2023 OSBEELS SYMPOSIUM
SEPTEMBER 28-29

Attendee Notebook

OSBEELS 2023 Symposium
September 28-29 / 8:00 a.m. - 4:00 p.m.

TRAVERSE

Attendee Notebook

Section Links

Event Summary and Expectations
Best Practices
Webinar Interface
Schedule
Presentations

Important Information & Tips

- **Sign into the Zoom account you registered under before following the link within your confirmation email to join the virtual conference.**
- Internet connection: power down any devices not in use, close any applications or browser windows not in use, make sure your device is plugged in for best audio and video quality.
- Visit https://zoom.us/test to test out your set up to ensure no network or technical issues exist.
- During the Symposium, the fastest way to contact us is to **text** :

  Nick 971-701-1844
  Ashlee 971-218-1222
  Jenn 503-551-0323

OSBEELS 2023 Symposium

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EVENT SUMMARY AND EXPECTATIONS

After months of preparation and planning, the 2023 Symposium is here! This program was developed to provide you with all the necessary information and tips in one place as you prepare to join us for the 2-day virtual event. Within this digital notebook you'll find:

- Basic event details
- Daily schedule
- Best practices for attending a virtual event
- Tutorials on the Zoom webinar platform

Breakdown of participants at the 2023 OSBEELS Symposium:

Host:
OSBEELS, we will coordinate beginning and end of day periods, as well as transitions between presenters.

Attendee:
YOU, Registered individuals who will be tuning into the event.

- As an attendee, you will only be able to tune into the virtual conference and not be able to share video or audio.
- Attendees are able to post questions and participate in polls during the conference and presentations.

Presenter/Panelist:
When presenting, "speakers/panelists" will have the ability to share their audio and video with attendees.

If at any point during the conference you are experiencing difficulties or have questions please reach out to the OSBEELS event staff who will be available throughout the day.

Details regarding the structure of the live, virtual presentation:

- Presenters have 60 minutes to present and answer questions.
- As attendees, you will only be able to tune-into the broadcast. You will not have audio or video capabilities unless granted by the OSBEELS event hosts.
- Attendees will be able to chat and pose questions for the Q&A session, as well as "up-vote" questions.
- OSBEELS event staff will monitor audience questions and pull the top to share at the end with presenters during the Q&A session.
- OSBEELS event staff will be monitoring the chat log throughout the day and responding to any questions as soon as possible.

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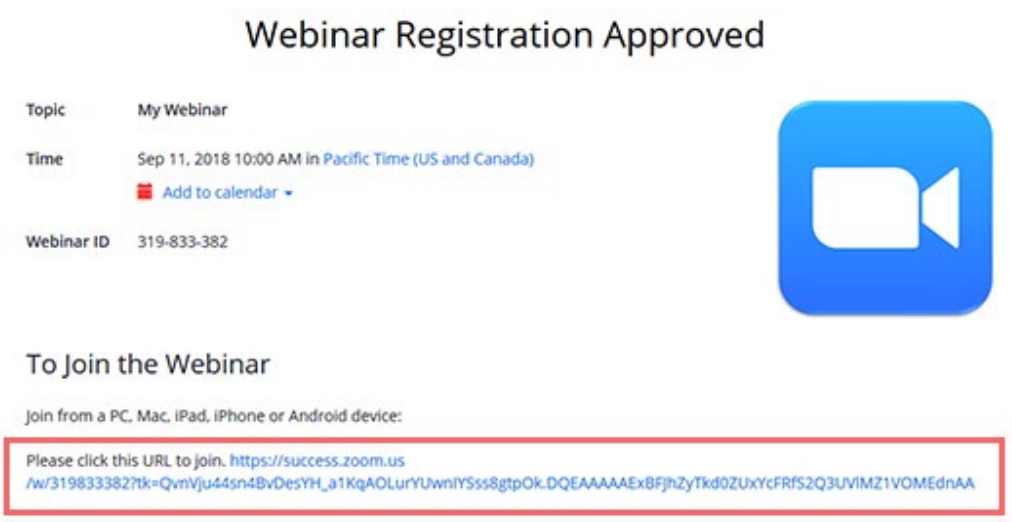
BEST PRACTICES

- When using equipment or working from a location not regularly used, test your internet and webinar connections in advance. If possible, establish video and audio connections prior to your virtual session to test quality.
- Visit https://zoom.us/test to test out your set up to ensure no network or technical issues exist.
- If connecting from a laptop, plug in the power cord. Battery use can adversely affect video quality.
- If you and other colleagues are tuning into the event through one feed, make sure all individuals who are participating are registered in order for us to accurately track their attendance and to assist with providing PDH certificates following the event.
- **It is also best to inform the OSBEELS event staff ahead of the event if you and other registered attendees are watching from one feed so we may mark all who are viewing the virtual conference are marked as in attendance.**

