



STATE EQUILIBRIUM

Newsletter of the
Structural Engineers Association of Washington

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Seattle Chapter Meeting

“SEISMIC RETROFIT AND VERTICAL CAPACITY UPGRADE OF THE APPROACHES TO THE I-90 FLOATING BRIDGE OVER LAKE WASHINGTON”

Details:

Date: Tuesday, November 19, 2019

Time: 5:00 - 8:15 P

Location: Hotel Monaco

1101 Fourth Avenue, Seattle, WA 98101

[Click here](#) for directions.

Registration Fees:

Early Bird Members - \$40*

Non-Members, & Guests - \$50*

Early Bird YMG - \$30*

Students - \$15

**Early bird rate ends November 11, 2019. YMG rate applies to Engineers under 35 for both members and non-members.*

Agenda:

5:00 - 6:00 pm Registration/Networking

5:15 - 6:00 pm Tech Talk

6:00 - 6:30 pm Dinner

6:50 - 7:00 pm Welcome/Announcements

7:00 - 8:15 pm Program

Program:

As a part of Sound Transit East Link Extension, several large highway bridges along the I-90

- Basalite Point
- 7. Spokane SEAW Chapter Meeting Recap
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corridor between Seattle and Bellevue were converted for Link Light Rail service. The structures were strengthened for increased vertical loads and retrofitted to meet current seismic requirements. The project is currently under construction. This presentation will concentrate on the evaluation, retrofit design and construction challenges of the East and West approach bridges to the floating bridge over Lake Washington.

Speakers:

Yakov Polyakov, PE, SE, is a principal structural engineer with WSP, and is the Engineer of Record for the work discussed in this presentation. Over the years Yakov has worked on infrastructure projects large and small throughout the United States and internationally.

Matthew Barber, PE, is a bridge engineer who has been with WSP for fourteen years, seven of them in Seattle. He is currently serving as WSP's Design Lead During Construction for the Seattle to South Bellevue segment of Sound Transit's East Link Extension (E130).

James Collins, PE, SE, has worked for the last two and-a-half years on the E130 project as a Construction Engineer, managing the seismic and gravity retrofit of the WSDOT fixed structures.

Register Today

October Dinner Meeting Recap

By Ishani Singal

This month's dinner presentation started with Mo Paz from Peikko discussing the Peikko system that allows the use of multiple slab options, including Hollowcore, long-span metal deck, and CLT. This was followed by messages from SEAW Vice President Mike Visser, SEAW YMG President Linda Ji, and Equilibrium editor John Gunn.

SEAW YMG has been nominated for the "YMG of the Year", results of which will be declared at the NCSEA Summit. SEAW committees are a great way to get engaged in SEAW, connect with your peers, and learn about the latest changes in the profession. More information about upcoming events and seminars can now be found on SEAW's LinkedIn page - <https://tinyurl.com/y6jj6vc8>.

The main presentation was about Tyler S. Sprague's latest book about the life and work of Jack Christiansen. Tyler is an Assistant Professor in the Department of Architecture at the University of Washington. His book captures Jack's significant contributions to the modernist architecture and engineering of the Pacific Northwest. As a named partner of Magnusson Klemencic Associates, previously known as Skilling Helle Christiansen Robertson, his work in thin-shell concrete reached new levels of material efficiency, long-span capability, and architectural expression, vaulting him into the pantheon of global shell designers with Felix Candela and Heinz Isler. Inspired by Northwest topography and drawn to the region's mountains and natural landscapes, Jack employed hyperbolic paraboloid shapes, barrel-vaulted structures, and efficient modular construction to echo and complement the forms he loved in nature. Jack's crowning structural feat was the Kingdome roof, which, at 660 feet in diameter, was the largest concrete dome in the world. The structure took pride in being efficient due to its circular frame and thin roof. The outdoor ramps served double duty as braces for the vertical columns. Christiansen went on to develop some 75 thin-shell projects, including public schools, gymnasiums, and sculptural church spaces. To close the presentation, Tyler talked about the exhibit he has staged at the University of Washington highlighting the work of Jack Christiansen.

