

# SEATTLE SECTION NEWSLETTER

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October 1, 2014 – September 30, 2015

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#### **ASCE Seattle Section Meeting**

Wednesday, October 8, 2014

Place: McCormick & Schmick's Harborside, 1200 Westlake Ave. N., Seattle, WA 98109

Cost: Early Bird Registration: \$40 General Admission \$15 Students, Unemployed (Early Bird Rates apply until Friday, October 3.)

> After Friday, October 3: \$45 General Admission \$20 Students, Unemployed

**Meal**: Choice of grilled flank steak, crab-stuffed shrimp or roasted mushroom flat bread

5:30 Social 6:15 Dinner 7:15 Program

8:30 Adjourn

Online registration closes Monday, October 6.

Click here to register.

For assistance with online registration, please contact House and Hospitality at 206-434-6378 or <u>seattleascereservations@gmail.com</u>

Direct questions or comments regarding meetings to Section President Stefanie Herzstein at <u>seattleascepresident@gmail.com</u>

#### Program — Building a Better SR 520: The Road to the World's Longest Floating Bridge

The Washington State Department of Transportation (WSDOT) is currently replacing the world's longest floating bridge as part of the SR 520 Bridge Replacement and HOV Program. When the \$4.3 billion program is complete, the region will have a new floating bridge and corridor with major improvements to safety and mobility. The floating bridge connects to fixed bridges on its east and west ends, and includes lidded freeway sections – some with integrated transit stops – fish passable culverts, stormwater treatment, a bicycle/ pedestrian path, noise walls, and other regulatory and community mitigation. Larry Kyle, a senior engineering manager on the program, will talk about the unique design and construction challenges and opportunities in building this megaproject. The next newsletter deadline is: 5:00 p.m. Monday, October 20, 2014

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Newsletter Editor: Todd Crandell seattleASCEnews@gmail.com Phone: (206) 459-2250

**CHANGE OF ADDRESS:** All changes to your address (including your newsletter e-mail address) should be provided to ASCE at <u>www.asce.org</u> or: 1801 Alexander Bell Drive, Reston, VA 20191-4400. The Seattle Section will receive your updated information from ASCE.

AMERICAN SOCIETY OF CIVIL ENGINEERS, SEATTLE SECTION http://www.seattleasce.org

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#### ASCE SEATTLE SECTION NEWSLETTER ADVERTISING RATES

#### **Employment Ads:**

\$75 for one month on web site and in the newsletter

#### **Display Ads:**

| Costs are for one year (10 issu | ıes)    |
|---------------------------------|---------|
| Business Card size              | \$100   |
| Quarter page                    | \$250   |
| Half Page                       | \$500   |
| Full Page                       | \$1,000 |
| -                               |         |

To place an ad or for more information, contact the editor at <u>seattleASCEnews@gmail.com</u>.

## By Stefanie R. Herzstein, P.E., PTOE, M.ASCE, Seattle Section President

**President's Column** 

Welcome to the ASCE 2014–2015 year. The Seattle Section Board is excited to begin the year and eager to serve you. As we begin the year, I would like to reflect on the Society's strategic initiatives. ASCE has established three initiatives to help achieve its vision and mission:

- Raise the grades on America's infrastructure
- Raise the bar for future entry into professional engineering practice
- Achieve a more sustainable natural and built environment

You can learn more about *The Vision for Civil Engineering in* 2025 and these strategic initiatives at <u>www.ASCE.org</u>.

The Seattle Section continues to be involved in these initiatives to benefit our members and the public. The following provides an overview of what the Section is doing and how you can get involved.

**Infrastructure.** In 2013, volunteers from the Seattle Section completed the <u>Washington State Infrastructure Report Card</u>. The Report Card provides data to the public and policymakers so they can gain a better understanding of how our infrastructure is doing and what needs attention. With the completed Report Card, the Section Legislative Affairs Committee can use this resource in talking with the public and local and state officials. Are you interested in funding infrastructure or educating the public? Join the <u>Seattle Section Legislative Affairs Committee</u>.

