



Newsletter of the
Structural Engineers
Association of Oregon

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SEAO has a twitter
account and can be
followed at
[@SEAOregon](https://twitter.com/SEAOregon).



CONNECTIONS

In Brief

March 2016 Volume 16 Issue 5

Upcoming SEAO Meetings and Events:

Thursday, March 24, 2016: YMF Happy Hour

Location: TBD

Time: 5:30 pm to 7:30 pm

See Page 5 for additional YMF information.

Tuesday, April 12, 2016: Oregon Concrete Show and Job Fair

Location: Portland Expo Center

Time: 10:00 am to 7:00 pm

Page 8 for additional information.

Wednesday, April 27, 2016: SEAO Lunch Meeting

Topic: Deep Foundation Systems

Speakers: Manuel Castañeda, PLI Systems Inc.

Location: Sentinel Hotel, 614 Southwest 11th Avenue, Portland, OR

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

PDH Credit: 1 hour

Look for additional information in April's newsletter.

Wednesday, July 27, 2016: SEAO/OACI Golf Tournament

Location: Pumpkin Ridge Golf Club

See Page 10 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.

Send membership inquiries to:
9220 SW Barbur Blvd.
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Portland, OR 97219

ENGINEERS WEEK SUMMARY

BY: DAVE BEH

COMMITTEE CHAIR: MICHELLE JUAREZ

Engineers Week is an annual event which was held this year on February 25, 2016 at the Double Tree Hotel in Portland. Hundreds of high school students participated in the event designed to encourage students to pursue and learn about careers in engineering. SEAO was a Silver Sponsor and sent ambassadors to help answer questions about the exciting career of structural engineering.

SEAO member Dave Beh of Nishkian Dean was seated with students from Vancouver iTech Preparatory High School. He noted that "the students were very interested in engineering and seemed particularly receptive to the challenges and rewards of structural engineering."

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Students chose a facility to tour from a range of options including Boeing, OHSU Biomedical Engineering, Vestas Wind Systems, and Biontronik. After their chosen field trips, students headed to Double Tree Hotel Lloyd Center for exhibits and a banquet. The Keynote speech, given by Dr. Daniele Lantagne of Tufts University, was titled

"Testing and Evaluating Water, Sanitation and Hygiene Interventions for Reducing Infectious Disease in Developing Countries and Emergencies".

The volunteers from SEAO each had encouraging and hopeful interactions with several students from a variety of backgrounds. The next generation of engineers is bright, eager, and full of potential and thirst for developing creative solutions for the next generation of challenges!



Students at the Engineers Week Banquet

SEAO COMMITTEES

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Phillip Davis—
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CONTINUING EDUCATION COMMITTEE

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SEAO AWARDS COMMITTEE UPDATE

BY: *BRYNN ADKINS*

SAVE THE DATE – This year's Excellence in Structural Engineering Awards will take place at the September dinner meeting. Projects will be judged on innovative design, engineering achievement, and creativity and awards will be presented in the following categories:

Submission Categories:

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

Eligibility Requirements:

1. Project must have been completed during the calendar year of 2015 or 2016.
2. At least one member of the design team must be a member of SEAO.
3. Entries are not limited to any size, type or location.
4. Projects may be submitted into one category only.

Each company may submit up to two projects per category (8 project total).

*For questions regarding submission categories or eligibility requirements, contact brynn@wdyi.com

Entering firms are required to provide a written summary of the project emphasizing the major aspects of the project, photos highlighting the project during and after construction, and any other pertinent information or documents that will aid in the judging process.

Applications will be available in the May SEAO newsletter and the deadline for submissions is June 30, 2016.

Want to get involved? The Awards Committee is looking for new members. Email brynn@wdyi.com for details.

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.

CANSTRUCTION



Over 1,000,000 meals raised by Canstruction Portland!

This is what the design community of Portland has donated to fight hunger in the metropolitan area over the last 19 years. Yet, we are not done! Our community has an on-going need. Oregon Food Bank serves 270,000 people in need 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. Our structures dramatically illustrate the volume of need: just imagine one CANstructure consisting of 5,000 cans, will feed 70 families for 4 days.

Great designers are inspired; they understand the scope of the demands; they use quality materials; they budget well. We use these tools every day, the same tools needed for building a great CANstructure to visually exemplify the tremendous need. Canstruction is intriguing, anyone can stack cans—they are like big Legos; it's fun for the whole family!