[Download Sprague Flyer Here](#)



Tyler S. Sprague looking at a photo of Jack Christiansen standing on one of his signature thin-shell concrete umbrellas

Outreach Committee Update

By Gino Mazzotti

The committee has hit the ground running this school year. Tom Corcoran, Vlad Lefelman and Angela Gottula Twining ran SEAW's Shake Table display at the first ever Boeing STEM Night on October 10th. Katarina Kubiniec of ASCE and Gino Mazzotti of SEAW began a six-week afterschool curriculum on Materials Engineering at Whitman Middle School. Tom Corcoran and the SEAW Shake Table highlighted the importance of Structural Engineering at a Seattle Architecture Foundation Youth Program on October 19th. If you would like to volunteer at events like these, please sign up for our mailing list at <https://www.seawoutreach.org/volunteer>

SEFW Fall Forum a Success!

By Angela Gottula Twining

The Structural Engineers Foundation of Washington hosted another successful Fall Forum on Nov. 6 at Benaroya Hall. This year's presentation, "Trends in Worldwide Urban Growth: How Washington Stacks Up," was given by Antony Wood, CEO of the Council on Tall Buildings and Urban Habitat. About 250 people attended the lecture, including architects, engineers, contractors, university students, and even younger children! The SEFW mission is to promote the profession of structural engineering to all audiences, especially the general public, and the Forum perfectly presented statistics, challenges, and thoughtful concepts in an accessible way, so everyone learned something. Antony was engaging and humorous, offering information about Washington state that was unique, thought-provoking, and downright fun.

In regards to worldwide growth, Antony discussed trends, drivers, and challenges. He identified that tall buildings are getting taller, can be found in more locations around the world, are being built with more diverse functions (i.e., they are no longer just commercial office towers), and are less likely to be made entirely of steel.

He said more than 1 million people are urbanizing every week worldwide, and they need homes. He cited a Seattle Times article that said Seattle is the #1 city for population growth in this decade, and its 18.7% growth is higher than any of the largest 50 U.S. cities.

One of the biggest challenges with urbanization is that the infrastructure in urban cities cannot support the growth that is happening. In order for cities to be successful, all of the things that need to be in place to support residents and businesses (think doctor's offices, schools, government services) need to go UP into towers as well.

Antony rattled off all of the big companies in the Seattle area – Starbucks, Microsoft, Boeing, Amazon – and said the city should be about 6 times its current size. Some of the more interesting parts of the lecture were where he analyzed the number of local tall buildings and projects on the books and identified unique conclusions about our growth climate. Per CTBUH research, Seattle is the 4th highest in tall building construction in North America, even higher than Chicago! Only New York City and Miami

have more tall buildings built in the last several years in the US. What does this indicate about our area? Antony believes it means Seattle is a hub of innovation.

One other interesting commentary concerned architecture. Antony is a professor of architecture at the Illinois Institute of Technology, and he said that he truly feels like 95% of all architecture in tall buildings is badly designed. Why? A successful tall building does more than just be tall or look impressive, it incorporates form into function and takes on a responsibility beyond just the building itself. These successful towers do things like feature vertical gardens, use tall timber, or creatively utilize the roof space.

The lecture was recorded and will be available at www.sefw.org and vimeo.com/sefw in just a few weeks. Anyone who missed the event is welcome to watch to learn more about worldwide urbanization, growth in Washington, and CTBUH.

SEFW would like to thank the 37 corporations and 2 individuals that donated at the Platinum, Gold, Silver, and Bronze levels, including Platinum sponsors Contech Services and PCS Structural Solutions. Additionally, thank you to the 14 cooperating organizations that supported the event and 14 "Friends of the Foundation" who donated at the individual level. Funds raised at this event go to support SEFW's mission for the next year, allowing SEFW to promote structural engineering through scholarships, education, research, and outreach. Please visit www.sefw.org to learn more about what SEFW has been doing in all of these areas of the mission.

Thank you for your support, and we will see you next year!



Antony Wood discussing one of his favorite tall buildings, the Bosco Verticale in Milan, Italy.

CMU Beam Design

By Casey Moore and Tom Corcoran, Integrus Architecture

Reinforced concrete masonry beams are a standard design element when considering an opening in masonry walls. As wall opening spans increase, the beams are required to not only support gravity loads, but also must meet code deflection requirements. At the new 325,000-square-foot Kitsap HS/MS project, a concrete masonry unit beam was designed for a 48-foot clear span across a large proscenium opening in the 900-seat Performing Arts Center. The design included consideration of simple-span versus fixed ends for supporting gravity loads, out-of-plane requirements for seismic and wind loads, and standard beam versus deep beam design methodology.