**Raise the Bar.** As the challenges of our society evolve, education for professional engineers must advance so we can continue to protect the public and improve its quality of life. Future civil engineers will need education beyond the undergraduate degree to meet new challenges. As practicing civil engineers, we need to get involved in determining what the appropriate curricula is for not only undergraduate, but for graduate level or addi-

See President's Column on page 3

## **Bio for October 8 Speaker**

Larry Kyle, P.E. has program management and design experience with a major emphasis on design and planning of highways, bridges and transit/multi -modal facilities. He is currently the Program Engineering Manager on the SR 520 Bridge Replacement and HOV Program, as well as the GEC Program Manager. On the I-405 rehabilitation program, he was the Program Quality Manager as well as leading



the HDR team on the project. He also has experience in the general civil engineering fields of wastewater conveyance and treatment, drainage

See October Speaker on page 3

#### President's Column (continued from page 2)

tional education beyond undergraduate. The Society is looking to each Section to establish a champion for Raise the Bar. Are you passionate about future civil engineers and their education? To get more involved in Raise the Bar and/or become the Section liaison contact me at <u>seattleascepresident@gmail.com</u>.

**Sustainability.** This is a hot topic in our engineering work at the state and local level. Civil engineers are being challenged to embrace their role as environmental stewards, life-cycle planners, and policy leaders and contribute to a more sustainable environmental. The Seattle Section has a very active Sustainability Committee whose mission is to bring the engineering community and public together to discuss sustainability issues facing our area. The Committee promotes sustainable development principles through professional development and outreach activities. They also provides education on the Envision<sup>™</sup> sustainability rating system for infrastructure projects. Are you looking to be more involved in sustainability or learn about Envision<sup>TM</sup>? You can contact the Sustainability Committee at sustainability.seattle@gmail.com.

With your help, I look forward to continuing to work on the Society's strategic initiatives. The items I've noted above are just a few of the ways you can get involved with the Seattle Section. To learn more about involvement visit <u>www.seattleasce.org</u>. I look forward to seeing you at a monthly meeting or other Section activities soon.

#### October Speaker (continued from page 2)

analysis and design, aquaculture (fish hatchery) design, and construction management. His responsibilities have included program and project management, quality management, detailed design, preparation of route studies, environmental impact reports and studies, plans, specifications and estimates (PS&E). Mr. Kyle is a Senior Vice President with HDR, and has led major transportation management, design, construction and planning projects in the Western United States.

## Renew Your ASCE Membership, Pay Your Seattle Section Dues, And Win!

By Evan Sheesley, P.E., ENV SP, M.ASCE, Seattle Section President-Elect

Help the Seattle Section win the renewal race and everyone is a winner! If the Seattle Section and Younger Member Forum have the highest percentage of renewed members by



December 12, 2014, they will each win a \$1,000 cash prize. Not only will everyone in the Section win, but those who help us reach our goal will also be entered to win one of two \$50 gift certificates. The winnings will be used to support the many valuable programs that are sponsored by the Section.

Paying your Seattle Section dues is a vital action in your membership renewal. You may not realize this, but our Section subsidizes a portion of every monthly dinner meeting that you attend. Additionally, your Section dues support all of the Seattle Section committees in which you and your colleagues participate.

But wait...there's more. The biggest benefit to renewing your membership is to you. A few of your membership benefits include five free online PDH courses, group rates on a range of services, and of course it is an investment in your career. For information and access to all of the benefits of your ASCE membership please visit <u>www.asce.org</u>.

Remember, when you renew your ASCE membership this fall, please pay your Seattle Section dues. Your support is greatly appreciated.

## ASCE Seattle Section Executive Board Meeting Minutes

#### June 11, 2014 Meeting

The June 11 minutes will be published in the November 2014 newsletter.

