



# CONNECTIONS

April 2016 Volume 16 Issue 6

Newsletter of the  
Structural Engineers  
Association of Oregon

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## Upcoming SEAO Meetings and Events:

### 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  
See Page 3 for additional information.

### Thursday, April 28, 2016: YMF Happy Hour

Location: Green Dragon  
Time: 5:30 pm to 7:30 pm  
See Page 5 for additional YMF information.

### Tuesday, May 17, 2016: Spring Seminar

Topic: Founding Structures on Shallow and Deep Foundations  
Location: Embassy Suites Hotel and Conference Center, Portland, OR  
Time: 8:30am to 4:30pm  
PDH Credit: 6  
See Pages 8 to 10 for additional information.

### Wednesday, May 25, 2016: SEAO/SEI Joint Dinner Meeting

Location: Kells, 112 SW 2nd Ave, Portland, OR  
Time: 5pm social, 6pm program  
PDH Credit: 1 hour  
Look for additional information in May's newsletter.

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

Location: Pumpkin Ridge Golf Club  
See Page 13 for additional information.

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



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: ENCOURAGING POTENTIAL ENGINEERS

BY: GARY J. LEWIS, S.E.



One of my daughters recently called to talk about going back to college to pursue a new career. She has a gift for

mathematics, and had started out after high school at PSU pursuing a major in Mathematics and a minor in Spanish, with the laudable goal of eventually teaching math in a South American country. As time went on and her student loans mounted, she had second thoughts and went to work as a store manager instead. That work eventually took her to Philadelphia (I miss her), where she manages a piercing studio in the downtown area. She has recently grown unhappy in her job, as her friends have all moved on to other jobs and the store lost its social aspect for her.

She arranged to call me on the weekend to talk about her options. I have always encouraged both of my daughters to be aware of professions they might think would be better for them, but that is easier to advise than to do. My "math" daughter is in her late twenties, and I have not pushed her to enter the engineering fields, or even suggested that before, but I broached the subject in our conversation and she was receptive. There are now so many bright young women engineers in SEAO compared to even ten years ago, and I have been very impressed with the leadership and skills they represent. I would be proud to have my daughter in our profession, and I believe that she

would enjoy Structural or another branch of engineering and would excel in it.

That brings me to the point of this message. Many of our member firms (including ours) have been trying to hire new engineers lately, with mixed results. It seems that we have a "feast or famine" situation with the availability of employees, based on the boom and bust construction economy. What shall we do to encourage young people to enter the structural engineering profession so we can continue to train our eventual replacements? The SEAO Scholarship Fund does help offset the cost of education for a few students every year, but that is not nearly enough to fill the demand in times like these. The Young Member Forum has been very proactive in outreaches to schools, and the Engineer's Week Committee makes a big impression on local students, but what about the rest of us? What else can we as an organization do to help fill this need, and to help guide young people to rewarding careers that we have enjoyed?

This is something I would like to encourage within SEAO that would benefit both young people and our member firms. I feel fortunate to have a career that I have enjoyed for over 30 years, and would like to share it with young people who are soul-searching about their future lives. We will be discussing it as a board and would welcome any suggestions or volunteers to work toward that end. Thank you.

– Gary Lewis

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*Seth Thomas (Alternate)*—  
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## APRIL LUNCH MEETING ANNOUNCEMENT WEDNESDAY, APRIL 27, 2016

### Topic: Deep Foundation Systems

The presentation will provide deep foundation options, noting the advantages/disadvantages of each. We will discuss costs and look at examples of sample projects. Engineers will be able to make better choices when selecting systems. Practical applications on difficult sites. All systems have their upside and their downside. Manuel will discuss this openly and without bias.



**Speaker: Manuel Castañeda**  
President/Founder of PLI Systems, Inc.  
Hillsboro, OR

From its humble origins back in 1986, Manuel has created a multi-million dollar contracting business specializing in deep foundation solutions. PLI Systems has gathered unique specialty equipment from Italy, Finland and England and has benefitted from the knowledge and experience from some of the top experts in various fields across the U.S. and Europe.

Our company has worked with many engineering firms in Oregon and Washington and has a reputation for being able to provide novel solutions to the most challenging engineering/construction issues regarding deep foundations and soil and foundation problems in general.

Location: Sentinel Hotel, 614 Southwest 11<sup>th</sup> Avenue, Portland, OR

Check-in & Lunch: 11:30 am  
Program: 12:00 pm

Cost: Lunch and Program:     \$32 — Prepaid Members  
   \$20 — Prepaid YMF Members  
   \$40 — Prepaid Non-Members  
   Free — Students

Reservations: Pre-registration is required for all. You can register and pay online at [www.seao.org](http://www.seao.org) before noon, Friday, April 22. You can also register with Jane Ellsworth via phone at (503)753-3075 or via Email: [jane@seao.org](mailto:jane@seao.org). Note: No-shows will be billed.

