



Newsletter of the
Structural Engineers
Association of Oregon

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SEAO has a twitter
account and can be
followed at
@SEAOregon.



CONNECTIONS

April 2017 Volume 17 Issue 6

Upcoming SEAO Meetings and Events:

Thursday, April 20, 2017: YMF Happy Hour and OMSI Dream Big Screening

Location: OMSI - Reel Science

Time: 5:30pm Happy Hour, 6:30pm Panel Discussion and Screening

See page 4 for additional YMF information.

See page 6 for additional screening information.

Tuesday, April 25, 2017: Canstruction Kickoff Meeting

Location: DOWA-IBI Group, 907 SW Stark, Portland, OR

Time: 5:30pm

See page 4 for additional information.

Wednesday, April 26, 2017: SEAO Lunch Meeting

Topic: Earthquake Resilience: A New Role for Structural Engineers

Speaker: David Bonowitz, SE

Location: Sentinel Hotel, The Billiard Room, 614 SW 11th Ave., Portland, OR

Time: 11:30am check-in and lunch, 12:00pm program

PDH Credit: 1 hour

See page 3 for additional information.

Tuesday, May 2, 2017: Oregon ACI Seminar

Topic: Troubleshooting Concrete Construction

Speaker: Kim Basham, PhD, PE, FACI

Time: 7:00 am to 4:00 pm

Location: Crowne Plaza Hotel, Lake Oswego, OR

See page 12 for additional information.

Friday, May 5, 2017: YMF Lunch Meeting

Location: KPFF

Time: 12:00pm

See page 4 for additional YMF information.

Tuesday, May 9, 2017: SEAO/ACEC Spring Seminar

Topic: Risk Management - Legal & Insurance Criteria for Engineers

Time: 8:30 am to 4:30 pm

Location: Embassy Suites, Portland, OR

See page 14 for additional information.

Wednesday, July 19, 2017: SEAO/OACI Golf Tournament

Location: The Reserve, Aloha, OR

Time: 1:00pm Shotgun Start, 6:00pm Social Hour, 6:30pm Dinner and Awards

See page 18 for additional 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.

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PRESIDENT'S MESSAGE:

TIME TO GET INVOLVED

By: KEVIN MCCORMICK, S.E.



Good day to you all. Here it is the April newsletter and I am $\frac{3}{4}$ of the way through my tenure as President of this fantastic organization. At our board meeting last night, we discussed the process required for the selection committee to get started on the recruiting process for the next incoming board. What causes some frustration is that we have over 500 people in our membership yet it seems way too difficult to find people who want to be on the board or a committee.

Why is that? This is one of the greatest technical organizations to which you can belong (sorry Ed, Seth and Amit; I put NCSEA second). If you are on a committee or the board and you run into other SEA members from across this country, you will see that there is a bond. They immediately know that you are someone who can be counted on and are respected. I know the standard excuse is "I am too busy". We are in a profession where we are always busy. Being involved only takes a few hours a month. Now is the time to get involved. I am asking that when we ask for volunteers, please seriously consider getting involved. You will not be disappointed. For some of the senior members, encourage your younger staff to get involved. I have said it before, "many hands make light work".

I leave you with this. A few days ago, there was a media frenzy about the bulge in the wall of a downtown building. How many of you were able to look at the pictures and have a pretty good idea of what could be going on? Thank your mentors for giving you the knowledge and experience to recognize this. For you young engineers who did not know what you were looking at, listen and learn from your mentors. You have some fantastic learning experiences ahead of you!

— Kevin McCormick

SEAO COMMITTEES

CODE ADVISORY COMMITTEE

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STRUCTURAL ENGINEERS EMERGENCY RESPONSE (SEER)

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APRIL LUNCH MEETING ANNOUNCEMENT WEDNESDAY, APRIL 26, 2017

Topic: Earthquake Resilience: A New Role for Structural Engineers

Once the Resilience movement gets past its buzzword phase, what will it mean to our work as structural engineers?

Earthquake resilience, however you define it, is as much about reoccupancy and recovery as it is about safety. So a shift to resilience-based design will involve new performance objectives, new design criteria, and even new structural systems for limiting downtime. But as resilience emerges as the new basis for earthquake policy, it will also change how we think about building codes, how we measure building performance throughout a jurisdiction, and the roles we play as engineers, both individually and through organizations like SEAO.

A review of recent proposals will show why our current practices might be inadequate, even counter-productive, in terms of community resilience. Resilience, much more than safety, requires collective action; you can make your building *safe* for yourself, but you can't make your business *resilient* without the rest of the block, neighborhood, city, or region also contributing. The resilience challenge is what economists call a tragedy of the commons, and it cannot be solved by relying on rational self-interest alone. If we just copy the policies and programs we used for safety hazards, swapping in the word "resilience" for "safety," we will likely fail.

This recognition should affect how we advise clients and policy-makers. SEAO has helped lead past efforts to reduce earthquake risk. If we intend to continue that leadership, we will need to be more careful in lending our support to efforts that mean well but will have unintended, if predictable, consequences. The complexity of the resilience challenge means it is no longer enough for engineers simply to endorse every proposal with the word "earthquake" or "retrofit" in it; we might actually have to smartly oppose some ideas in order to make progress. Current case studies and policy initiatives suggest how SEAO and its members can maintain their influence, with new confidence and expertise, in the coming era of resilience-based design.