You are invited to take a role in raising funds and food for Oregon Food Bank. CANstructure's have the unique ability to reach the community-at-large visually inspiring public awareness.

Join the some 95 firms who have teamed-up to build 153 structures over the past 19 years in the on-going effort to stamp out hunger in Oregon!

See our Call For Entry or contact us at canstruction.portland@gmail.com

Design **BUILD** Feed!

Your Canstruction Committee

For more information, see page 11.

SEISMIC EVENTS

ASCE Webinars

Thursday, March 24, 2016, 8:30 AM – 10:00 AM PST. [Design of Lateral Load Resisting Systems in Masonry Buildings.](#)

Tuesday, April 26, 2016, 9:00 AM – 10:00 AM PST. [Seismic Design of Curtain Wall Systems.](#)

ATC Council Webinars

Wednesday, March 23, 2016, 12:00 PM – 1:30 PM PST. [NETAP Webinar: FEMA P-50 and P-50-1 – Simplified Seismic Assessment and Retrofit Guidelines for Detached, Single-Family, Wood-Frame Dwellings.](#)

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.

YOUNG MEMBER FORUM ACTIVITIES

BY: PHILLIP DAVIS

Upcoming YMF Events:

Thursday March 24th – YMF Happy Hour

Location: TBD

Time: 5:30-7:30

Bring a friend or coworker and get to know some other young professionals in the area over food and drinks. Happy hour food provided by SEAO.

YMF Website Info:

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

Please visit our website for more information on YMF events and information.

NEW MEMBERS

The newest members to join SEAO are:

Glenn Koester – NSEG

David King – Pillar Consulting Group

Chris Pangelinan – ACI Engineers

Welcome New Members!!

NEW FISHCAMP RAFFLE FOR YMF!

In the past, a raffle has been held each year for several at-large spots for the SEAO Fishcamp retreat held each fall (early October). This year the board has decided there will be a separate raffle for YMF members. Raffle tickets are earned by attending SEAO meetings and seminars throughout the year with the drawing held around May. This trip is a lot of fun and a great networking opportunity, especially for young engineers.

SATURDAY ACADEMY



Saturday Academy's Apprenticeships in Science and Engineering program is going into our 27th year of connecting committed, creative high school students with full-time summer internships in science and engineering fields. We are excited to work with SEAO member companies to offer more internships to students from Oregon and Southwest Washington.

Each mentor designs the internships that advance their organizational goals, and rank candidates who apply for the position. ASE supports the internship over the summer, including processes like liability and school credit. The application process is competitive, with nearly 700 applicants for 161 positions; mentors are able to select for students with CAD or other design experience, programming and coding skills, and experience in specific areas such as robotics.

While ASE interns do join large companies and institutions such as the Bonneville Power Administration, Hewlett-Packard, and Mead & Hunt, we also value partnerships with smaller and emerging organizations. Regardless of size, all mentor organizations identify a project (or series of projects) through which interns can advance institutional goals via research, field work, product development, etc.

- Interns and mentors commit to eight full-time weeks over the course of the summer; mentors set the final schedule.
- Interns can work on a single project or on a series of related projects; the goal is that they have an opportunity to learn and gain early professional experience while making measurable contributions to a mentor's work.
- In addition to your goals and deliverables, each ASE intern develops an oral and a poster presentation for the end of summer Symposium.
- There is typically a \$3,200 program fee for the 296 hour internship. This includes a stipend to the intern, insurance and liability, travel to two ASE conferences, and the staff time for recruitment and support.

To submit a proposal:

<https://fs2.formsite.com/saturdayacademy/form529489916/index.html>

IBC CODE INFORMATION

EXCERPT FROM 2012 IBC HANDBOOK

Section 1910 *Shotcrete*

This section contains provisions very similar to those in Section 1911 of the BOCA/NBC, Section 1924 of the UBC, and Section 1915 of the SBC (latest editions). BOCA and SBCCI published commentaries on their shotcrete provisions, from which the material here is largely drawn.

General. Shotcrete is pneumatically projected concrete or mortar. Other terms such as spraycrete, sprayed concrete, and gunite are also associated with shotcrete construction. Shotcrete needs to conform to Chapter 19 requirements for plain or reinforced concrete, unless specifically exempted by Section 1910.