High strength masonry blocks were used for both the 12-inch nominal masonry beam and the 24-inch nominal masonry support piers. The wall above the proscenium opening continues another 42 feet to complete the total wall height of 64 feet. The opening is part of a reinforced concrete masonry shear wall with a length of 100 feet and a height of 64 feet.

For more information, a paper on this subject is included in the proceedings of the 13th North American Masonry Conference held on June 17-19 in Salt Lake City. The conference is sponsored by The Masonry Society. www.masonrysociety.org



Reinforced concrete masonry beam with a clear span of 48 feet and 20 feet tall. Ian Kane, Morgan Wiese, Casey Moore (who designed the beam) and Ben McElroy. Credit: Tom Corcoran

State and Chapter Committee Reports

Contact the committee chair if you are interested in learning more or getting involved:

- NCSEA Delegate – Chun Lau
- Earthquake Engineering Committee – Kai Ki Mow
- One of the current main focus and an important topic that the committee hopes to address in the upcoming year is the Increased Seismic Load in the newly published ASCE 7-16.
- Members interested in EEC can find additional information regarding the meeting on the [SEAW website calendar](#) or can contact the committee chair.
- Outreach Committee - Gino Mazzotti
- To sign up to volunteer or to mentor, [visit the SEFW page.](#)
- Sustainability Committee – Chris Jeseritz
- Refresher Committee – Mark Whiteley
- Public Information Committee – Darrell Staaleson
- Disaster Preparation/Response Committee – Joyce Lem
- WABO Liaison Committee – Matt Snook
- The SEAW/WABO Liaison committee is now available for questions from SEAW or WABO members. These questions can be about subjects addressed in the white papers already issued or general questions in the realm of structural engineering practice as it relates to interaction with the various building departments. Comments or questions can be emailed to matts@cplinc.com.
- Technology Taskforce – Morgan Wiese
- Membership Task Group – Jill Shuttleworth
- Continuing Education Committee – Nathalie Boeholt
- Scholarship Committee – Kevin Solberg

SEAW Southwest Chapter Tours Basalite Plant

By Tom Young, NWCMA Executive Director

Members of the Southwest Chapter gathered on May 9th for a tour of Basalite Concrete Products' concrete block and sack plants in DuPont, WA. The SEAW Southwest Chapter was welcomed to the plant by Blair Harter, NW Operations Manager. He provided an overview of the production facility prior to the tour and focused on the many innovations Basalite has incorporated into their manufacturing process.

Additionally, a presentation on masonry constructability was given by Tom Young, P.E., of the Northwest Concrete Masonry Association. Tom was joined by mason contractors Steve Borman and Ron Adams, owners of Keystone Masonry and Cascade Construction, respectively.



SEAW engineers recently enjoyed a tour of the Basalite plants in DuPont, WA.
Credit: Tom Young, NWCMA