Speaker: David Bonowitz, SE



David is a Fellow Member of both SEAO NC and SEAO OC. He chairs the NCSEA Existing Buildings committee and is a past chair of SEAO NC's Seismology and Existing Buildings committees. He is a member of SEAO OC's Legislative Committee and EERI's Advocacy and Public Policy Committee, and is active in the SPUR Resilient City initiative and on the NIST Community Resilience Panel. Bonowitz is a graduate of Princeton University and holds a Master of Engineering in Structural Engineering from UC Berkeley.

Details:

Location: Sentinel Hotel, 614 SW 11th Ave., Portland, OR

Time: 11:30 am — Check in and lunch
12:00 pm — Presentation

Cost: \$32 — Prepaid Members
\$20 — Prepaid YMF Members
\$42 — Prepaid Non-Members
Free — Students

Reservations: Pre-registration is required for all. You can register and pay online at www.seao.org before noon, Friday, April 21. You can also register with Jane Ellsworth via phone at (503)753-3075 or via Email: jane@seao.org. Note: No-shows will be billed.

PDH Credit: One PDH has been recommended for this program.

CANSTRUCTION



Canstruction is an engaging design/build event that combines the Lego building skills of your childhood with your A/E/C experience to create impressive CANstructures. Great designers are inspired; they understand the scope of demands, use quality materials, and budget well. We use these tools every day, the same tools needed for building a great CANstructure to visually exemplify the tremendous need to feed the hungry. This year we are very excited to celebrate the 21st annual Canstruction Design and Build Competition in Portland.

Even as Portland grows there are still many in our community that are in need of food assistance. Oregon Food Bank serves 270,000 people every month! "One in six Oregonians face food insecurity. They struggle silently and make heart-wrenching decisions that nobody should have to make." *Quote taken from Oregon Food Bank "Voices 2015" brochure.* We CAN help. Canstruction uniquely speaks to the public by highlighting the growing food challenge in Portland and the surrounding communities. The CANstructures dramatically illustrate the volume of need; just one CANstructure consisting of 5,000 cans will feed 70 families for 4 days.



You are invited to team up with your clientele to build a CANstructure and take a role in raising funds and food for Oregon Food Bank. CANstructures have the unique ability for us to reach the community-at-large with visually inspiring public awareness while teambuilding within your firm and clientele. **The 2017 Kickoff Meeting will be Tuesday, April 25th from 5:30pm to 6:30pm at DOWA-IBI Group (907 SW Stark St).** Please R.S.V.P. to info@canstructionpdx.org. We will have light snacks and refreshments and will be going over updated rules, timelines, and an event overview.

Join the 100+ firms who have teamed-up to build 162 structures over the past 20 years in the ongoing effort to stamp out hunger in Oregon!

See the Call for Entry on page 11 for more information about our kickoff meeting on April 25th or contact us at info@canstructionpdx.org.

Design BUILD Feed!

Your Canstruction Committee

SEISMIC EVENTS

ASCE Webinars

Tuesday, May 2, 2017, 8:30 AM – 10:00 AM PST. [Design of Lateral Load Resisting Systems in Masonry Buildings.](#)

Friday, May 5, 2017, 9:00 AM – 10:00 AM PST. [Introduction to the Seismic Design of Nonbuilding Structures to ASCE 7-16.](#)

Friday, May 26, 2017, 8:30 AM – 10:00 AM PST. [Seismic Screening of Buildings Using ASCE 41-13.](#)

YOUNG MEMBER FORUM ACTIVITIES

BY: KATE PFRETZSCHNER AND DEANNA KUHLMAN

Upcoming YMF Events:

Thursday April 20th – Happy Hour

Location: OMSI - Reel Science

Time: 5:30pm Happy Hour, 6:30pm Panel Discussion and Screening

This happy hour will be before OMSI's Reel science showing of Dream Big with a panel discussion and movie screening to follow. Pay at the door or online for entrance fee- drinks not included. See page 6 for more information.

Friday May 5th – Lunch Meeting

Location: KPFF

Time: 12:00pm to 1:00pm

Lunch will be provided.

YMF Website:

Please visit our website for more information on YMF events:

<http://www.seao.org/committees/advocacy/ymf/>.

MEMBER OF THE MONTH: PAUL KLUVERS

The SEAO member of the month for April 2017 is Paul Kluvers. Paul has been involved in SEAO since 1980 and is a Life Member and past President. He is being recognized for his ongoing leadership of the Legislative Committee and his valuable service to the organization.

Paul is the General Manager and Senior Structural Engineer at Cascade Design. Many of you know him well from his time at other local firms over the years. His leadership, wisdom, and positive personality make him a great guy to have around the office. And he's a great person to go to for an enlightened conversation about a multitude of topics.

Paul earned a Bachelor's Degree in Structural Engineering from Portland State University, and he has over 30 years of experience as a structural engineer. In addition to the design and rehabilitation of all types of buildings, his expertise includes water treatment facilities, port and waterfront structures, and dams and fish passage facilities.

Outside of the office Paul is an accomplished fisherman and enjoys travel and photography. Thanks again to Paul for his ongoing service to SEAO!

AWARDS PROGRAM BY: BRYNN ADKINS

SEAO is pleased to announce the third annual Structural Engineer Awards Presentation to acknowledge outstanding projects and structural engineering advancement. Projects will be judged by a panel of invited judges from multiple fields related to design and construction and will be based on innovative design, engineering achievement, and creativity. Awards will be presented at the September dinner meeting.

Submission Categories:

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

Please see pages 16 and 17 for eligibility requirements and submission form. All submissions must be post-marked or emailed by June 30, 2017.

NEW MEMBERS

The newest members to join SEAO are:

Sean Clark - ABHT

Nathan Hoesly - Nishkian Dean

Jeremy Williams - Washington County Building Services

Jake Salter - Kennedy Jenks

Welcome New Members!!

