SEAW Engineer of the Year Award is presented at the June Chapter Social, which will be held in person this year on June 21st at The Lake Union Café. Coincidently, Kai Ki Mow is this year's awardee. Please plan on attending this event to congratulate Kai Ki.

Seattle Chapter members may suggest candidates for these awards by submitting nominations to the Seattle Chapter President.

WAsafe Update: Include Text Messaging as a Contact Method

By Joyce Lem, Chair, DPRC

We recently learned that, even if your mobile phone number is already entered in the WAserv system as "Mobile Phone," you are still only registered to receive voice mails from the WAserv system. To be able to receive text messages in addition to voice mails, you will need to **add "SMS/Txt msg"** as another contact method. When you're inside WAserv and editing your Contact information. Use the dropdown menu to select "SMS/Text Msg."



Log in to the WAserv system and add "SMS/Txt msg" to receive text messages about CR22 and in the event of a future emergency. It is predicted that when other communications methods may falter, texting will be reliable.

For more detailed instructions about logging in to WAserv and updating your contact information to include text message capability, see this PDF of instructions that the DPRC has prepared: ***Enabling Text Messages from WAserv***.

Text messaging is a preferred method for alerting WAsafe Building Safety Evaluators (BSEs) and is expected to be more reliable following a major disaster such as a large earthquake when communications systems may falter. To practice a call-up of WAsafe BSEs, text messages and emails from the WAserv system will be sent during the Cascadia Rising Exercise in June 2022. WAsafe BSEs will be asked to respond to the emails as part of a "WAsafe drill." Those responses will be tracked so we can review and learn how to better use the WAserv system.

As a reminder, Cascadia Rising 2022 (CR22) is a regional earthquake preparedness and response exercise taking place June 13 – 16, 2022. The purpose of CR22 is to practice responses to a 9.2 Subduction Earthquake along the Cascadia Subduction Zone (full 700-mile long "rip"). The CR22 exercise "starts" four days after the assumed earthquake, and it is assumed that communications systems are functioning.

To the more than 100 SEAW members who are currently registered as WAsafe BSEs: Please review and update your contact information! And thank you!

What are WAsafe and WAserv? ***WAsafe*** is our statewide program for volunteer Building Safety Evaluators who have registered in ***WAserv***, the electronic registry for enrolling, managing, and dispatching volunteers following a disaster such as a major earthquake.

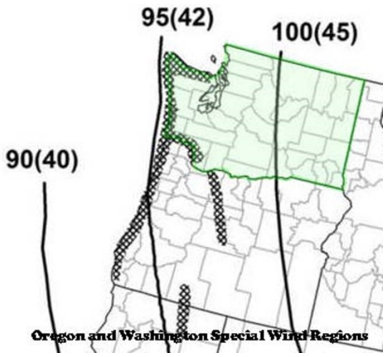
For more details about the Cascadia Rising Exercise, WAsafe, and the DPRC, see the **SEAW Disaster Prep and Response Committee (DPRC)** webpage.

To receive committee announcements and meeting agendas, join the DPRC email list (instructions on the webpage). Join us at our monthly committee meetings -- online on third Tuesdays, noon – 1pm (links given in the emailed agendas). Our Committee welcomes new members and those who want to find out more.

SWR Report, ATC 60 Update, and Bellevue Kzt Map

By Scott Douglas, WEC

The Wind Engineering Committee (WEC) presents its May 2022 report:



ASCE 7-16 Figure 26.5-1B

- **Washington/Oregon Special Wind Regions (SWR) Study** – CPP has completed the preliminary draft report for all the special wind regions in Washington State. The SEAW WEC has reviewed and commented on the draft report. These comments are being forwarded to CPP for incorporation into their final report. For those interested in receiving a copy of the preliminary draft report please contact Scott Douglas @ **sdouglasscott@gmail.com**. Upon completion, the final report will be submitted to the SEAW State Board for approval. SEAW's final recommendations will then be submitted for adoption by the Washington State Building Code Council, and eventually for inclusion in ASCE 7 and the IBC.

- **Update to the 2004 SEAW commentary on wind code provisions (ATC 60) –**The NCSEA CAC Wind Engineering Subcommittee will be proceeding with this update effort. An outline is being developed for the new commentary in order not to duplicate commentary in ASCE 7 or other publications.