Proportions and materials. Proportions of shotcrete mixtures should be determined prior to the beginning of construction by trial applications on test specimens. The test specimens should be representative of the in-place application (flat, vertical, overhead), and the shotcrete should be applied using the same materials and equipment that will be used for construction.

Aggregate. For construction applications in which the shotcrete will be several inches thick, coarse aggregate may be used in the mixture. In those cases, the aggregate size is limited to 3/4 inch, to minimize the effects of rebounding during placement and the creation of voids in the shotcrete. Rebound refers to shotcrete that ricochets off the receiving surface. See Section 1910.6.

Reinforcement. The size and the spacing of the reinforcement are required to be such as to minimize interference with the high-velocity placement of the shotcrete and to ensure that the reinforcement is completely covered. The clearance between the form and the reinforcement may vary depending on whether concrete or mortar is used for the shotcrete. The use of reinforcing bars or welded wire reinforcement can also affect the minimum clearance from the form. The exception allowing reduction of required clearances, subject to approval of the building official and preconstruction testing, should be noted. Noncontact lap splices are preferred, to minimize the creation of weak sections in the shotcrete. Where possible, at least 2 inches should separate lapped bars. Welded wire reinforcement should be lapped by one square in all directions. When adequate encasement can be shown, contact lap splices are permitted with the approval of the building official.

Preconstruction tests. The preconstruction tests provided for in this section are at the discretion of the building official. They were part of the UBC provisions, but not part of the BOCA/NBC or the SBC provisions. The requirements are quite explicit and self-explanatory.

Rebound. As mentioned earlier, rebound is shotcrete that ricochets off the receiving surface. The position of the work (flat, vertical, or overhead), layer thickness, discharge pressure, cement content, water content, size and gradation of aggregate, and type and amount of reinforcement can affect the amount of rebounding that occurs. Rebounded material may not be reused or worked back into the construction and must be removed from the surface prior to placement of additional layers of shotcrete.

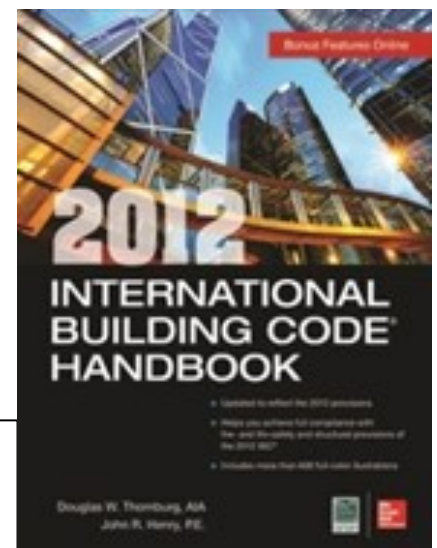
Joints. Construction joints are generally tapered to a thin edge over a width of approximately 12 inches. Square construction joints should be avoided, except as specifically permitted by this section.

Damage. After placement, any shotcrete that lacks uniformity or that exhibits segregation, honeycombing, or delamination, or which contains dry patches, slugs, voids, or sand pockets (porous areas low in cement content), or that sags or sloughs must be removed and replaced.

Curing. As in most construction involving cementitious materials, proper curing practices need to be followed from the time of completion of the shotcrete application, as outlined in this section.

Strength tests. The BOCA/NBC and the SBC required strength tests of shotcrete to be made in accordance with the quality assurance provisions of ACI 506.2. Test specimens were required to be obtained from the in-place shotcrete or from a test panel that was representative of the work, and tested in accordance with ASTM C 42, *Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete*. The IBC, like the UBC, spells out strength test provisions, including sampling requirements and acceptance criteria.

This excerpt is from the 2012 International Building Code Handbook, authored by John Henry, PE and Doug Thornburg, AIA. The book is available at iccsafe.org/store. Use ID # 4000S12.



EMPLOYMENT OPPORTUNITIES

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 5 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.