IBC INFO

2210 Cold-Formed Steel

CHANGE TYPE: Modification

CHANGE SUMMARY: A new Steel Deck Institute (SDI) standard addressing the design and construction of composite concrete slabs and steel decks has been added to IBC Chapter 35.

2015 CODE:

SECTION 2210

COLD-FORMED STEEL

2210.1 General. The design of cold-formed carbon and low-alloy steel structural members shall be in accordance with AISI S100. The design of cold-formed stainless-steel structural members shall be in accordance with ASCE 8. Cold-formed steel light-frame construction shall also comply with Section 2211. Where required, the seismic design of cold-formed steel structures shall be in accordance with the additional provisions of Section 2210.2.



Steel deck

Photo Courtesy of the Steel Deck Institute www.sdi.org

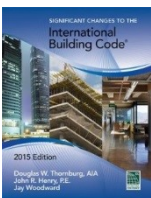
2210.1.1 Steel Decks. The design and construction of cold-formed steel decks shall be in accordance with this section.

2210.1.1.3 Composite Slabs on Steel Decks. Composite slabs of concrete and steel deck shall be permitted to be designed and constructed in accordance with SDI-C.

Chapter 35

SDI. SDI-C-2011 Standard for Composite Steel Floor Deck Slabs.

CHANGE SIGNIFICANCE: Previous editions of the IBC contained no specific provisions for the design of composite slabs on steel decks. The previous ASCE 3 standard referenced in the 2009 IBC was deleted from the 2012 IBC, which resulted in designers and building officials having to use the alternate materials and methods of construction provisions of Section 104.11 for these common structural systems. The 2011 Standard for Composite Steel Floor Deck Slabs (SDI-C) is an update of the previous 2006 version developed and approved through a consensus process under ANSI guidelines. The standard is available for download from the SDI website at www.sdi.org.



This excerpt is from the Significant Changes to the International Building Code, authored by John Henry, PE, Jay Woodward and Doug Thornburg, AIA. The book is available at shop.iccsafe.org.

DREAM BIG OMSI SCREENING AND SOCIAL



Date: Thursday April 20, 2017

Network/Social Time: 5:30 PM

Panel Discussion and Movie Time: 6:30 PM

Location: OMSI - 1945 SE Water Ave, Portland, OR 97214

Tickets: \$7 each. \$5 with Student ID at the door. Buy your tickets and read more [here!](#)

From the Great Wall of China and the world's tallest buildings to underwater robots, solar cars and smart, sustainable cities, Dream Big celebrates the human ingenuity behind engineering marvels big and small, and shows how engineers push the limits of innovation in unexpected and amazing ways. Watch the Movie Preview [Here!](#)

Join us for networking/social hour and an opportunity to meet our panelists and network with engineers and students of all disciplines. Appetizers provided by ASCE, KPFF and SEAO. Beverages will be available for purchase.

Panel discussion will feature three local minds behind the projects showcased in the film. Their experiences and journey will inspire us all to Dream Globally and Engineer Locally.

- Ralph Salamie, PE, Area Manager with Kiewit Corporation recently returned from Nicaragua where he was building Bridges to Prosperity's longest suspension bridge to date.
- Gray Johnson, Electrical Engineering Student at Oregon State University is a member of the OSU Solar Powered Car Design Team which races solar powered cars at competitions around the world.
- Evan Thomas, PhD, PE, MPH, Associate Professor at Portland State University is working on International sustainable development, surface water treatment and renewable energy for developing communities. He is also credited with the design of spacecraft water recovery hardware flying on the Space Shuttle and International Space Station.

For more information see page 10.

WEBSITE UPDATE

The SEAO board is looking at overhauling the website in the next year, as our current website is becoming obsolete. The board is soliciting input from the membership to help guide the overhaul process. We would like to know what features the current website has that you like, dislike, and wish worked better. In addition, what would you like to see added, reorganized, or changed? This website is one of the tools SEAO can offer its membership, and we want to make it as useful as possible for all our members.

If you have any ideas, please contact Seth Thomas (seth.thomas@kpff.com).

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 announce a simple way for Q&A's with technical committees. Email questions to jane@seao.org, 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 www.seao.org.

Committees include: Seismic, Wind, Snow, Code, Vintage Building, and Special Inspections.

SUPPORT THE ASCE/AISC NATIONAL STUDENT STEEL BRIDGE COMPETITION AT OSU

Oregon State University has the honor of hosting the 2017 National Student Steel Bridge Competition (NSSBC) on May 26-27. Help us to make the 2017 NSSBC a resounding success and to keep student registration fees low by becoming a sponsor!

- **Platinum Sponsorship Level**
 - Contribution: \$5000 +
 - Benefits: Booth at the display event; Ad space (3.5"x3") in the competition guide; 2 tickets to the awards banquet; Logo on the competition shirts and website
- **Gold Sponsorship Level**
 - Contribution: \$2500
 - Benefits: Ad space (3.5"x3") in the competition guide; 2 tickets to the awards banquet; Logo on the competition shirts and website
- **Silver Sponsorship Level**
 - Contribution: \$1000
 - Benefits: 2 tickets to the awards banquet; Logo on the competition shirts and website
- **Black Sponsorship Level**
 - Contribution: \$500
 - Benefits: Logo on the competition shirts and website
- **Orange Sponsorship Level**
 - Contribution: \$100
 - Benefits: Name on the competition shirts and website

Other opportunities for company and NSSBC branded merchandise are also available. If you are interested in sponsoring the 2017 NSSBC event, please contact Chelsea Farnsworth at farnswoc@oregonstate.edu.