#### September 10, 2014 Meeting

The September 10 minutes will be published in the November 2014 newsletter.

## Younger Members Forum Update: Summer in Seattle By Courtney Davis, P.E., M.ASCE, YMF President

This summer the Seattle YMF had a lot to celebrate. In addition to being the second-hottest summer on record, the Seattle YMF was awarded the Younger Member Group Award for 2014. The large group award will be presented to the Seattle YMF at the ASCE National Conference in Panama along with the Edmund Friedman Young Engineer Award, going to Seattle's own, Shane Binder, P.E. In an effort to take advantage of our fabulous weather, we hosted several great events. Here are a few of the highlights.

The Seattle Sounders vs. Portland Timbers rivalry soccer match at CenturyLink Stadium drew an impressive crowd of YMF members and friends. In addition to taking notes for *Civilly Disobedient*, the ASCE YMF year-round coed soccer team, the group met at a local watering hole before cheering the Sounders to a 2-0 win.

The YMF hosted a beta testing session of the ASCE's Supercharge Your Career Series: Project Management Module. The workshop was broken down into three standalone 2-hour sessions: *Project Initiation, Project Organization,* and *Project Controls.* Attendees learned about scope of services, developing an effective team, and handling the unexpected. Erin Slayton, an Associate Vice President with HDR, presented the content that was developed by ASCE's Committee on Leadership and Management. Erin was full of energy and kept the group motivated through talks on invoicing, scope creep, and project close out, which is not an easy task. The Seattle YMF looks forward to more opportunities to work with ASCE's programming.

The Seattle YMF hosted its first Golf Tournament after the event had been on hiatus for a few years. The weather was a little fickle, but the rain eventually gave up and the 44 golfers had a great time. The tournament included a longest drive and closest to the pin competition, raffle prizes, and catered luncheon. The successful event raised funds for the group and will continue to be an exciting networking opportunity for years to come.

The Portland and Seattle ASCE YMFs gathered at Fort Steven's State Park outside of Astoria, Oregon, for a weekend of camping. The group was composed of nine from Oregon and seven from Washington. Campers



Portland and Seattle ASCE YMF members get together for a camping trip at Fort Steven's State Park outside of Astoria, Oregon.

arrived on Friday, set up their tents, and settled in by the campfire for some socializing and storytelling. The group saw the sites around the park, hiked the Fort to Sea Trail, and had dinner over an open campfire. The weekend was a fun time to reconnect with and make new friends while enjoying the great outdoors. Is it too early to start planning our annual Winter Ski Retreat with the Portland YMF?

The Seattle YMF spent the summer taking advantage of the sunshine, planning and attending wonderful events and getting geared up for a chart topping new year! We have a brand new group of enthusiastic officers that are working tirelessly preparing for the Western Region Younger Member Council (WRYMC) in February. It is also the 20th anniversary of our Popsicle Stick Bridge Competition and promises to be the best one yet. We look forward to seeing you in Seattle in February 2015!



#### **Employment Notices**

To post an employment notice in the newsletter and on the Section's web site, please contact the <u>newsletter editor</u> in advance of the monthly deadline (the 20th of the month). Rates for advertising are shown on page 2.



## Hatch Mott MacDonald Delivering Solutions

#### Senior Structural Engineer, Seattle

Hatch Mott MacDonald (HMM) is an award-winning consulting engineering firm with major success in the fields of architectural services; highway and bridges; aviation; rail and transit; water and water resources; wastewater; environment; municipal engineering; ports and harbors; tunnels; and pipeline services. We have earned a reputation for technical excellence on some of the world's most prominent and challenging projects. With office throughout North America, HMM provides a full range of services, from planning and design through construction management. We are seeking highly motivated individuals to join our dynamic team of professionals in locations throughout the U.S. and Canada.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, protected veteran status, or disability status.