LEWIS & VAN VLEET INC. ENGINEERS

**Structural Engineer
Tualatin, OR**

Lewis & Van Vleet Inc. Engineers, located in Tualatin, Oregon is seeking licensed applicants with 2 plus years of experience in structural design and project management. At LVI, you will experience the benefits of a small firm along with a wide diversity and scale of engineering work. Our projects include commercial, office, industrial, educational, hospitals and medical offices, emergency response, multi-family, senior housing, and seismic studies, in addition to design of structural components and other smaller projects. You should have experience designing with a variety of building materials, as our work is diverse.

We offer a casual work environment, paid time off and flexible work hours and full benefits. Pay negotiable depending on experience. To apply, please submit a cover letter with goals to gilewis@lvvi.com, along with a resume and references.

KPFF CONSULTING ENGINEERS

**Experienced Structural Engineers and
Entry-Level Structural Engineers**

KPFF Portland is looking for Experienced and Entry-Level 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. We are looking for exceptional engineers to join us. 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

Entry-Level Structural Engineer Apply Here: http://chc.tbe.taleo.net/chc05/ats/careers/requisition.jsp?org=KPFF_2&cws=63&rid=151

HOLMES CULLEY

**Structural Engineer
San Francisco and Los Angeles, CA**

Holmes Culley is a California based structural engineering firm dedicated to providing quality service and creative design solutions. As part of the New Zealand based Holmes Group, we are an international practice with over 300 professionals in six offices, providing engineering expertise to clients along the West Coast and throughout the Pacific Region. We are seeking structural engineers with 5+ years design experience for both our San Francisco and Los Angeles offices; M.S. degree in Structural Engineering and PE license are preferred.

Check us out at www.holmesculley.com and send your resume with cover letter to hr@holmesculley.com.

With Thanks to Our Sponsors:



2016 OREGON CONCRETE SHOW & JOB FAIR

**FEATURING CONCRETE
& MASONRY:**

**Distributors, Manufacturers,
Contractors & Ready-Mix Producers**

WIN \$500!
**HERE'S HOW TO ENTER
FOR YOUR CHANCE AT
A \$500 CASH PRIZE!**



- 1) Have the referring exhibitor for the show complete their portion at the bottom of the form below.
- 2) Complete the "Attendee" portion with your information.
- 3) Submit flyer to the OACI booth on the day of the show.

ATTENDEE

Full Name _____

Company _____

Phone # _____

Email _____

EXHIBITOR

Full Name _____

Company _____

Phone # _____

Random drawing will be held by OACI. Winners will be contacted on or before Tuesday, April 19th, 2016. Only 1 (one) \$500 prize available for the drawn/winning attendee, with matching prize for referring exhibitor. Prize winners must be able to receive prize in person at a Portland Metro location specified by OACI. Prizes must be claimed within 30 days from notice of award. Must be 21 years of age or older to enter. Only 1 (one) entry per attendee.

2016 OREGON CONCRETE SHOW & JOB FAIR



April 12th 2016
Portland Expo Center
Portland, OR
10:00^{am} - 7:00^{pm}

PORTLAND EXPO CENTER
2060 N Marine Dr, Portland, OR 97217
<http://www.oregonconcreteshow.com>



2016 OREGON CONCRETE SHOW & JOB FAIR

**No General Admission
Charge At The Door...**

ATTENDANCE IS FREE!*

On April 12th 2016, the Oregon Chapter of the American Concrete Institute (OACI), along with a number of Northwest Sponsors will be hosting the 2016 Oregon Concrete Show and Job Fair for one day only.

We're inviting you to be a part of this incredible event for members of the Concrete and Masonry industry. Whether you or your business is looking to advertise services, showcase products, seek new customers and employees, or you are looking for employment in the industry by participation in the job fair, the 2016 Oregon Concrete Show and Job Fair is for you.

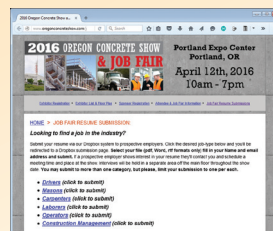
**Portland Expo Center has a nominal daily parking fee.*

**ARE YOU SEEKING
EMPLOYMENT AS A:
Mason, Carpenter, Laborer,
Driver, Operator or
Construction Manager?**

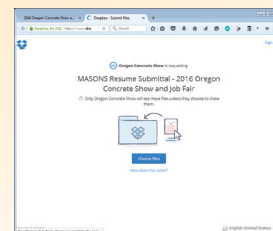
**Then Be Sure To Participate
In The Job Fair At The Show!**

A number of concrete and masonry industry leaders in the Pacific Northwest are looking to meet and interview new applicants at the show. Just submit your resume online, and potential employers will contact you to schedule a meeting time and location within the Portland Expo Center on April 12th, 2016!