VENDOR ADVERTISING

SEAO is now accepting vendor advertising!

Cost of a full page ad running for one month:

\$250 - Members

\$350 - Non Members

For more information, contact Jane Ellsworth at jane@seao.org.

EMPLOYMENT OPPORTUNITIES

FULCRUM TECHNOLOGIES, INC.

Structural Engineer
Tualatin, OR

Fulcrum Technologies, Inc. in Tualatin, Oregon, designs and manufactures machine bases for vibration sensitive production tools used in the semiconductor fabrication process. Immediate opening for Structural Engineer with Civil Structural Professional Engineer license. Must have Oregon PE license (or ability to obtain within 6 months); California PE license required (or ability to obtain license within the first year); Licensing in other states through NCEES record system including but not limited to NY, AZ, TX, WA, CO. Must produce and stamp structural calculation and drawing packages for customer record and submittal to AHJ as required; perform seismic restraint anchorage analyses and calculations; proficiency with RISA structural software and Hilti Profis anchorage software, extensive knowledge and experience with Structural and Welding codes and structural, seismic analyses.

Interested? Send resume to beth.grice@fulcrum-tech.net.

SEFT CONSULTING GROUP

Structural Engineer
Beaverton, OR

SEFT Consulting Group is a growing consulting firm located in Beaverton, Oregon. SEFT offers our clients structural seismic solutions for critical buildings and lifeline infrastructure systems through expert services in seismic evaluation, performance-based design, resilience planning, and practical implementation of analytical and experimental research. SEFT is looking for an energetic entry to mid-level team member that has earned a Master's Degree or PhD in Structural Engineering and is committed to life-long learning. This position requires an individual that is passionate about structural engineering and is self-driven with the ability to work independently. Applicants must have excellent communication and interpersonal skills. SEFT offers flexible work hours, competitive salary and benefits, and opportunities for profit sharing. If you are interested in joining us, please send your resume and cover letter to info@seftconsulting.com.

WISEMAN + ROHY STRUCTURAL ENGINEERS

Structural Engineer
San Diego, CA

Wiseman + Rohy Structural Engineers is a full service Structural Engineering company with four decades of quality projects constructed around the United States. Most of these projects are in Southern California and western states. We have an opening for an engineer with over 5 years of experience in structural engineering. This position offers the opportunity to participate in challenging and unique projects in all types of commercial structures. We are looking for a highly motivated engineer to become a long-term part of this established company.

Immediate position available. Please Send Resumes to: HR@wrengineers.com.

EMPLOYMENT OPPORTUNITIES (CONT.)

KPFF PORTLAND

Structural Engineer
Portland, OR

KPFF Portland is looking for Experienced Structural Engineers who are motivated and interested in an opportunity for growth. KPFF is about freedom. Freedom to work on what inspires you. Our engineers work on a vast spectrum of projects that are located around the globe: from anchorage of mechanical systems to complex, non-linear analysis of high-rise structures. We have the benefits of a large, stable firm but none of the red tape that comes with it. Providing first-class service to our clients is what we're about. We are a group of dedicated, friendly, collaborative, hard-working professionals. Please use the appropriate link below for full details. KPFF is an equal opportunity employer.

Experienced Structural Engineer:

Apply Here:

http://chc.tbe.taleo.net/chc05/ats/careers/requisition.jsp?org=KPFF_2&cws=63&rid=73

AKANA

Structural Engineer
Portland, OR

Akana is a Native American-owned multi-discipline consulting firm with a diverse portfolio of clients and projects throughout the United States offering a wide variety of services related to buildings, infrastructure, fisheries and transit facilities. We offer a stimulating work environment and great benefits in a culture that promotes growth. Learn more about our firm at www.akana.us. Akana currently seeks Structural Engineer with minimum of 10 years of professional experience. Experience in steel, concrete, masonry and timber, and willingness to work with non-traditional building methods and structures is important. Our focus on good client service requires excellent communication and project management skills. Familiarity with seismic analysis and AutoCad drafting with Revit a plus. Engineering degree from an ABET-accredited university and registration as a Professional Engineer preferred.

CATENA CONSULTING ENGINEERS

Structural Engineer
Portland, OR

catena consulting engineers provides the personal environment of a small firm while providing the opportunity to work on a variety of projects. Our projects vary in size from a single day's effort to large projects with construction values in excess of \$300 million. You will gain design experience in concrete, steel, timber, and masonry buildings and will work on a wide variety of project types including buildings created for healing, learning, living, and interacting. Due to the technical complexity and challenge of many of our projects, we seek engineers that hold a Master's degree, and that have a desire to learn, grow, and be challenged. U.S. citizenship is preferred. We are currently seeking engineers with 0-6 years of experience in structural engineering for buildings. For a detailed advertisement and to submit your resume, visit our website <http://www.catenaengineers.com/opportunities.php>.

OMSI

1945 SE Water Ave, Portland, OR 97214

April 20th

Network/ Happy Hour: 5:30pm

Discussion & Film: 6:30pm

PLEASE JOIN US FOR THE
SCREENING OF:

DREAM BIG

Dream Big celebrates the human ingenuity behind engineering marvels big and small, and shows how engineers push the limits of innovation in unexpected and amazing ways.

Join us for a panel discussion and movie screening! Meet some of the local minds behind the projects showcased in the film:

- **Ralph Salamie, PE**, Kiewit Corporation Area Manager
- **Gray Johnson**, Oregon State University Electrical Engineering Student & member of the OSU Solar Powered Car Design Team
- **Evan Thomas, PhD, PE, MPH**, Associate Professor at Portland State University

Buy your tickets and read more [here](#).