Many individuals may have previously participated on a teleconferencing meeting on the Zoom platform, and for some this may be their first time. We'd like to note there are small differences between the Zoom Meeting and the Zoom Webinar platforms. If interested we encourage attendees to visit the Zoom blog and learn about the experience they can expect as an "attendee" on the Zoom Webinar platform. Learn more here: https://support.zoom.us/hc/en-us/articles/115004954946

Confirmation email, contains your unique link



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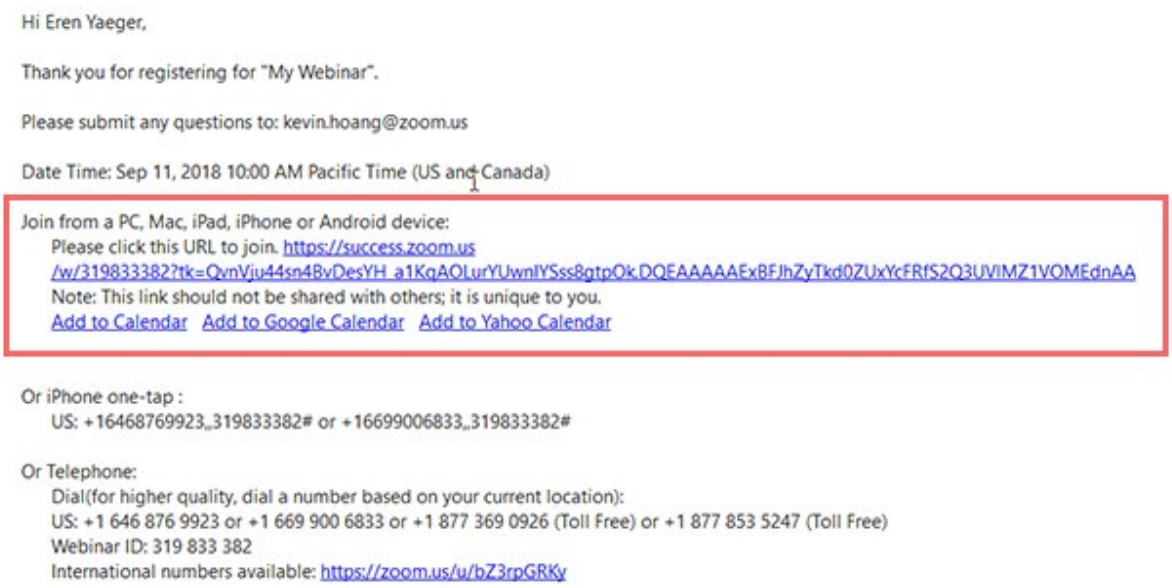
WEBINAR INTERFACE

When using the link provided by your OSBEELS host via email,
you will be directly added into the webinar.



Hi Eren Yaeger,

Thank you for registering for "My Webinar".

Please submit any questions to: kevin.hoang@zoom.us

Date Time: Sep 11, 2018 10:00 AM Pacific Time (US and Canada)

Join from a PC, Mac, iPad, iPhone or Android device:
Please click this URL to join. https://success.zoom.us
/w/319833382?tk=QvnVju44sn4BvDesYH_a1KqAOLurYUwnIYSss8gtpOk.DQEAAAAAExBFJhZyTkd0ZUxYcFRfS2Q3UVlMZ1VOMEdnAA
Note: This link should not be shared with others; it is unique to you.
Add to Calendar Add to Google Calendar Add to Yahoo Calendar

Or iPhone one-tap :
US: +16468769923,,319833382# or +16699006833,,319833382#

Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 646 876 9923 or +1 669 900 6833 or +1 877 369 0926 (Toll Free) or +1 877 853 5247 (Toll Free)
Webinar ID: 319 833 382
International numbers available: https://zoom.us/u/bZ3rpGRKy