- **City of Bellevue Kzt Map –** A Wind Load Factor Map following the format of the existing City of Seattle Wind Load Factor map for rapid determination of Kzt and shoreline exposure factors will be generated for City of Bellevue consideration and potential adoption.

- **Participation -** All SEAW members, whatever their experience, are encouraged to participate at in WEC meetings. Please contact the WEC chair, Scott Douglas **sdouglasscott@gmail.com**, to join the SEAW WEC and receive additional information and announcements on Committee activities and actions.

- **Next Meeting** – Friday June 24 from 12:00 noon to 1:00 pm. Meeting will be virtual via the following Zoom link:
  - **https://us02web.zoom.us/j/86920849906?pwd=cGE5VkpNRk9mRXNqRGN0U0dYVnRwQT09**
  - Meeting ID: 869 2084 9906 | Passcode: 271801

SEFW Spring Updates

By Angela Gottula Twining, SEFW

SEFW is enjoying a productive 2022 – every single board member was in attendance at our April Board meeting! We are grateful to have an active Board and great support from SEAW!

Things in progress include:

- Ongoing work with the **SEAW Outreach Committee** to share the World's Fair video and promote structural engineering in K-12 schools and the community
- Funding the **SEAW Scholarship Program**, which will recognize the 2022 recipients this month
- Personally connecting with **Life Members** to issue invitations to the Seattle Spring Social
- Working with the **SEAW Diversity & Equity Committee** and **SEAW Scholarship Committee** to fund a future award for underserved students
- Planning for the **2022 Fall Forum**, slated for November with a topic of embodied carbon
- Establishing practices for the **SEAW Hall of Fame**, to be sure updates are made to solidify the legacy of structural engineers in Washington state
- Updating the **SEFW website** to better accommodate mobile and device viewing
- Planning for the **SEFW future,** in terms of leadership transition, fundraising processes, and mission emphasis
- **Fundraising** to support the pillars of the SEFW mission

Whew! There are a lot of balls in the air! We take pride in this great mission to promote the profession of structural engineering through scholarships, education, research, and outreach. We welcome anyone who would like to participate in these efforts, and we thank you for your continued support.

Please contact SEFW to get involved at **admin@sefw.org**.

Calendar of Events

- June 21 - June Meeting, 5-9 pm @ Imperia Lake Union, Seattle
- June 22 - YMG Social
- June 24 - WEC Meeting

For more details and registration on events visit the website.

Membership Postings

In accordance with SEAW bylaws, membership applications are vetted by the executive director, granted probationary status by the chapter board, and posted for membership comment. Membership is considered accepted 30 days after posting if current year dues are paid and no member objections have been received. **Read More**

New Members:

- Brian Miller
- Reid Zimmerman
- Anandharam Mourougassamy

Employment Opportunities

Are you currently seeking employment as a structural engineer, senior manager, or a senior engineer technician? Check out our job board for current employment opportunities. **Learn More**

Seattle Structural

Opportunities for Mid-level Design Engineer and Senior Project Manager:

Seattle Structural is a downtown Seattle firm looking for qualified professionals to join our talented group practicing across a number of different industries. Seattle Structural offers an excellent opportunity to work on a variety of public and private institutional, healthcare, educational, and commercial projects both domestically and internationally. We offer a competitive salary and a relaxed, collaborative work environment. Benefits include medical, transit reimbursement, and retirement

matching. Seattle Structural is a firm that makes it easy to become personally invested in the achievements of your company. Seattle Structural is an Equal Opportunity Employer.

We are filling two positions. Candidates must meet the following requirements:

- **Mid-level Designer**: 5+ years' experience.
- **Senior Project Manager**: 10+ years' experience.
- BS or MS in Structural, Civil/Structural, or Architectural Engineering.
- Experience in steel and concrete buildings, aluminum structures, lateral analysis, deep foundations, and marine projects are desired.
- Working knowledge of CAD and Revit preferred.
- Strong emphasis on client service.
- Excellent communication skills.
- Strong technical skills.

Please address inquiries to:
Lisa Wipplinger
Seattle Structural PS Inc.
1420 Fifth Avenue, Suite 425
Seattle, WA 98101

LWipplinger@SeattleStructural.com

MLA Engineering

MLA Engineering has a **Senior Structural Engineer** position available immediately.
Position requires seven to fifteen years of experience, specifically in a consulting design office that provides structural engineering on buildings that require close coordination with a multi-discipline team. We look forward to talking with engineers who are exceptionally skilled designing with all major construction materials and communicating well on a project team.