IMAX Tickets: \$7 each. \$5 with Student ID at the door

For group tickets or questions, contact:
Courtney.Davis@kpff.com



View the preview [here](#).





ANNUAL DESIGN AND BUILD COMPETITION

TO BENEFIT OREGON FOOD BANK

CALL FOR ENTRIES

WHO

Teams of Portland Metro & SW Washington area Architects, Engineers, Contractors, Designers and Students attending Schools of Architecture, Engineering and Design.

WHEN

April 25 Kickoff Meeting, 5:30 - 6:30 pm
DOWA-IBI Group, 907 SW Stark, downtown

May 9 Deadline for Entry

September canstruction Build Out (Monday)

WHAT

Design and build structures made entirely from canned foods as a creative fundraising and teambuilding opportunity for the A/E/C community.

MAIL \$250 ENTRY FEE TO

Canstruction Portland
P.O. Box 6323
Portland, OR 97228

Payable to: Canstruction Portland

ENTRY FORM (e-mail to info@canstructionPDX.org)

Design **BUILD** Feed!

Firm _____

Contact _____ Phone _____

Address _____

E-mail _____

Teaming with Firm(s) _____

Contact _____ E-Mail _____

Contact _____ E-Mail _____

CONTACT US

Christopher Mount, **canstruction** Chair
phone: 503.891.9819
e-mail: info@canstructionPDX.org



LIKE US on Facebook
(canstruction Portland Oregon)

Learn more at canstruction.org



OREGON ACI SEMINAR MAY 2nd, 2017

TROUBLESHOOTING CONCRETE CONSTRUCTION

With: **Kim Basham, PhD, PE, FACI**



TUESDAY CROWNE PLAZA HOTEL
MAY 2ND 14811 KRUSE OAKS DR
7:00^{AM} – 4:00^{PM} LAKE OSWEGO, OR 97035

Engineers receive 6 PDH's
for Attending Seminar

Contractors receive 6 CEU's
for Attending Seminar

\$295.⁰⁰
Per Attendee

SPACE IS LIMITED TO 100 SEATS, SO BE SURE TO REGISTER EARLY!!

**TAKE
10% OFF
FOR OACI
CORPORATE
MEMBERS!**

7:00^{AM} – 7:30^{AM}

REGISTRATION

AM SESSION

7:30^{AM} – 8:00^{AM}

Continental Breakfast will be provided

8:00^{AM} – 9:15^{AM}

Evaluating Low Concrete Strength (75 min)

Field vs. Lab Cured, Evaluating Strengths, Non-destructive Testing (NDT) for Strength

9:15^{AM} – 9:30^{AM}

BREAK

9:30^{AM} – 10:30^{AM}

Troubleshooting Concrete Cracks (60 min)

Why Concrete Cracks, Intrinsic vs. Structural Cracks, Restrained-shrinkage Cracks

10:30^{AM} – 10:45^{AM}

BREAK

10:45^{AM} – 11:30^{AM}

Troubleshooting Concrete Cracks, continued (45 min)

Controlling Cracks: Concrete Shrinkage, Jointing & Reinforcement

11:30^{AM} – 12:30^{PM}

LUNCH

A Full Lunch will be provided

PM SESSION

12:30^{PM} – 1:30^{PM}

Troubleshooting Formwork and Surface Finishes (60 min)

Formwork Pressures, As-cast Finishes - Smooth Form vs. SF-1.0, SF-2.0 & SF-3.0, Imperfections vs. Defects

1:30^{PM} – 1:45^{PM}

BREAK

1:45^{PM} – 2:45^{PM}

Troubleshooting Steel-troweled Floors (60 min)

Aggregate Shadowing, Window of Finishability, Premature Finishing, Air-Entrainment, Surface Delaminations, Crusting

2:45^{PM} – 3:00^{PM}

BREAK

3:00^{PM} – 3:55^{PM}

Troubleshooting Scaling of Exterior Slabs (55 min)

Durable Concrete, Air Entrainment, Premature Finishing, Steel-troweling vs. Floating & Brooming, Overworking the Surface

3:55^{PM} – 4:00^{PM}

Closing Remarks

ABOUT THE SPEAKER:



Kim Basham, PhD, PE, FACI
KB Engineering, LLC
Senior Structural Engineer

EDUCATION

*B.S. and M.S. in Structural Engineering from
Virginia Polytechnic Institute & State University
and a Ph.D. in Civil Engineering from the
University of Wyoming.*

**SPACE IS LIMITED TO 100 SEATS,
SO BE SURE TO REGISTER EARLY!!**

ACTIVITIES AND EXPERIENCE

Dr. Basham is a member of the ACI 306 – Cold Weather Concrete Committee, ACI 302 – Concrete Floor and Slab Construction, and ACI 347 – Formwork Construction of the American Concrete Institute; American Society of Civil Engineers; The Concrete Society, American Society of Concrete Contractors; and International Concrete Repair Institute. He is a certified Trainer and Examiner for the Concrete Field Testing Technician, Concrete Flatwork Technician & Flatwork Finisher, and Concrete Lab I programs sponsored by ACI. Dr. Basham has taught structural analysis, concrete and masonry design, and concrete material courses at Virginia Military Institute, the University of Wyoming, and the University of Colorado at Denver. He has been an instructor in many concrete seminars and short courses directed towards architects, engineers, and contractors across the United States and abroad. He has published over 150 articles, coauthored *Excavation Safety* published by the Aberdeen Group, and been a contributing writer for *Concrete Contractor* magazine. Dr. Basham has also served as an expert witness in numerous litigation and arbitration cases concerning concrete construction, materials, and engineering.