**Job Description:** HMM is hiring a Structural Senior Project Engineer with experience on light rail building structures to support projects in Seattle, WA. The selected candidate will have at least 15 to 20 years of structural design experience. This hire will manage the design team while leading the CADD department for plan sets production.

The selected candidate should have experience with structural analysis software. In addition, knowledge of MicroStation, AutoCAD, etc. Candidate should have very good communication skills and being a good coordinator. This hire will work and lead a team of engineers to build and analyze structure software models. Manage preparation of design calculations and development details structural drawings.

#### **Experience**:

- 15-20+ years of experience in structural design, mainly on transit projects
- BS Civil Engineering degree; Masters or PhD preferred
- Registered Washington P.E.
- Experience using AutoCAD and engineering design software.
- Senior Structural Project Engineer will be manage a design team on a major transportation design project
- Manage design of construction drawings

Interested candidates should visit our career site at <u>www.hatchmott.com</u> and apply to job#16506. Or, send your resume directly to

#### kevin.ramsey@hatchmott.com.

VEVRAA Federal Contractor Request Priority Protected Veteran Referrals EEO



#### Senior Civil Engineer - Stormwater

**City of Redmond** Job No. 14-0075 Minimum Salary: \$6,685.00 per month Maximum Salary: \$9,025.00 per month Posted Date: August 08, 2014 Open until filled. (Open to current employees and the general public.)

To apply for this position, please go to <u>www.redmond.gov/jobs</u>.

The City of Redmond is in search of an energetic and innovative engineer who shares the City's commitment and passion for the environment to join our team. This position resides in the Engineering Section of the Natural Resources Division and will be supporting implementation of our innovative regional facilities and watershed management plans that integrate stormwater management, stream protection and restoration, and groundwater protection. As well, this position will focus on developing stormwater infrastructure sub-area plans to improve water resources while supporting development, managing Natural Resources capital projects and programs, and supporting development review and operations staff. These efforts require a strong technical stormwater background including design and field experience to provide strong and practical direction, as well as project/ program management skills to address complex issues with multiple stakeholders and deliver results on time and on budget. The successful applicant must be able to make independent design decisions in the context of City policy and interests, select and manage project teams, communicate with field staff, residents, business owners, coworkers and management, and participate effectively on various types of project teams. Decisions have significant financial implications to the City, stormwater rate payers, and developers. This position will work in partnership with other staff to fulfill the Division's vision to support our vibrant urban community while providing a lasting natural legacy.

#### Duties

This position serves as a stormwater project manager responsible for the planning, design, and construction of Natural Resources projects. Duties include, but are not limited to the following:

#### Stormwater System Planning & Manage-

**ment:** Evaluating stormwater management technologies, including low impact development techniques, for use in Redmond in relation to effectiveness, cost, and maintenance ability; managing longrange stormwater infrastructure planning efforts, including the stormwater functional plan update and sub-area planning in Marymoor and Rose Hill; managing consultant contracts for hydrologic and hydraulic modelling, including periodic updates and maintenance of existing

See Employment Notices on page 6

## **Employment Notices** (continued from page 5)

models; interpreting drainage reports and modelling output for project review; coordinating with Development Services on policy development and implementation and responding to developer requests; and coordinating yearly updates to stormwater standard details and specifications.

Capital Project Delivery: Developing and managing project scope, schedule, and budget; developing Requests for Proposals; conducting consultant hiring processes; managing consultants and multidisciplinary project teams; leading stormwater capital projects from initiation, through development of project specifications, design drawings, and cost estimates, to advertising; providing stormwater function and design expertise to city capital projects; reviewing city projects for compliance with stormwater management requirements, applicable codes and standards; and managing stormwater capital programs focused on cost effective delivery of small stormwater capital improvements and infrastructure replacements.

Stormwater Maintenance and Operations Support: Providing technical stormwater engineering support for operations staff; providing practical, cost effective field solutions to issues; and performing field investigations, surveys, property research, site inspections, alternatives analysis and selection of preferred alternatives to address drainage concerns.