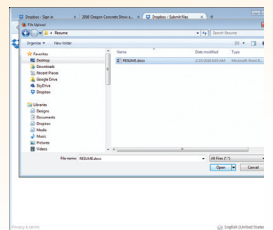
<http://jobs.oregonconcreteshow.com>



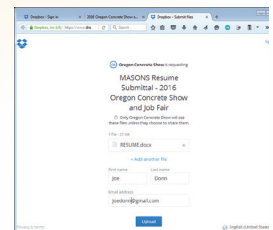
1) Select your desired job type



2) Click the upload button



3) Select your resume file (Word, .rtf, Acrobat, or .txt)



4) Enter your First name, Last name, email address (all required) and upload

FREE SEMINARS

Beginning at 12pm
Last Seminar at 6pm

**PDHs &
CEUs Will Be
Available!**

**12pm Top 10 Myths
in Concrete
Construction**

With: Michelle Wilson, FACI

2pm New Approach To Freeze Thaw
With: Jason Weiss

4pm ACI Repair Code:
Introduction to ACI 562-13, "Code Requirements for Evaluation, Repair, and Rehabilitation of Concrete Buildings and Commentary"
With: Khaled Nahlawi, Phd, PE

6pm Concrete Mix Design
With: Michelle Wilson, FACI

Michelle Wilson, FACI, Director of Concrete Technology at the Portland Cement Association. 15 years of experience relating to concrete materials, specifications, performance, troubleshooting and repair. Previously worked for Construction Technology Laboratories. Holds a B.S. in Architectural Engineering from Milwaukee School of Engineering.

Jason Weiss is the Miles Lowell and Margaret Watt Edwards Distinguished Chair in Engineering and the Director of the Kiewit Center for Infrastructure and Transportation Research. Oregon State head of the school of Civil and Construction engineering. Previously, Jack and Kay Hockema Professor of Civil Engineering and Director of the Pankow Materials Laboratory at Purdue University. B.A.E. from Penn State and MS and Phd from Northwestern.

Khaled Nahlawi, Phd, PE, Senior Engineer with the American Concrete Institute. PhD from University of Michigan. Over 20 years of experience in the design and strengthening of structures.

2016 SEAO / OACI GOLF TOURNAMENT



JULY 27TH, 2016
Pumpkin Ridge Golf Club

Contact Info:

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

Donation / Hole Sponsor Form

Sponsor Information:

Company Name: _____

Contact Name: _____

Phone: _____ Fax: _____

Email: _____

HOLE SPONSORSHIP

☐ **GOLD** - \$250 for individual banner at the hole and recognition on banner at dinner.

☐ **SILVER** - \$200 for tee sign stationed driving range before golf and recognition on banner at dinner.

☐ **BRONZE** - \$175 recognition on banner at 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

☐ Gift Cards | \$50 & \$100

☐ Ocean Tuna Fishing Trip for 2 | \$600

☐ Restaurant Gift Cards | \$300

☐ Yeti 65 Cooler | \$400

☐ Nike Wedge | \$100

☐ Power Washer | \$500

Would you like to sponsor/donate your own raffle prize?

☐ NO ☐ YES, Please describe below:

SPECIAL SPONSORSHIPS

☐ LD/KP/Long Putt Hole Sponsor
\$150

☐ On Course Drink Refreshment Sponsor
\$375
(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)

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



CALL FOR ENTRIES



Teams of Portland area Architects, Engineers,
Contractors and Designers.

WHEN

April 19 **Kickoff Meeting, 5:30 - 6:30 pm**
DOWA-IBI Group, 907 SW Stark

April 29	Deadline for Entry
September 12	Structure Build Out (Monday)
September 18	de-construction

CONTACT US

Christopher Mount, **can**struction Chair
503.891.9819 canstruction.portland@gmail.com

WHAT

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

In conjunction with SDA Portland Chapter

Learn more at canstruction.org



Design **BUILD** Feed!