Prior to KB Engineering, Dr. Basham worked as a structural engineer with Concrete Engineering Specialists LLC, Structural Services Inc. and a concrete/construction engineer with Baker Concrete Construction Inc. Prior to joining Baker, Basham was the Engineering Director for World of Concrete and Contributing Editor for *Concrete Construction* magazine. He was also the Director of Engineering for CTC-Geotek, Inc. and an Assistant Professor of Civil Engineering at the University of Wyoming and the Virginia Military Institute. Dr. Basham specializes in structural analysis, concrete design, mix designs, concrete specifications and preconstruction, formwork, shoring and reshoring, temporary structures, mass concrete placements, concrete forensic investigations, structural evaluations, condition surveys, destructive and nondestructive testing, concrete repair, concrete construction techniques, and concrete technology and research.

Please complete the registration form below (can be filled out in Adobe Acrobat or printed and completed).

Registrant Name:

Company/Organization:

Phone Number:

Email Address:

Choose Amount of Payment:

☐

\$295

Non-Member

☐

\$265.⁵⁰

(\$295 Less 10%)

OACI Corporate Member

Corporate membership: \$500 yearly fee*,
unlimited use for all members of your organization.

☐

\$265.⁵⁰

(\$295 Less 10%)

OACI Individual Member

Individual membership: \$90 yearly fee,
for personal use only.

Add-On Option:

☐

\$200

Vendor Tabletops Available

(Space is limited)

***To Register for an OACI Membership Please
Visit: www.OregonACI.org**

PAYMENT INFORMATION

Pay By Credit Card:
MAIL or EMAIL

☐

*By checking this box, you authorize the
OACI to run the credit card info below
for the total amount above.*

- OR - Pay By Check:
MAIL ONLY

☐

*Make payable
to "OACI"*

Name:
As it appears on Credit Card

Credit Card #:

Credit Card Exp Date:

3-Digit Code:
On back of Credit Card

Billing Zip Code:

Register Via Mail: with check
(made out to "OACI") or credit card
information completed, send to...

OACI
P.O. Box 2958
Vancouver, WA 98668

Register Via Email: with credit
card information attached, sent to...
oaci@comcast.net

For more information: Call **503.753.3075 or Visit **www.OregonACI.org****



Risk Management – Legal & Insurance Criteria for Engineers

Presented by the Structural Engineers Association of Oregon (SEAO) & American Council of Engineering Companies (ACEC Oregon)

Date: **Tuesday, May 9, 2017 – 8:30 AM to 4:30 PM**

Registration Opens at 7:30 AM (Lunch Included)

Cost: \$200 SEAO, ACEC Member (Includes Class Notes) \$250 Non-member
\$25 Late Fee (if registration received after May 2, 2017)
Students \$55 (Includes Notes) – Must show current student ID
No refunds after 12:00 noon Tuesday, May 2, 2017

Register early; Maximum 100 people

**Program to be Taped
by Limelight Video**

Location: **Embassy Suites** 9000 SW Washington Square Rd
Hotel and Conference Center Portland, Oregon
(503) 644-4000

Continuing Education: **SEAO has recommended this seminar for 6 PDHs (4 PDHs for Viewing Video)**

Speakers: **Mark Jacobson, PS Attorney at Law,**

Mr. Jacobson is a highly acclaimed speaker on A & E Contract Essentials, Risk Solutions and Professional Liability Risk.

Lindsey Pflugrath, Attorney, Cairn, Cross & Hempelmann

Mrs. Pflugrath's area of practice is Litigation and will be covering Legal Considerations for Design Professionals. She is the author of Small Projects Big Risks.

Brent Stewart, JD, Risk Manager, XL Catlin

Mr. Stewart is responsible for developing risk management and education materials for Architects and Engineers with the goal of minimizing the frequency of loss exposure, while focusing on best practices.

Ryan Schultz, MBA, CPCU, RPLU, ARM, Risk Management Consultant, Dealey, Renton & Associates

Mr. Schultz is responsible for developing comprehensive risk management programs for design professionals. He is a frequent speaker at industry associations on insurance risk management issues.

Summary:

Risk Management, Legal and Insurance Considerations for Engineers

This seminar will discuss contract essentials and risk solutions dos and don'ts, risk management essentials for design professionals and E&O Insurance for design professionals. It will cover risk management education materials to help minimize the frequency and severity of loss exposure and how to focus on best practices. There will be coverage that includes construction litigation, contract negotiation and various methods of conflict resolution. Claims will be discussed covering allegations of defects, cost overruns and schedule overruns as well as claims of personal injury or wrongful death against design professionals occurring on construction projects related to design/construction safety issues. There will be discussion on insurance coverage, the standard of care and contract language. They will also discuss frivolous lawsuits and the requirement for a third party expert. The statute of limitations for construction projects will also be covered along with suggestions of mistakes not to make.