#### Qualifications

Knowledge of principles, practices and methods of public works design and construction; strong understanding of Ecology SWMMWW, the NPDES municipal stormwater permit, Ecology approved runoff treatment technologies, and low impact development design and construction techniques; CAD, GIS, and Stormwater H & H modeling software such as SWMM & HSPF.

Ability to plan and implement capital improvements; prepare and review plans; develop specifications and manage the work of consultants and contractors; interpret and apply codes and regulations; manage multiple projects and priorities; work independently with little direction; use personal computer and software; positively interact with City Council and staff, contractors, businesses, public agencies, citizens and other jurisdictions to exchange information, coordinate projects, and resolve issues, effectively collaborate between various city functional groups to help realize city and division mission, provide critical feedback to consultants and other team members, work as part of a team; and communicate clearly and articulately and explain technical issues to a non-technical audience.

#### **Education and Experience**

Any combination equivalent to: Bachelor of Science degree in civil engineering and seven (7) years increasingly responsible civil engineering experience, including at least three (3) years of project management experience. Field inspection, operations/maintenance, or construction experience preferred. Infrastructure system planning experience preferred.

#### Licenses and Requirements

Professional Engineer's (PE) license required. Valid Washington State driver's license required by date of hire with a driving record that meets City standards.

#### **Union Affiliation**

Fulfillment of bargaining unit membership is required within 30 days of hire.

#### Working Conditions

Work is performed primarily in an office environment with fieldwork required to review projects. May be exposed to physical hazard from traffic or construction equipment during on-site inspection.

#### Benefits

The City of Redmond offers an excellent benefits package including: flexible work hours; medical, dental and vision benefits; paid sick leave, vacation and holidays; life insurance; retirement; and career development including tuition reimbursement.

#### City of Redmond Values

**Integrity:** We demonstrate sound, honest, truthful and consistent actions.

Accountability: We take ownership of our actions and responsibilities.

**Commitment to Service:** We are dedicated to seeking solutions for our community.

**Selection Process:** The City is accepting applications from internal and external applicants. Please include a resume and cover letter with your application, and be sure to list all relevant training and certifications.

The City may review existing application pools to fill this position, or use this pool to fill future vacancies.

Top candidates will be contacted to participate in the next phase of selection, which may include testing and/or an interview. Candidates who are selected to interview will be required to complete a Background Authorization form to have a thorough background investigation conducted.

#### **Civil/Structural Engineer**



Precision Structural Engineering, Inc. is looking for self-motivated, Civil/ Structural Engineer with minimum of 2 years' experience in commercial buildings analysis, design using STAAD Pro software and B.S. in Civil Engineering is required. Will be reviewing the design of the Dream Mall, four huge building supported on piles. An excellent opportunity for those who love structural engineering. Come and grow with us and enjoy Southern Oregon's outstanding outdoor activities. Bonus plan and other excellent benefits. We use new Green/sustainable and traditional construction materials. Please send resume to 250 Main Street, Klamath Falls, OR 97601.

Please visit <u>www.structure1.com</u>

Tel: 541-850-6300

## **University Mentor Night Help Needed**

#### By Paul Grant, P.E., M.ASCE

If you are interested in being a mentor for a night for college students, the Puget Sound Engineering Council (PSEC) needs your help! The purpose of the mentor night activity has been to bring as many practicing engineers together with as many students as possible. We are trying to inspire the students, most of whom are freshmen and sophomores as well as high school seniors, toward a career in engineering. The mentor night allows engineers to relay their experience in the profession and answer questions posed by students. The events offer an open forum where the students visit various tables and converse with the mentors. The mentors are asked to bring sample of their work, such as reports, drawings, models, that will fit on a 30"X30" table top for discussion with the students. In the past, some of the events have included over 40 mentors in 17 disciplines.