LIKE US on Facebook
(canstruction Portland Oregon)



2016 Western States Roundup – NW SEA Conference

Schedule of Events

Wednesday 8/3

The Element Hotel in Downtown Bozeman

1 – 5 pm: Western States and NW Delegate Meetings

5 pm – 8 pm: Welcome Reception



Thursday 8/4 & Friday 8/5

Montana State University Ballrooms

8:30 am - 5 pm : Breakfast – Lunch – Vendors – Seminars!

Thursday 6 pm – 9 pm: Key Note Speaker Dinner, Bobcat Stadium Skybox (TBD)

9pm – 12pm: Music on Main Street, Downtown Bozeman!

Friday 6 pm – 10 pm: BBQ Dinner – Music – Views – Fun! (Location TBD)

Saturday 8/6 – Fly Fishing, Rafting, Picnic – Sweet Pea Arts Festival, Yellowstone Park... TBD.

Registration Information Coming Soon... look for announcements!



Serving Arizona Structural
Engineers since 1966

SEE NEXT PAGE FOR CONFERENCE SCHEDULE AND REGISTRATION RATES

SEAoA 50th Anniversary Convention And Conference

June 16-18, 2016

Attendee Registration Information

REGISTER ONLINE at <http://www.seaoa.org>



WE-KO-PA RESORT & CONFERENCE CENTER 10438 NORTH FORT MCDOWELL ROAD • SCOTTSDALE/FOUNTAIN HILLS, AZ 85264 PHONE: (480) 789-5300

SEMINAR TOPICS (9.0 PROFESSIONAL DEVELOPMENT HOURS)

The Future of Structural Engineering—Ashraf Habibullah, President/
CEO, Computers and Structures, Inc.

OdySEA Aquarium (Scottsdale, AZ) — Daniel Van Cuyk, P.E., CTS
Consulting Structural Engineers

Steel Moment Frame Testing, How and Why? - Ryan E. Smith, P.E.,
S.E.; SidePlate Systems

Post-Tensioned Concrete Design of Two Way Slab Systems—Bryan
Allred, S.E., Seneca Structural Engineering

Design Considerations for Mid-Rise Wood Structures—Terry Malone,
P.E., S.E.



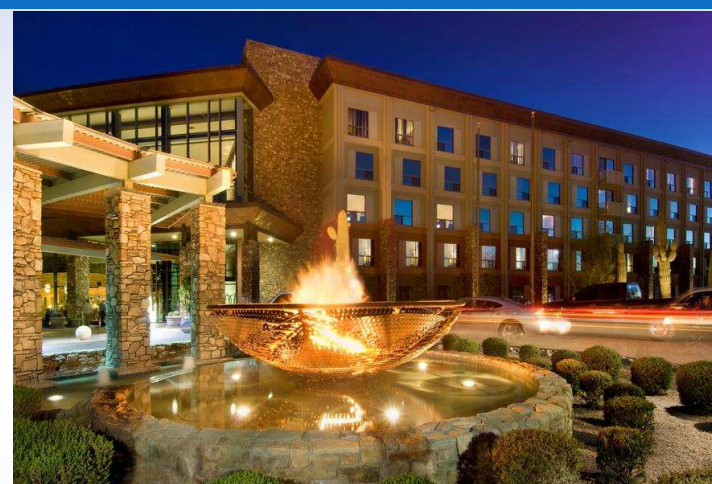
**3D Printed Structures: Challenges and
Opportunities** — Caitlin T. Mueller, PhD,
Massachusetts Institute of Technology

Vibrations of Concrete Floors — Mike Mota, PhD,
PE, SECB, Concrete Reinforcing and Steel Institute

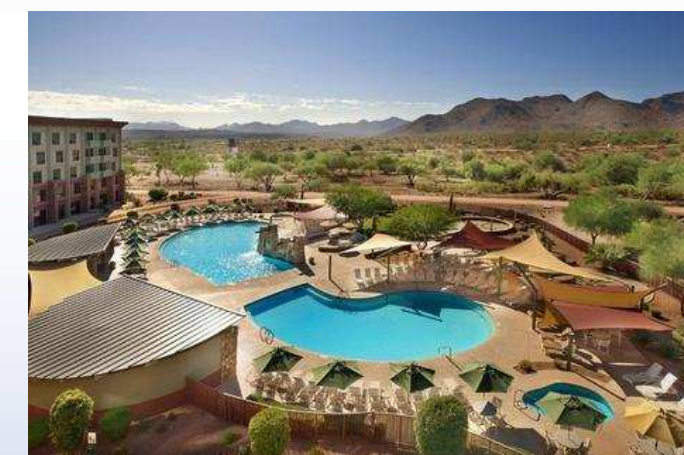
Design of Shelf Angles for Masonry Veneers—W. Mark McGinley, Ph.
D PE, FASTM; University of Louisville, Arizona Masonry Guild