Questions: Andy Stember (503) 657-9800

Risk Management – Legal & Insurance Criteria for Engineers

Registration Form

Register Online at www.seao.org or

Send to: SEAO

PO Box 2958
Vancouver, WA 98668
(503) 753-3075

Make Checks Payable to:
SEAO

Firm Name: _____

Firm Address: _____

Phone _____

Name of Attendee(s) _____

of Attendee(s) _____ @ \$200.00 / each = \$ _____

(Nonmember \$250.00)

of Late Fees _____ @ \$25.00 / each = \$ _____

of Students _____ @ \$55.00 / each = \$ _____

of Videos _____ @ \$150.00 / each = \$ _____

_____ @ \$ / each = \$ _____

Total Enclosed = \$ _____

Visa Or Mastercard (circle one)

Name (as appears on card) _____

Credit Card # _____

exp _____ Billing Zip Code _____

Cardholder Signature _____



STRUCTURAL ENGINEERS ASSOCIATION OF OREGON

9220 SW Barbur Blvd, #119, PMB #336, Portland, OR 97219

503.753.3075

www.seao.org E-mail: jane@seao.org

2017 Excellence in Structural Engineering Awards

The Structural Engineers Association of Oregon (SEAO) Excellence in Structural Engineering Awards was created to acknowledge outstanding projects and structural engineering advancement by members. The third annual SEAO Awards will be recognized as a part of the September 27, 2017 dinner meeting and awards ceremony.

Eligibility Requirements:

1. Project must have completed construction during the calendar year of 2016 or 2017.
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.
5. Each company may submit up to two projects per category (8 projects total).

SEAO Judging Criteria:

Projects will be judged by a panel of invited judges from multiple fields related to design and construction based on the following criteria:

1. Creativity of structural design
2. Complexity of design criteria
3. Ingenuity of design for efficient use of materials and construction
4. Fulfillment of client's / owner's needs or expectations
5. Suitability of the structure for its environment

Entry Instructions:

All entries must include the following:

1. Completed entry form on following page, including signature. Please enter all information as they would appear on an award.
2. Project Summary:
 - a. A written summary of the project emphasizing any outstanding accomplishments achieved and hurdles overcome during the course of the project's duration.
 - b. Two pages of text maximum, (10.5 point font minimum, 1.5 line spacing), plus one optional additional page for photos and figures at the end of the summary. Architectural renderings will not be considered and should not be included with the summary. Figures showing structural analysis or structural drafting models and details (Revit, AutoCAD, etc.) are allowed.
 - c. Summary must not include names of participating firms or project team members to allow for impartial judging. Any included names will be removed prior to judging.
 - d. Do not include any confidential or sensitive information.
3. Provide up to 15 photos (per project entry). If entry is mailed, provide a separate CD/Flash drive with all photos and figures. If entry is emailed, provide a separate Zip file attachment of .jpg images. Renderings will not be considered.
4. \$100 Entry Fee (per entry). Please make checks payable to SEAO and mail check as noted at bottom of entry form.
5. Multiple entries may be mailed together (and paid by single check). Refer to entry form for mailing address. If entries are emailed, send each entry in a separate email to the email address provided at the bottom of the entry form.
6. All entries shall become the sole property of SEAO. SEAO reserves the right to use or publish some or all entry material in publications. By entering, the Entrant grants a royalty-free license to SEAO to use any copyrighted material submitted. Such right includes publication of photographs and names of award recipients without compensation to Entrants.
7. **Submissions must be post-marked or emailed by June 30, 2017.**



STRUCTURAL ENGINEERS ASSOCIATION OF OREGON

9220 SW Barbur Blvd, #119, PMB #336, Portland, OR 97219

503.753.3075

www.seao.org E-mail: jane@seao.org

2017 Excellence in Structural Engineering Award Entry Form

Project Information:

Project Name:

This project is to be judged under the following category (select **one**):

New Buildings Under \$10M

Renovation / Retrofit

New Buildings Over \$10M

Special Use Structures

**Note: The SEAO Awards Committee reserves the right to transfer projects into a different category as it sees fit*

Project Location: City:

State:

Total Construction Budget:

Completion Date:

Entering Firm: (contact must be a current member of SEAO)

Please complete all sections of the form below. This information may be used for publicity purposes.

Firm Name:

Address:

City:

State:

Zip:

SEAO Contact Name:

Contact Email:

Phone:

By signing below, I accept responsibility for any issues regarding project confidentiality agreements.

→ **Signature:**

Involved Entities:

Owner/Developer:

General Contractor:

Architectural Firm:

Geotechnical Firm:

Civil Firm:

MEP Firm:

Other:

Role:

Submission Checklist:

Entry Form

Project Summary (see entry instructions)

CD/flash drive for mailed entries or separate email
attachment w/up to 15 photos/images

Check for \$100 per entry made payable to SEAO

Mail all materials to:

SEAO Awards

Structural Engineers Association of Oregon

9220 SW Barbur Blvd, #119, PMB #336

Portland, OR 97219

Or Email all materials (10 MB maximum
per email) to:

seao.excellence.awards@gmail.com

Submissions Must Be Post-Marked or Emailed By June 30, 2017

2017

SEAO / OACI

GOLF TOURNAMENT



**\$20,000
HOLE IN ONE
PRIZE!**

JULY 19TH, 2017
The Reserve
Vineyards & Golf Course
1:00 PM - SHOTGUN START!

EVENT DETAILS:

The S.E.A.O. and O.A.C.I. have joined together to hold another day of golf, fun and prizes for 2017! We've selected a brand new location for this year's tournament, the Reserve's North Course in Aloha, just outside of Hillsboro, OR!

Designed by the award-winning Bob Cupp, the Reserve's North Course is a more expansive, open air course that captures a lot of Oregon's low land landscapes, including the rolling hills of the valleys, and grassy coastal dunes. Measuring up to 6,845 yards, this par-72 course will be an excellent new location for the tournament and our players.

Per usual, we will have a shotgun start at 1pm, and capping the evening with dinner, beverages, and prizes for participants and their teams.

We look forward to seeing everyone come out again for our annual golf tournament, and are confident this will be the best one yet!