October events will be held at the following schools:

- Seattle Pacific University Tuesday, October 21, 2014, 6:00 to 8:00 pm
- University of Washington Bothell Campus Wednesday, October 29, 2014, 6:00 to 8:00 pm
- Seattle Central Community College January
- North Seattle Community College March
- Highline Community College April
- Bellevue College May

If you are interested in participating in any of these events and being included on the Section's roster of potential volunteers please contact Paul Grant at <u>pgrant@pangeoinc.com</u> for details. Please use the following links to sign up for the events:

- SPU: <u>www.eventbrite.com/e/mentor-night-seattle-</u> univ-seattle-pacific-univ-tickets-13070858289
- UW Bothell: <u>www.eventbrite.com/e/2014-uw-</u> bothell-mentor-night-tickets-8245521577

## Nominations Open for 2014-2015 ASCE North Seattle Branch

By Gabe Ng, P.E., M.ASCE, ASCE Seattle Section North Branch Secretary/Treasurer

Nominations are open for the 2014–2015 ASCE Seattle North Branch. There are two positions available this year for the branch officers (Vice President and Secretary/Treasurer) and two positions available for the YMG (Younger Member Group).

Please feel free to invite new/potential North Branch members to consider these positions. We are looking for individuals with fresh ideas and motivation to continue the growth of our branch, community, and members. These roles are not strictly defined and can be adapted to the personality of the officers.

Nominations will be accepted through October 14, with voting to occur at the November North Branch meeting. For more information, contact <u>ascenorthbranch@gmail.com</u>.

## Reach over 2,000 Engineering Professionals

### Advertise in this Newsletter

See advertising details on page 2

### Water Resources Committee Brown Bag Meeting

#### By Homero Flores, Committee Co-Chair

The Water Resources Committee's next brown bag meeting will be October 16, in Seattle, followed by the November 20 brown bag meeting in Bellevue. October meeting details are as follows:

#### October ASCE Water Resources Brown Bag Presentation

| Date:     | October 16, 2014, 12:00 pm - 1:00 pm                                                   |
|-----------|----------------------------------------------------------------------------------------|
| Location: | Brown & Caldwell, One Convention Place,<br>701 Pike Street, Suite 1200, (206) 624-0100 |
| Title:    | Developing World Water Treatment Program                                               |
| Speaker:  | Harrison Gill, Mechanical Engineer at Steady<br>Flux                                   |

Mr. Gill will be giving a short presentation on sustainable water treatment in developing countries. The talk will center around AguaClara, a project team out of Cornell University that develops and helps to implement water treatment plants that use no electricity, pumps, or computer systems to provide water that exceeds WHO standards. Mr. Gill's talk will briefly cover the origins of the project and design philosophy, then delve into some of the technical challenges the project has encountered. These include compact sand filtration, automated chemical dosing, and decentralized data monitoring. For those who are interested please check out <u>aguacla-</u> ra.cornell.edu.

Harrison Gill is a recent transplant to Seattle. He graduated from Cornell University's Environmental Engineering program in 2013 where he worked on developing linear chemical dosing systems for water treatment plants and rapid sand filtration systems for rural villages in India. Prior to moving, he worked with a small startup developing residential-scale wind turbines in Upstate New York.

## K-12 Outreach Activities

By Eset Alemu, K-12 Outreach Chair

#### Mailing List Available for Those Interested in Volunteering at K-12 Student Outreach Events

Please send an email to <u>eset.alemu@gmail.com</u> if you are interested to receive e-mails about K-12 student outreach events such as engineering and science fairs, career fairs, mentor nights at universities or high schools, or speaking at Engineer's Day in a middle school/high school. The Seattle Section and YMF K-12 Outreach coordinators will periodically send out emails to solicit for volunteers for different activities.

#### Career Fair in Highline School District

There are two upcoming career fairs in the Highline School District in October. The District has recently added some introductory engineering courses in a few of its high schools and is trying to educate students about engineering early on. The career fairs are part of the District's efforts to help students form a plan for a bright future before they graduate. The career fairs focus on providing students with an opportunity to interact with and learn from professionals in the engineering field.