Spokane SEAW Chapter Meeting Recap

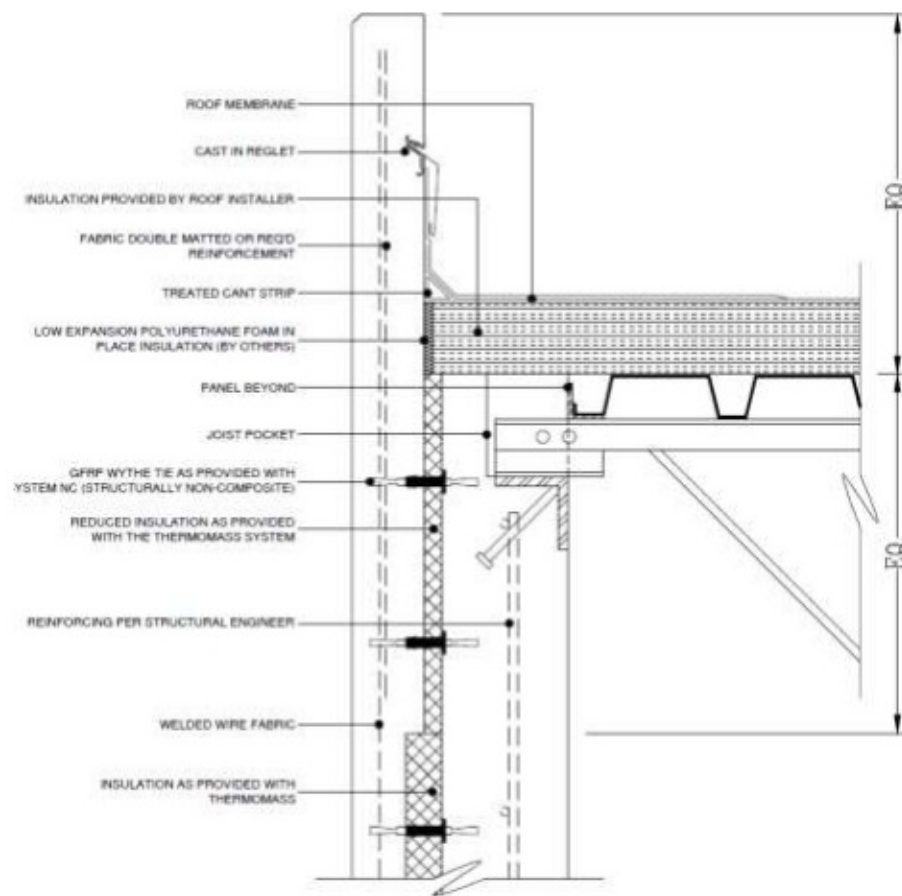
By Colby Litzenberger

In October the Spokane Chapter held its second meeting of the season. Imran Khan of Meadow Burke and Eric Nessel from Thermomass presented on tilt-up concrete solutions.

Imran Khan presented on several Meadow Burke products including the “Super Lynk” and the “Rapid-Lok Ultimate”. The Super Lynk provides a foundation connection for tilt-up and precast concrete panels that helps reduce and, in some cases, eliminate field welding. An insert is cast into the panels that provides an eyelet for bolting the panel to the foundation. The Super Lynk provides the code required 10,000-pound tensile connection and can be welded off as required for in-plane shear delivery. The second item discussed was the Rapid-Lok Ultimate, a steel alternative to traditional cast-in concrete corbels. A slotted embed plate is cast into the panel and a bearing angle can be clipped into the slots after the panel is erected. This allows simplification of formwork when corbels are required, as there are no protrusions from the panels during casting.

Eric Nessel provided an overview of Thermomass as a company, how their products can benefit a project, and what they offer in terms of technical support (aid in design of parapets, software for composite sandwich panel design, etc.). Eric stated that the majority of tilt-up concrete construction done in this area is sandwich (non-composite) panels, so he focused his discussion on applicable products.

There were several questions that SEAW members had submitted prior to the presentation which Eric addressed. One question was asked about tall parapets and how they can be designed. Eric showed the following detail where the outer wythe thickness is increased for a certain distance below the roof line (typically equal to the parapet height). This allows for taller unbraced parapets to be achieved. Extra sandwich panel connectors at the roof line ensures a proper load path back to the roof diaphragm.



Tall parapet detailing. Detail courtesy of Thermomass

Overall, the presentation provided a great primer to tilt-up concrete construction and informed the Spokane members about valuable tools to aid in the design of efficient structures.

Next month's meeting will feature geotechnical engineer Chris Comstock, of Comstock Consulting, who will be presenting on "Hillside Development; Suggested Design Practices from a Geotechnical Perspective".

Three PCS Retirees

By Valerie Hendel

If Old Walls Could Talk: Jim Collins Retires from PCS After 41 Years



Jim Collins, a senior principal of PCS Structural *Solutions*, retired on September 4, 2019. Jim joined then-Chalker Engineers in downtown Tacoma on January 1, 1978—the only employee, he notes, to start on a holiday. It was a fortuitous meeting of energies—a young, new engineer and a city ready to reimagine itself. The city leaders had a new vision for Tacoma and were determined to see the reanimation of its beautiful downtown buildings, and Jim was an energetic engineer ready for the

opportunity.