WHEN:

DATE: Wednesday, July 19th
 SHOTGUN START: 1:00PM
 SOCIAL HOUR: 6:00PM
 DINNER & AWARDS: 6:30-7:30PM

TOURNAMENT:

4-Person Scrambles

CONTACT:

Jane Ellsworth
 ph: (503) 753-3075
 em: jane@seao.org

Don't forget to bring money for the raffle prizes and string! This year's raffle prizes will be:

- 42" TV
- Apple Watch
- Nike Wedge
- Ocean Tuna Fishing Trip for 2
- Power Washer
- YETI Cooler
- Gift Cards
- Much more!

WHERE:

The Reserve (North Course)
 4805 SW 229th Ave.
 Aloha, OR 97007
 Phone: (503) 649-8191

DINNER:

A barbecue dinner, cosponsored by **RAMJACK** will be served after the tournament.

FEES:

Golf & Dinner: \$125/person
 (Includes golf cart & driving range)
SEAO Young Members Forum: \$85
Mulligan: \$5/ea

Appropriate "Country Club" attire is required:

- Collared Shirts
- No Denim
- Shorts must have a 6" inseam
- Soft spikes only

NO REFUNDS FOR CANCELLATIONS AFTER JUNE 28th

**PLEASE RETURN
THIS ENTRY FORM
BY JUNE 28th TO:**

S.E.A.O.

9220 SW Barbur Blvd. #119

PMB #336

Portland, OR 97219

(503) 753-3075 Phone

(503) 214-8142 Fax

Player Names

Green Fees

Membership

Payment Enclosed

☐ Golf & Dinner - \$125 ☐ SEAO ☐ OACI \$_____

☐ Golf & Dinner - \$125 ☐ SEAO ☐ OACI \$_____

☐ Golf & Dinner - \$125 ☐ SEAO ☐ OACI \$_____

☐ Golf & Dinner - \$125 ☐ SEAO ☐ OACI \$_____

Included: 1 (one) five-foot string per group.

Mulligan Add-Ons (1 Mulligan = 1 Shot Per Person)

☐ **Check Enclosed**

☐ Mulligans - \$5 ea (Limit 5 Per Foursome) _____ Qty \$_____

☐ **VISA / ☐ MasterCard / ☐ AMEX Accepted**

Total \$_____

Name On Card: _____ **Card #:** _____ **Exp. Date:** _____

Contact Number: _____ **Billing Zip Code:** _____ **3-Digit Code On Back Of Card:** _____

2017 SEAO / OACI GOLF TOURNAMENT



JULY 19TH, 2017
1^{PM} Shotgun Start
The Reserve
Vineyards and Golf Course

Contact Info:
Jane Ellsworth
(503) 753-3075
oaci@comcast.net

SPONSORSHIP FORM

Company Name: _____

Contact Name: _____

Phone: _____ Fax: _____

Email: _____

HOLE SPONSORSHIP *(choose any or all of the following)*

- | | | |
|---|---|--|
| <input type="checkbox"/> CORE SPONSORSHIP - \$250
Comes with individual tee signage, recognition on signage/banners at both the dinner and driving range. | <input type="checkbox"/> PREMIUM SPONSORSHIP - \$1,000
Complete setup at the tee of one of two available, 3-par holes. Will include recognition from SEAO/OACI at the dinner. | <input type="checkbox"/> PLATINUM SPONSORSHIP - \$3,000
Join RAMJACK in sponsoring the barbecue dinner to be hosted on site after the tournament. Includes separate recognition from SEAO/OACI at the dinner. |
|---|---|--|

WE THANK YOU FOR YOUR SUPPORT!

If you or your company would like to sponsor more than the above hole sponsorships, please check any of the additional sponsorship items below, or the option to sponsor/donate your own raffle prize:

RAFFLE PRIZE SPONSORSHIPS

- ☐ 42" TV | \$600
- ☐ Apple Watch | \$400
- ☐ Garmin GPS Golf Wawtch | \$200
- ☐ Traeger Grill | \$600
- ☐ Ocean Tuna Fishing Trip for 2 | \$600
- ☐ YETI 65 Cooler | \$400
- ☐ iFly Gift Card | \$90
- ☐ Top Golf Gift Card | \$150
- ☐ Power Washer | \$500
- ☐ Escape Room for Four | \$120

SPECIAL SPONSORSHIPS

- ☐ LD/KP/Long Putt Hole Sponsor
\$150
- ☐ On Course Drink Refreshment Sponsor
\$400 *(Host drink cart for one beverage per participant to be redeemed during play)*
- ☐ Tee Off Sponsor
\$250 *(Host keg of Micro-brew)*
- ☐ 19th Hole Sponsor
\$250 *(Host keg of Micro-brew)*
- ☐ Golf Cart Sponsor
\$200 *(Host the golf carts with a sign in each cart with your company name)*
- ☐ Scorecard Sponsor
\$200 *(Host the scorecards with the name of your company on each card)*

Would you like to sponsor/donate your own raffle prize? (ex: Mariner's seats, Blazers seats, etc)

☐ NO ☐ YES, Please describe below:

☐ Check Enclosed

☐ VISA / ☐ MasterCard / ☐ AMEX Accepted

Name On Card: _____ Card #: _____ Exp. Date: _____

Contact Number: _____ Billing Zip Code: _____ 3-Digit Code On Back Of Card: _____

Please Return This Form A.S.A.P. to:

S.E.A.O.
9220 SW Barbur Blvd., Suite #119, PMB #336
Portland, OR 97219
Email: oaci@comcast.net

Total \$ _____