## **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](mailto: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](mailto:canstruction.portland@gmail.com)

*Design* **BUILD** Feed!

*Your Canstruction Committee*

For more information, see page 14.

## AWARDS COMMITTEE UPDATE

SEAO is pleased to announce the second annual Excellence in Structural Engineering 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.

### Submission Categories:

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

Please see pages 11 and 12 for eligibility requirements and submission form. All submissions must be post-marked by June 30, 2016.

## SEISMIC EVENTS

### ASCE Webinars

Tuesday, April 26, 2016, 9:00 AM – 10:00 AM PST. **Seismic Design of Curtain Wall Systems.**

Thursday, April 28, 2016, 8:30 AM – 10:00 AM PST. **Alternative Designs for Steel Ordinary Moment Frames.**

Friday, May 6, 2016, 8:30 AM – 10:00 AM PST. **Practical Seismic Evaluation of Existing Buildings Using ASCE 41-13 Tier 1 Screening Procedure with a Case Study.**

Monday, June 6, 2016, 9:00 AM – 10:30 AM PST. **Seismic Screening of Buildings Using ASCE 41-13.**

## YOUNG MEMBER FORUM ACTIVITIES

BY: PHILLIP DAVIS

### Upcoming YMF Events:

**Thursday March 24<sup>th</sup> – YMF Happy Hour**

**Location:** Green Dragon, 928 SE 9th Ave., Portland

**Time:** 5:30pm to 7:30pm

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:**

**Michael Poulos – Catena Consulting Engineers**

**Ken Oliphant – Advanced Structural Forensics**

**Jim Oliver – Turner Engineering and Design**

**Welcome New Members!!**

## SATURDAY ACADEMY



Saturday Academy's Apprenticeships in Science and Engineering program is going into our 27<sup>th</sup> 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:

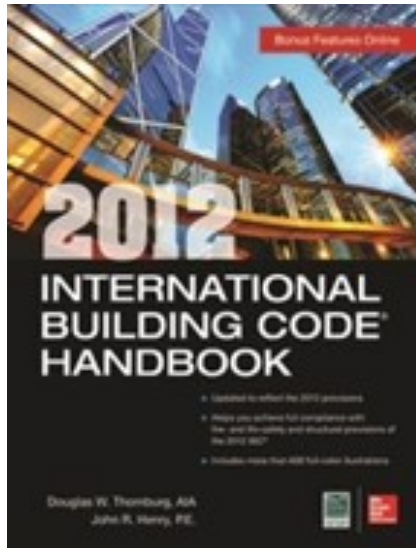
<https://fs2.formsite.com/saturdayacademy/form529489916/index.html>

## IBC CODE INFORMATION EXCERPT FROM 2012 IBC HANDBOOK

### 1805.1.3 Ground-water control

After completion of building construction, it is necessary to maintain the water table at a level that is at least 6 inches below the bottom of the lower floor to prevent the flow or seepage of water into the basement. Where the site consists of well-draining soil and the highest point of the water table occurs naturally at or lower than the required level, there is no need to provide any kind of a site drainage system specifically designated to control the ground-water level. Where the soil characteristics and the site topography are such that the water table can rise to a level that will produce a hydrostatic pressure against the basement structure, a site drainage system may be installed to reduce the water level. When ground-water control in accordance with this section is provided, waterproofing in accordance with Section 1805.3 is not required.

There are many types of site drainage systems that can be employed to control groundwater levels. The most commonly used systems may involve the installation of drainage ditches or trenches filled with pervious materials, sump pits and discharge pumps, well point systems, drainage wells with deep-well pumps, sand-drain installations, and so on. This section requires that all such systems be designed and constructed using accepted engineering principles and practices based on considerations that include the permeability of the soil, amount and rate at which water enters the system, pump capacity, capacity of the disposal area, and other such factors that are necessary for the complete design of an effective drainage system.



*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](http://iccsafe.org/store). Use ID # 4000S12.*

## 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.

## 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](mailto: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](http://www.seao.org).