Over the course of his career, Jim served countless school districts and wrote over a thousand school evaluations. He established himself as a leading engineer in seismic retrofit. Jim was the structural engineer for renovation of the Children's Museum—originally the Sprague Building—in downtown Tacoma as well as the iconic Union Station. But for all the high-profile work Jim has done in downtown, it is the project at the heart of a community that he calls his favorite—Chief Leschi School in the Puyallup Valley. The school was created with the vision to provide a rich cultural and educational experience for its children. "It's an important part of the community. There was a pow wow and at least three other celebrations we were a part of," recalls Jim. The project spoke to Jim personally as his mother grew up on native land in Oklahoma.

Tacoma—Boom, Bust, Boom

Perhaps no one person has been inside more of Tacoma's downtown historic buildings than Jim Collins, according to Dan Putnam, Jim's long-time colleague and friend. Behind the brick-and-mortar facades of downtown Tacoma's buildings are stories of the boom-and-bust tenacity of waves of immigrants who built the City of Destiny. In 1977, Ray Chalker took a prospective new engineer on a walking tour of downtown Tacoma. Jim Collins remembers that first tour. "He pointed to all the buildings Chalker Engineers was working on. I was so impressed. Wouldn't you be?" Jim asked, with no hint that his enthusiasm has flagged 41 years later. "I joined the firm, and when the Tacoma Dome was going under design, it seemed like I was doing everything else." Jim keeps up the downtown tour tradition to this day.

A Structural Philosophy

Jim has been cavorting with these old buildings for 41 years. Four decades of service have established his expertise in the seismic retrofit of existing buildings nationally and especially on the West Coast. "He understands the architectural part of the code that not many people know all the way through," says PCS senior principal and colleague, Don Scott.

Jim calls what he does in existing buildings the *Dark Side*—his way perhaps of embracing the uncertainty that many engineers find uncomfortable. "I always went to him for information on existing buildings," says Scott. "You can ask him a question, and you want a black and white answer. We engineers like black and white answers, but Jim won't give you one. Jim gives options instead. He asks, 'What do we want to accomplish?' and 'How far can we get?'"

Jim's son and fourth-generation engineer, Jason Collins, continues the thought. "You can come in with a pre-crafted solution, but he has an exploratory mindset. He's always asking, 'What is this building asking for? How can we allow this building to stand on its own and maintain its dignity?'"

Jim is always looking for recruits to the engineering *Dark Side*. What does he look for? "Well, to understand old buildings, you have to understand new," says Collins. "Someone who doesn't mind ignoring conventional thinking or rules from time to time."

When asked what advice he has for new engineers, Jim doesn't hesitate. "You have to ask the right questions. Ray Chalker taught me that my job is to make sure engineers are asking the right questions."

PCS Structural Solutions

Jim went on to make his mark in the firm he worked for and contributed his name to Chalker Putnam Collins & Scott, Inc. in 1987. Dan Putnam, Jim Collins, and Don Scott would navigate the firm into the next generation and to what is now PCS Structural Solutions.

Jason Collins describes how Jim influenced PCS culture. "He's a big advocate of work-life balance. He always said that when you're the most stressed, that's when you have to get to the gym. There are six kids in my family, and I remember him at most of my games and events."

Post-PCS

So, what's on the post-retirement bucket list for Jim? An enthusiastic hiker, you'll likely find Jim in the mountains. "I'd like to spend more time in the mountains and backroads of Pierce County hiking and climbing ... alongside a stream fly fishing or mountain biking through the woods. Wendy wants to visit Sweden. I'd also like to teach my grandchildren to fish."

Renaissance Man: Celebrating Rick Oehmcke's Career and Retirement



Rick Oehmcke has been a foundational part of PCS Structural *Solutions*' evolution since his arrival in 1987. On February 25, 2019, he retired from his 38-year structural engineering career.

When asked to describe Rick in three words, friends and coworkers placed *innovator* firmly at the top of the list. Rick was a Building Information Modeling (BIM) evangelist from the start. Colleagues describe his uncanny ability to read the horizon. "He latched on to Revit—he was adamant it was the future," says Doug Goodwin, principal at PCS Structural *Solutions*. "Others were going to MicroStation."

I ask Rick about his knack for future-telling and about how he talked the firm into buying into the costly new Revit software at a time when it was unknown. Rick demurs. "It could have gone the other way. When 3-D modeling was in its infancy, I knew it could help clients. Revit just fit our needs."