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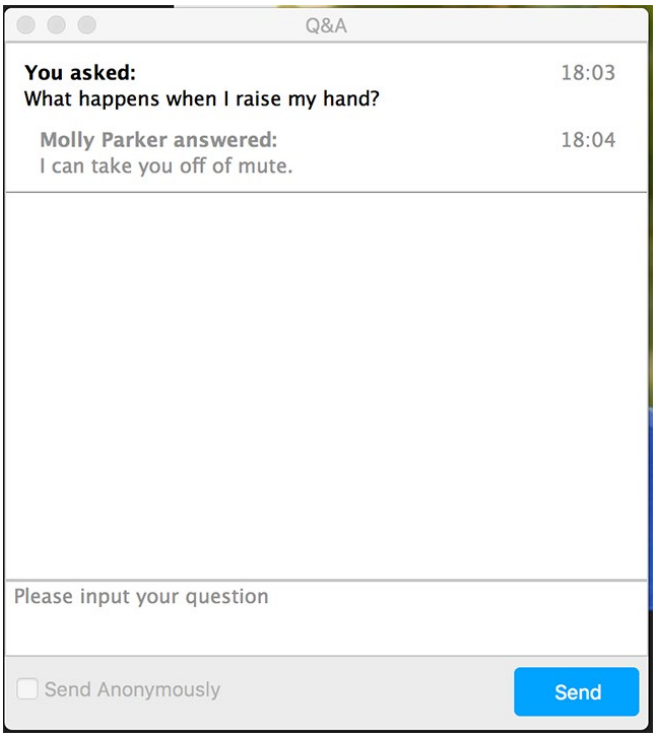
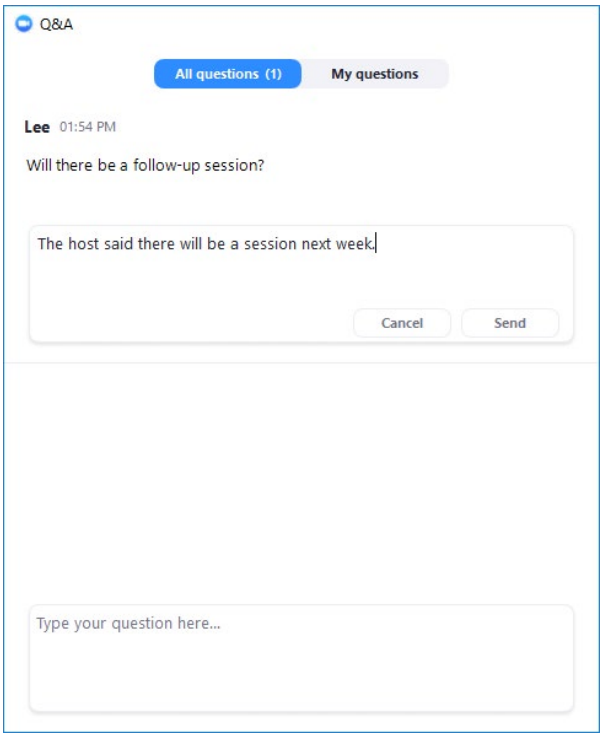
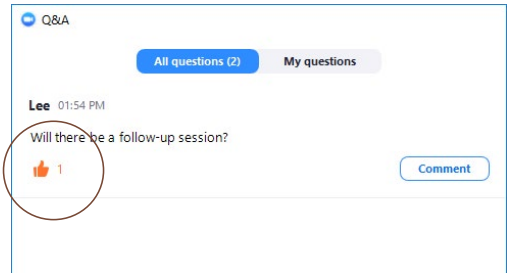
WEBINAR INTERFACE

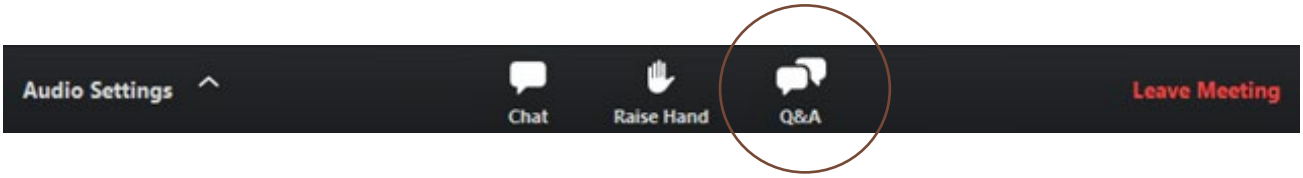
Ask questions
"Like" questions, comments, or answers







Submit your questions with the Q&A option at the bottom.



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SCHEDULE

Thursday, Sept. 28	Time	Friday, Sept. 29
8:00 — 8:15 a.m. **Welcome & Intros**		
U of O Knight Campus Shane Day, PE – Affiliated Engineers	8:15 — 9:15 a.m. **Session 1**	**NuScale Power Overview** J.J. Arthur, PE – NuScale Power
ODOT Engineering Technology Advancement & PVG Jakki Carter, PE - ODOT	9:15 — 10:15 a.m. **Session 2**	**Aerial Base Mapping for Oregon Cities** Bret Hazell, RPP - GeoTerra
10:15 — 10:30 a.m. **Break**		
Lifeline Systems & Disasters Yumei Wang, PE – Portland State University	10:30 — 11:30 a.m. **Session 3**	**Survey Taskforce Overview** Pat Gaylord, PLS – David Evans & Assoc.
OSU Student Panel	11:30 a.m. — 12:00 p.m. **Spotlight Sessions**	PEO & PLSO
12:00 — 12:30 p.m. **Lunch Break**		
Tsunamis & How To Prepare Harry Yeh - OSU	12:30 — 1:30 p.m. **Session 4**	**PLSS Overview** Dane Courville, PLS – Colorado DOT
Willamette Water Supply Program Joelle Bennett, PE – Willamette Water Supply	1:30 — 2:30 p.m. **Session 5**	**Affordable Housing** Tim Terich, PE, SE – Froelich Engineers
2:30 — 2:45 p.m. **Break**		
I-5 Bridge Replacement Shilpa Mallem, PE - WashDOT	2:45 — 3:45 p.m. **Session 6**	**OSBEELS Updates and Q&A** OSBEELS
3:45 — 4:00 p.m. **Closing Remarks**		