Interested parties should contact Julie Burr at <u>Julie.Burr@highlineschools.org</u> for more detailed information.

Mount Rainier High School Career Fair When: October 2 from 5:30 p.m. – 8:00 p.m. Where: 22450 19th Ave. S., Des Moines, WA, 98198

*Highline High School Career Fair* When: October 15 from 7:30 a.m. – 10:00 a.m. Where: 225 S. 152nd St., Burien, WA 98148

## AIA Seattle to Present Disaster Assistance Program Building Evaluator Training

AIA Seattle provides a course that prepares licensed architects and engineers to help jurisdictions assess damage that has occurred to structures due to natural disaster.

The course is October 18 from 9 a.m. – 4:00 p.m. in Seattle, and AIA Seattle has extended member pricing to ASCE and SEAW members to encourage members of allied organizations to get trained. For more information and for registration, visit <u>www.aiaseattle.org/node/9065</u>.

#### Geotech Group Dinner Meeting: The 22 March 2014 Oso, Washington Landslide

The ASCE Seattle Section Geotechnical Group / Geo-Institute Seattle Chapter will hold a dinner on Thursday, October 16, 2014.

- Topic: The 22 March 2014 Oso, Washington Landslide
- Time: 5:30 Social Hour 6:30 – Dinner 7:30 – Program
- Location: Red Lion Hotel, 11211 Main Street, Bellevue, 98004, 425-455-5240
- RSVP: REGISTRATION PROCESS HAS BEEN RE-VISED. Please RSVP via <u>this link</u> with your dinner entrée preference (Seared Northwest Salmon or Ratatouille) by 4:00 PM on Friday, October 10, 2014 for the advance RSVP rate. MAX ATTENDANCE IS 150. PLEASE REGISTER EARLY
- Cost: \$40 with advance RSVP . \$45 with reservations made after October 10 deadline or at the door. \$20 for non-reimbursed public agency employees, unemployed members, and students. A limited number of student sponsorships will be provided on a first-come, first-served basis via the registration link.

The speaker will be Dr. Joseph Wartman.

The Oso, Washington Landslide occurred on the morning of Saturday, 22 March 2014, and claimed the lives of 43 people, making it the deadliest landslide disaster in United States history. The landslide initiated within an approximately 200-m-high hillslope comprised of unconsolidated glacial and colluvial deposits; it rapidly transitioned to a debris flow/debris avalanche that rapidly inundated a neighborhood of approximately 35 single-family residences. An intense 3-week rainfall that immediately preceded the event is believed to have played a major role in triggering the landslide. In this talk, I will present the findings of our Geotechnical Extreme Events Reconnaissance (GEER) Association scientific research team that performed a field reconnaissance of the Oso Landslide shortly after its occurrence. The talk will focus on observations made and data collected at the landslide site, but will additionally review regional and local geologic conditions, climate setting, eyewitness accounts, and land-use history. Finally, I will offer a preliminary hypotheses that address landslide initiation, mobilization, and runout behavior.

Joseph Wartman is the H. R. Berg Associate Professor of Civil and Environmental Engineering. The author of over 60 professional articles, Wartman edits the Journal of Geotechnical and Geoenvironmental Engineering and chairs the Geo-Institute (GI) Committee on Embankments, Dams, and Slopes. He is the recipient of several awards and honors including the U.S. National Science Foundation Faculty Early Career Development Award, the John J. Gallen Memorial Award for Technical Advancements from Villanova University, and the Geotechnical Engineer of the Year award from the Philadelphia section of ASCE. Prior to his arrival at the University of Washington in 2010, Wartman spent nearly 10 years at Drexel University, where he was a founding Co-Director of the Drexel Engineering Cites Initiative. In 2008, he was a Visiting Scholar at the Universitat Politècnica de Catalunya (UPC) in Barcelona, Spain. Before his career in academia, Wartman was a professional practitioner in California and Pennsylvania for 5 years. He received his B.C.E. from Villanova University, and his MS, MEng, and PhD degrees from the UC Berkeley. Wartman is a Registered Professional Engineer in Pennsylvania and California.