Rick is the person who is out front with customers and tuned in to what they need. When asked about his favorite project, he zeroes in on the people. "Aviation High School in Highline [School District – in Burien, Washington] is my favorite, because it brings kids from all over who are fascinated with science."

"Do you remember the moment when you decided to become an engineer?"

"I was an Air Force brat, so we lived all over. When we moved to the Upper Peninsula in Michigan, my Dad was a radar navigator on B-52s. But my dad was an artist too and taught me how to draw. Dad met a young navigator who was an architect-engineer and asked if I could meet him. I saw his renderings, and I was mesmerized. All of these drawings ... When our family ended up in California, that was it. I went to Cal Poly."

Doug has been working with Rick for a long time. He met Rick in 1993 when Doug first started with PCS. "Funny, we haven't really worked on any projects together, but we're bouncing ideas off of each other every day."

Loyal friend, co-worker, and innovative artist-engineer, Rick plans to take on a bucket list of historic travel destinations. And then there's restoring the old Chevy truck patiently waiting in his garage and "the endless honey-do's from damned Pinterest."

As for the advice I ask him to give engineers today, he says, "At the end of the day, it's all about relationships and the creative process—it's what makes it memorable."

A Fondness for Light: Celebrating Jim Harris's Career and Retirement



You could say that Jim Harris—or Lou Billy—took the scenic route in his 41-year career—not as many straight lines in the trajectory that you might expect from a structural engineer. But it has a solidity to it, built on years of dedication, commitment and relationships.

We chat in a booth in the Virginia Inn on 1st and Virginia. "It used to be a bar all across," Lou says, and points to the prime corner seat by the front window. "There was a cigarette machine in that corner."

Lou points to several architects and engineers who come and go or pass the front door while we sit. The Virginia Inn apparently served as a hot spot for building designers back in the day. "We used to sit in that corner at two in the afternoon and work. One day our client walked by and we waved and said, 'We're working hard on your project!'"

Lou's favorite, architecturally significant, project might surprise you. He says "It's a building no bigger than this room. The Lightbox." The Lightbox is a stunner, a multi-award-winning residence designed by Bohlin Cywinski Jackson for a photographer in Point Roberts, Washington. Lou never mentions any of

the awards it has received. He adds, "It took a whole lot of effort to make it look like no effort at all."

Jim Harris joined Chalker Engineers in Tacoma in 1978 and worked for two years. He was itchy for the energy of a big city. He went to Ray Chalker, his boss at the time. "I've been here two years and I've done everything three times. I need to move to Seattle." As it happened, Chalker Engineering was planning to open an office in Seattle. Lou seized the opportunity. "Aaron Goodwin, Larry Karlson, and I did eighty percent of Waterfront Place," explains Lou. Today, Waterfront Place is the home of PCS's Seattle office.

Lou would eventually take a leave from Chalker for a bit of travel. He returned to Seattle and worked for several years at his own firm, then with Fossatti & Associates and Ratti Swenson Perbix & Clark. Lou approached Chalker again in 1991. He wanted to work with Chalker, but exclusively for his own clients.

"What would you tell the new generation of engineers?"

"Don't automatically say no. Try to look at a concern with a different perspective, and if the answer is still no, offer some alternatives."

Lou's favorite building in Seattle is The Chapel of St. Ignatius at Seattle University. Seven bottles of light in a stone box and A Gathering of Different Lights inspired architect Steven Holl. The Lightbox and A Gathering of Lights—Lou apparently has a fondness for light.

Lou retired on January 25, 2019. Lou and his wife, Jill, have celebrated their 25th anniversary.

YMG Corner

By Linda Ji

The YMG is delighted to announce that we are nominated for 'YMG of the Year' (link: <http://www.ncsea.com/awards/ymgchapter/>) for the second year running. Two representatives from the YMG, President Linda and Social Co-chair Alejandro, will attend the upcoming NCSEA Summit to be on hand for the recognition of finalists and the awarding. We hope to win this year! The success of the YMG has been built on our many well-attended events, so please join us for the next happy hour in our "Innovations in Structural Engineering" series hosted by Swenson Say Faget on November 21st. You can also check out our new Instagram account here: <https://www.instagram.com/seawymg/>.