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

# EMPLOYMENT OPPORTUNITIES

## **ERICKSON STRUCTURAL CONSULTING ENGINEERS**

**Project Structural Engineer  
Vancouver, WA**

Erickson Structural Consulting Engineers is seeking a motivated and detail-oriented, full-time project structural engineer to join our growing and busy office. The successful candidate must be a licensed PE in Oregon or Washington, or gain licensure via reciprocity in Oregon and/or Washington within six months of hire. A successful candidate must also be comfortable with direct client interaction, possess excellent English verbal and written communication skills, and demonstrate familiarity with a wide range of building structural systems. Preference will be given to candidates with experience in the evaluation and remediation of existing building structures and proficiency using AutoCAD. This position offers a competitive compensation package, including health and dental benefits, a matching 401k plan, a flexible work schedule and an opportunity to play a significant role in the firm's success. To apply, submit a cover letter describing your career aspirations and compensation expectations, a copy of your resume and a list of professional references to [info@ericksonstructural.com](mailto:info@ericksonstructural.com).

## **KPFF CONSULTING ENGINEERS**

**Experienced Structural Engineers and  
Entry-Level Structural Engineers  
Portland, OR**

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.taleo.net/chc05/ats/careers/requisition.jsp?org=KPFF\\_2&cws=63&rid=73](http://chc.taleo.net/chc05/ats/careers/requisition.jsp?org=KPFF_2&cws=63&rid=73)

**Entry-Level Structural Engineer** Apply Here: [http://chc.taleo.net/chc05/ats/careers/requisition.jsp?org=KPFF\\_2&cws=63&rid=151](http://chc.taleo.net/chc05/ats/careers/requisition.jsp?org=KPFF_2&cws=63&rid=151)

## **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](mailto:gilewis@lvvi.com), along with a resume and references.

## **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](http://www.holmesculley.com) and send your resume with cover letter to [hr@holmesculley.com](mailto:hr@holmesculley.com).

## **FIRST UNITED ENGINEERING**

**Civil Engineer  
Portland, OR**

First United Engineering is a small firm that has been doing business for more than 30 years. We are looking for an Oregon Registered Civil engineer with two years minimum experience. CAD experience is a plus.

Please send resume to: [jaime@firstunitedengineering.com](mailto:jaime@firstunitedengineering.com) or mail to 922 Killingsworth St, Portland, OR 97217.

# **Founding Structures on Shallow & Deep Foundations: Geotechnical & Structural Seminar**

**Presented by the Structural Engineers Association of Oregon (SEAO) along with the ASCE Geotechnical Group**

- Date:** Tuesday, May 17, 2016 – 8:30 AM to 4:30 PM  
Registration Opens at 7:30 AM (Lunch Included)
- Cost:** \$175 SEAO/ASCE Member (Includes Class Notes) \$225 Non-member  
\$25 Late Fee (if registration received after May 10, 2016)  
Students \$55 (Includes Notes) – Must show current student ID  
No refunds after 12:00 noon Tuesday, May 10, 2016
- 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:** **Trevor Smith, Ph.D., PE, Professor Emeritus, Portland State University,**  
Ph.D. from Texas A&M University  
**David Bugni, SE, PE, Principal, David Bugni & Associates,** BS Civil  
Engineering, Oregon State University, MS Structural Engineering/ Structural  
Mechanics, UC Berkeley  
**Wes Spang, Ph.D., PE, Principal, GRI,** Ph.D. from Georgia Tech  
**Arash Khosravifar, Ph.D., PE, Assistant Professor, Portland State  
University,** Ph.D. from UC Davis

This course is intended to provide information on foundation design for various structures. It will include the discussion of different types of deep foundation systems and interaction between the geotechnical and structural engineers during the design process for these systems. Some of the workshop topics will be:

**Soil Properties, Design Codes and an Introduction to Retaining Structures and Deep Foundations; Foundations in Liquefiable Soils**

- ❖ Site Investigation, testing and design properties, AASHTO codes.
- ❖ When to use yielding vs. non-yielding wall equivalent fluid pressures & limitations of the EFP assumption.
- ❖ Different types of deep foundation systems along with pros/cons (piles, tiebacks, shear piles, drilled piers, auger cast piles, soil nails, driven & grouted piles, stone columns, etc.)
- ❖ Performance Based Seismic Foundation Bearing Pressures.
- ❖ Liquefiable soils (discussion of the effects of plasticity (sand-like vs. clay-like) in determining soils that are prone to liquefaction).
- ❖ Theoretical basis of calculating lateral spreading loads on foundations.