# 2014 EERI Technical Seminar Series: Performance **Based Design – State of the Practice for Tall Buildings**



A technical seminar series supported by **FEMA** Department of Homeland Security

#### SEMINAR PROGRAM (8:30 a.m. - 4:30 p.m.)

Speakers listed worked on presentation development; only one speaker will present on each topic at each venue.

Introduction and History of PBD Ron Hamburger, SGH

Guideline Documents (LATBSDC/PEER) Farzad Naeim, Consulting Engineer; Jack Moehle, UC Berkeley

Using Ground Motions & SFSI Jon Stewart, UCLA; Marshall Lew, AMEC

Structural Analysis & Modeling (ATC 72-1/ASCE 41) Greg Deierlein, Stanford University

Case Study 1: Concrete Building Design John Hooper, MKA; Ron Klemencic, MKA

Case Study 2: Steel and Hybrid Building Design Nabih Youssef, Nabih Youssef & Assoc.; Leonard Joseph, Thornton Tomasetti, Inc.

Lessons from PBD Peer Reviews Farzad Naeim, Consulting Engineer; Jack Moehle, UC Berkeley

The Future of PBD and ATC 58 Ron Hamburger, SGH

Local Jurisdiction Applications Colin Kumabe, LADBS; Gary Ho, SFDBI; Steve Pfeiffer, City of Seattle

Panel Discussion

#### DATES AND LOCATIONS

Wednesday, October 29: Thursday, November 6: Friday, November 7:

San Francisco, CA Seattle, WA Los Angeles, CA

#### Who Should Attend

Structural and Geotechnical Engineers; Seismologists; Architects; Urban Planners; Developers; Building Officials; and Students. Attendees will receive 6.75 PDHs.

The Earthquake Engineering Research Institute (EERI) 2014 Technical Seminar Series focuses on the State of the Practice for Performance Based Seismic Design (PBD) of Tall Buildings. For the last decade engineers in major cities along the West Coast have taken advantage of performance based design concepts to achieve structural designs of tall buildings that are not in strict compliance with the International Building Code prescriptive provisions. These projects reflected cumulative best state-of-the-practice information related to seismology, geotechnology, and structural design to provide the most complete platform for implementing performance based seismic design concepts on major design projects.

The seminar will begin with a history of performance based design and the use of guidelines published by the Pacific Earthquake Engineering Research Center (PEER) and the Los Angeles Tall Buildings Structural Design Council (LATBSDC) in conjunction with the building code to form the basis of design for these structures. The focus will then turn to seismological and geotechnical considerations in the development of seismic demands in the form of both response spectra and ground motions for long period structures. This will be followed by a presentation on approaches for the modeling and analysis of these complex structures. In addition, two case studies will be presented by structural engineers responsible for major tall building projects to demonstrate how the concepts have been put into place on actual structures. Since PBD is new and each project has unique features and challenges, peer review is an important component of the design process, and a talk will present some of the lessons learned from peer reviewers. The final talk will discuss future directions of performance based seismic design, FEMA (ATC) 58, and moving present practice to the next level. The day will conclude with a panel discussion including a representative of a local building department who has been working with the developers and design team to help bring these landmark structures to fruition.

#### **Co-sponsors**

ASCE Metropolitan Los Angeles Branch EERI Regional Chapters: Northern California, Southern California, and Washington Seattle ASCE SEAW-Seattle SEAO – Structural Engineers Association of Oregon SEAOSC – Structural Engineers Association of Southern California

Register online or download a registration form for the 2014 EERI Technical Seminar Series at https://eeri.org/cohost/registration/tech-seminar-2014

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