MLA Engineering (MLA) has a solid reputation and success designing local, national and international projects, including:

- Aquarium, zoo, and entertainment facilities;
- Public infrastructure: maintenance, wastewater and solid waste facilities;
- Evaluation, repair and seismic improvements of structures.

Our Seattle staff enjoys designing diverse projects that require critical thinking and creativity. We combine the opportunity of engineering unique and exciting projects with the flexibility, culture and benefits of a small business.

Qualifications:

- Master of Science'
- Licensed Structural Engineer;
- Strong technical and analytical skills;
- Intuitive and practical;
- Competent using REVIT as a design tool;
- Excellent communication skills;
- Skilled at providing accurate work;
- Excels in a team environment.

MLA is an equal opportunity employer with a comprehensive benefits package including 401K matching contribution (up to 4%), medical, dental, vision insurance, HRA account, bonus potential and flexible work environment.

For more information, visit our website at **www.mlaengineering.com**
Please send your résumé and cover letter to **info@mlaengineering.com**

Green Mountain Structural Engineering

Green Mountain Structural Engineering is a firm located in Camas, WA, dedicated to providing an exceptional approach to engineering residential projects. We work with quality home builders and designers who strive to provide well-built, safe, and affordable homes. Our years of experience have enabled us to develop the tools necessary to provide efficiently designed structures with clear and easy-to-follow plans which has garnered the respect of both builders and regulators.
Green Mountain Structural Engineering is looking for an experienced, licensed structural engineer to be a part of our thriving firm. We typically work four 9-hour days with Fridays off, with pay based on a 40-hour

work week.

The successful candidate will have:

- Bachelor of Science degree in Civil Engineering from an accredited college or university with an emphasis in structural engineering.
- A Professional Engineering License (or be in the process of obtaining) in the States of Washington and Oregon.
- Minimum of 7 years of experience working on small to mid-size light frame wood construction including residential projects, with additional experience working with concrete, masonry, and steel.
- Experience with structural analysis design programs, such as StruCalc, RetainPro, AutoCAD, and Bluebeam.

To find out more, send cover letter and resume to **gmse@greenmountainse.com**

Swenson Say Fagét

Structural Staff Engineer / Project Engineer
What's missing from Swenson Say Fagét? You! SSF has immediate openings in our Seattle and Tacoma offices for talented Structural Engineers. All experience levels are encouraged to apply. Responsibilities include being smart, having common sense, playing well with others, and tackling challenges like a dog with a bone.

We approach project design with open minds and technical chops to find solutions to some real head-scratchers. Our loyal clients provide staff at all levels opportunities to directly collaborate with architects, owners, contractors, developers, artists, and public and private entities on projects of all types and sizes. Our office culture is informal. Besides being flexible, hardworking, and technically savvy, did we mention we're also really nice people and like to have a ton of fun?

We've been in business for 27 years and remain committed to creating a place where people want to spend their time and energy. Pay is dependent on experience and benefits are great. Check us out at **www.ssfengineers.com**. If you like what you see, we'd love to hear from you.
Submit your resume to **info@ssfengineers.com**.

Cary Kopczynski & Company



Message from the Chair



By Darrell Staaleson, PIC

In the coming months we will be updating the Charter of SEAW Public Information Committee (PIC) to incorporate the excellent past work and giving committee members new opportunities to create our Vision for the future and contribute to public awareness for SEAW in the future.

One of the benefits of working on the Public Information Committee is an opportunity to sharpen your technical writing skills and public speaking skills. And as Dale Carnagie said in his master work "How to Win Friends and Influence People," "being able to write well and present yourself makes you more valuable to employers and clients."

Opportunities include:

- "Equilibrium"
- "Hall of Fame"
- SEAW Brand Ambassador to NCSEA

All SEAW members, whatever their experience, are encouraged to participate in PIC meetings. Please contact the PIC chair, Darrell Staaleson at **dstaal@staaleng.com** or 253.520.0388 to join the SEAW PIC and receive additional information and announcements on activities and actions.

Structural Engineers Association of Washington

info@seaw.org | **206.338.7376**| www.seaw.org