- ❖ Considerations for down-drag loads on deep foundations due to liquefaction
- ❖ Differential settlements due to liquefaction and how to address them (deep vs. shallow foundations (e.g. raft or mats). Pros/cons.
- ❖ Theoretical basis of the exception to ASCE 7-10, section 20.3.1
- ❖ Overview of Tiebacks and Soil nails and proof load testing. Effective limitations on bond zone lengths in tiebacks, micro piles, etc.
- ❖ Introduction to soil-structure interaction issues (when to be considered and when they can be ignored)
- ❖ Selection of safety factors for bearing and uplift resistance for gravity vs. seismic design for deep foundations.
- ❖ Deep foundation load testing methods and limitations; static/cyclic.
- ❖ Load pressure diagrams for yielding vs. braced foundation systems.
- ❖ Appropriate surcharge loads (for traffic, etc.) to apply when designing retaining walls.
- ❖ Any shortcomings of the language in OSSC section 1803 regarding soil-related hazards that should be addressed for future codes or practice?
- ❖ When to consider seismic-related soil pressures against walls. How those pressures are derived.
- ❖ How to design for seismic loads on piles (due to lateral shear, moment and deflection). Need for proper confinement, moment-curvature, ductility etc.
- ❖ Hydrodynamic loads on deep foundations when installed through water. Scour and cyclic loading.

### **Structural Aspects of Deep Foundations and Rock & Soil Anchor Systems**

- ❖ Problem areas when designing pile caps for piles (proper anchorage and development of reinforcing) and bearing plates/support structures for tie back foundations.
- ❖ Need for proper jointing in long foundation walls which are constructed of brittle/shrinkage-prone (e.g. concrete) materials.
- ❖ Structural ramifications of large differential settlements due to liquefaction
- ❖ Pros/cons of battered piles
- ❖ Structural and geotechnical computer modeling considerations for deep foundations (modeling of soil properties, supports, staged analyses, linear vs. nonlinear, etc.)
- ❖ Temporary vs. permanent systems

- ❖ Deep foundation systems to consider for new & existing buildings.
- ❖ Corrosion protection considerations for deep foundations and tiebacks.
- ❖ Different pile types (precast concrete , wood & steel).
- ❖ Requirements of interconnections of foundations for seismic loads (grade beams, etc) and various interpretations used.
- ❖ Panel Question & Answer

**Questions: Andy Stember (503) 657-9800**

## **Founding Structures on Shallow & Deep Foundations Seminar**

### **Registration Form**

**Register Online at [www.seao.org](http://www.seao.org) or**

**Send to:** SEAO  
 PO Box 2958  
 Vancouver, WA 98668  
 (503) 753-3075

**Make Checks Payable to:**  
 SEAO  
 (503) 587-0337 (fax)

Firm Name: \_\_\_\_\_

Firm Address: \_\_\_\_\_

Phone \_\_\_\_\_

Name of Attendee(s) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# of Attendee(s) \_\_\_\_\_ @ \$175.00 / each = \$ \_\_\_\_\_

(Nonmember \$225.00)

# of Late Fees \_\_\_\_\_ @ \$25.00 / each = \$ \_\_\_\_\_

# of Students \_\_\_\_\_ @ \$55.00 / each = \$ \_\_\_\_\_

# of Videos \_\_\_\_\_ @ \$150.00 / each = \$ \_\_\_\_\_

**Total Enclosed = \$ \_\_\_\_\_**

### Credit Card Information

Name (as appears on card) \_\_\_\_\_

Credit Card # \_\_\_\_\_

exp \_\_\_\_\_ Billing Zip Code \_\_\_\_\_ 3digit \_\_\_\_\_



## 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

### 2016 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 second annual SEAO Awards will be recognized as a part of the September 28, 2016 dinner meeting and awards ceremony.

#### Eligibility Requirements:

1. Project must have completed construction during the calendar year of 2015 or 2016.
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, 2016.**



## 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

### 2016 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, 2016**

# 2016 SEAO / OACI GOLF TOURNAMENT



**JULY 27<sup>TH</sup>, 2016  
Pumpkin Ridge Golf Club**

**Contact Info:**  
Jane Ellsworth  
(503) 753-3075  
[oaci@comcast.net](mailto: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)*
- 19<sup>th</sup> 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](mailto:oaci@comcast.net)

# 20<sup>th</sup> year



## ANNUAL DESIGN AND BUILD COMPETITION TO BENEFIT OREGON FOOD BANK

# CALL FOR ENTRIES



### WHO

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

### WHEN

- April 19** Kickoff Meeting, 5:30 - 6:30 pm
- April 19** 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, canstruction 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](http://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

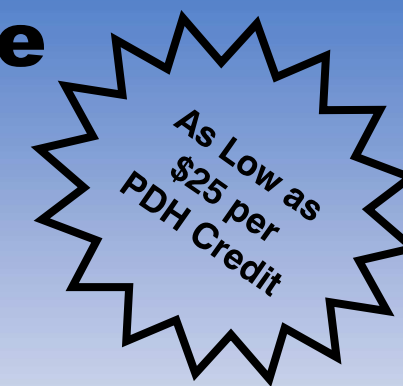
SEE NEXT PAGE FOR CONFERENCE SCHEDULE AND REGISTRATION RATES

# 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





Serving Arizona Structural Engineers since 1966

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