The last happy hour at KPFF

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:

Susan Chang

Ethan Crout
Phong Do
Tanakij Hanmongkolpipat
Ardel Jala
Robert Kramer
Bryce Lumpkin
Shawn McCann
Jessica Powell
Shawn Schaub
Alexander Schwartz
Nels Trygstad
Chase Young

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](#)

Plans Examiner - City of Issaquah

Project Engineers typically have the skill sets to excel in building code plan review. The City of Issaquah is seeking a **Plans Examiner** to join our team.

This position supports the Development Services Department by providing technical review of both residential and commercial projects for compliance with numerous complex, technical, and administrative codes and rules including all building, mechanical, plumbing, energy, and accessibility codes for both structural and nonstructural code compliance. The Plans Examiner works independently on technical review, is supported by a team of plans examiners and inspectors in the City, and reports to the building official.

Issaquah may be the place for you to expand your knowledge and dig into the building code industry. Our community of more than 38,000 is conveniently located and filled with a variety of project types to keep your interest. Nicknamed Trailhead City, Issaquah is a great location to enjoy trails and outdoor activities. Consider a transition to the public sector and help support our mission to enhance lives through public service.

We offer a competitive salary and generous benefits package. Apply today! For more info & to apply, visit: <https://www.governmentjobs.com/careers/issaquahwa?keywords=plans>

Smith Company Structural Engineers

Smith Company Structural Engineers is looking for an engineer with some experience in all the structural materials: concrete, steel, masonry and wood. In addition to engineering design, duties will include Revit modeling and drawing production, which we are willing to teach you. We are located in Woodinville. Please contact John Smith at John.Smith@SmithCompanyStructuralEngineers.com.

Save the Date for the 2020 SEA NW Conference "Innovations in Structural Engineering"

By Chun Lau

September 17 -18, 2020 · The Westin Hotel · Seattle, WA

The SEANW Conference draws together Structural Engineers from British Columbia, Idaho, Montana, Oregon and Washington together for top-notch continuing education with expert speakers, a trade show and great fun with your peers.

Please save the date to be part of this event hosted by the SEAW Seattle Chapter.

Upcoming Events

November 19: [SEAW / AIA DPRC Meeting](#)
November 19: [Seattle Chapter Board and Dinner Meeting](#)

November 21: [YMG Happy Hour](#)
December 5: [YMG Happy Hour](#)
December 12: [Seattle Chapter Informal Holiday Gathering](#)
December 17: [SEAW / AIA DPRC Meeting](#)

[For more details and registration on events visit website.](#)

From the Editor.



NOV 2019

Equilibrium Publication Team:

John Gunn, Editor
Darrell Staaleson, Past Editor
Zohrah Ali
Allison Tran
Blaine Sanchez
Lisette Terry
Shivang Gupta

ACTION ITEMS:

1. All members are welcome to submit articles to Equilibrium. To help you with your writer's block, here are a few topics: Write "Engineer's Notes from Afield," summarize an interesting technical design you worked on, write about how you have been successful and increased productivity with an accounting procedure or marketing technique, write about your experiences doing community service, or share some construction site photos and talk about lessons learned.
2. "A Picture and a Paragraph." Please use the article submittal form provided and the picture needs a caption along with the names of the people in the photo.
3. Please submit your articles in Word format using the Article Template. [\[Article Template\]](#)
4. Please send your articles to jmg485@cornell.edu

CORRECTIONS:

None.

November Puzzle:

According to the "Star Wars: The Clone Wars" animated TV series, what is the full name of Anakin Skywalker's apprentice?

Clue: Anakin's nickname for her is "Snips".

Bonus: What is her codename in "Star Wars Rebels"?

Look on the SEAW Facebook Page for a picture clue!

The first SEAW member to respond on our SEAW Facebook Page or at the next dinner meeting – **with a correct and full answer** - will get a prize.

October Puzzle:

Who first proposed the "Big Bang theory"?

Clue: He started out studying civil engineering in Belgium.

Bonus: What cosmological constant did he first estimate?

Bonus Picture Clue:



Answer:

George Lemaitre first proposed the "Big Bang theory" and first estimated the Hubble constant, which describes the rate of expansion of the universe.

https://en.wikipedia.org/wiki/Georges_Lema%C3%AAtre



Structural Engineers Association of Washington

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