2015 NDS Design Specification — Michelle Kam-Biron, P.E., S.E.,
SECB

**Innovation in Lateral Force Resisting Systems: Viscous Dampers in
Light Frame Wood Construction** — Jesse Karns, P.E., S.E. ; MiTek USA



- Exhibitor Trade Show and Welcome Reception
- SEAoA Excellence Awards



- Raffle Prizes for Attendees
- Commemorative Gift
- A Relaxing Resort Atmosphere

SEAoA 50th Anniversary MAIN EVENT

Sponsored by

Computers and Structures

Friday Evening June 17th, 6-9pm

Food, Entertainment and Homage



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SEAoA 50th Anniversary Convention And Conference

June 16-18, 2016

Attendee Registration Information

REGISTER ONLINE at <http://www.seaoa.org>

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2016 REGISTRATION RATES				CONVENTION AND CONFERENCE SCHEDULE		
Thursday Afternoon and Friday Sessions (9.0 PDHs)	Registration Period	Member Rates	Non-Member Rates	Thursday June 16th 8:00 AM—12 Noon <i>1/2 Day Seminar - Separate Registration Required—See Website for Topic</i> 1:00 PM Convention Opening Remarks 1:30pm—5:00pm Post-Tensioned Two Way Slabs <u>OR</u> Mid-Rise Wood Structures Vibrations of Concrete Floors <u>OR</u> 2015 NDS Design Specification		
	Pre-Registration Registrations through March 21st	\$210	\$250	Friday June 17th 7:30am—Breakfast 8:00am—8:15am Opening Remarks/Housekeeping 8:15—11:45am Steel Moment Frame Testing <u>OR</u> Shelf Angles for Masonry Veneers OdySEA Aquarium Presentation 11:45-1:30pm Lunch Presentation <i>SEAoA Excellence Awards Presentation</i>		
	Early Registration March 22nd—May 9th	\$225	\$275	Friday Evening 3:30—5:00pm SPECIAL PRESENTATION The Future Of Structural Engineering - Asharf Habibullah 6:00-9:00pm SEAoA 50th Anniversary MAIN EVENT Sponsored by Computers and Structures, Inc. and Asharaf Habibullah 6:00—Complimentary Cocktail Hour ~6:30—Dinner Service ~ 7:30 Honoring SEAoA's Past ~ 8:00 Entertainment -To Be Announced Saturday Seminar 8am –3pm <i>Separate Registration</i> <i>See Website for Topic and Details</i>		
	Standard Registration May 10th — June 10th	\$275	\$325			
	Bring-A-Colleague Combo Rate May 10th—June 10th	\$225 Each Person	\$275 Each Person			
	LATE or Walk-In Registrations After June 10th		\$375			
	Students VALID ID REQUIRED Registrations through June 10th		\$25 (fee waived if sponsored by a Chapter)			
	Companion Registration Anytime		\$150			
	Thursday Morning Session Till June 10th LATE/Walk-In Registration After June 10th Separate Registration on Website (4.0 PDHs)	\$75 \$100	\$100 \$125	5:00pm—7:30pm Exhibitor Trade Show Minute-to-Win-It Competition Watch our exhibitors and sponsors compete for your votes		
	Saturday Session Till June 10th LATE/Walk-In Registration After June 10th Separate Registration on Website (6.0 PDHs)	\$125 \$175	\$150 \$200			
Join SEAoA now for member rates and membership through July 2017 Email us directly for these offers at info@seaoa.org				\$99 Hotel Rate Rate Valid June 13th to June 20th Book by phone using code SEAoA or through the link below to received our guaranteed lowest negotiated rate with no resort fees: https://bookings.ihotelier.com/bookings.jsp?groupID=1550189&hotelID=96432 BOOK EARLY Rooms are limited and this rate may not be available after May 16th.		