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PRESENTATIONS

University of Oregon Knight Campus for Accelerating Scientific Impact: Engineering a New Facility for Ground-Breaking Biomedical Research

Shane Day, PE – Affiliated Engineers, Inc.

The University of Oregon's Phil and Penny Knight Campus for Accelerating Scientific Impact is a $1 billion initiative to fast-track scientific discoveries into innovations that improve quality of life for people in Oregon, the nation, and the world. Opened in 2020, the Phase 1 of the Knight Campus is an innovative 160,000-sf facility dedicated to accelerating the process of turning scientific discoveries into societal benefits. Phase 2 is an additional 185,000-sf and started construction earlier in 2023. The two buildings house research and teaching laboratories, classrooms, mezzanines, meeting rooms, offices, training rooms, cleanrooms, and public spaces to encourage collaboration among researchers from a wide variety of fields.

The mechanical, electrical, and plumbing systems feature a heat recovery chillers capturing heat rejected by lab, electrical, and IT equipment—along with heat from chilled beams—and delivering that heat to the building's laboratory hot water and space heating hot water systems. Additionally, cleanroom areas are designed to meet ISO 6 (Class 1000) standards.


Jakki Carter


Chris Harris


Mike Nichols

ODOT Engineering Technology Advancement & PVG

Jakki Carter, PE, Chris Harris, PE, Mike Nichols, PLS – Oregon Department of Transportation

ODOT Engineering Technology Advancement (ETA) and Geometronics are specialized resources for all design and construction engineering within ODOT, including all ODOT region tech centers. We research and develop requirements for new engineering technology initiatives, provide training and support, as well as explore new and innovative technology methods for design and construction engineering within ODOT. This presentation will detail innovative technologies being used in UAS and Remote Sensing as well as Project Visualization Development. Project Visualizations are proven communication tools that equitably convey transportation project design intent and impacts to a wide-ranging audience of diverse backgrounds. We offer a variety of internal Project Visualization services that provide design concept clarity to partners and the general public that incorporate remote sensing technologies and project design data that combine to make immersive 3D deliverables that provide project context to internal and external partners.

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PRESENTATIONS

Lifeline Systems & Disasters

Yumei Wang, PE – Portland State University

Natural disasters are getting worse. The Pacific Northwest is due for a major earthquake along the Cascadia Subduction Zone, and a magnitude 9 Cascadia earthquake and tsunami would likely produce an unprecedented catastrophe much larger than any disaster the state of Oregon has ever faced. Oregon's resilience to earthquakes is low, thus, preparing for a catastrophic disaster to become more resilient is needed to improve our safety. In her talk, Yumei Wang will discuss the importance of lifeline systems, expected impacts to infrastructure from a Cascadia earthquake and share ideas of what is needed to better prepare for "the really big one" Improvements on Oregon's fuel insecurity and conceptual designs of tsunami towers will be presented. In 2022, Wang received the 2022 Public Service award from The Geological Society of America (GSA Public Service Award - 2022 (geosociety.org), was named 2022 Engineer of the Year by the Professional Engineers of Oregon, and has served as a U.S. Congressional Fellow in Washington DC.

Understanding Tsunami and How to Prepare for It

Harry Yeh – Oregon State University

Tsunamis are translational long water waves created by seafloor displacement: primarily by the co-seismic fault rupture. Firstly, I point out geophysical time-and-space scales relevant to tsunami phenomenon, emphasizing its unique natural hazard phenomenon. Characteristics of tsunami generation, propagation, and inundation are discussed. Then, lessons learned from the 2011 Japan Tsunami are presented. Prior to this event, a commonly accepted myth was that reinforced concrete structures could withstand tsunami actions well. This is no longer the case. Several concrete coastal dykes failed by the flow-induced suction pressures on the crown, which detached the concrete panels that had covered dyke's infill. Next, we show a couple of reinforced concrete buildings that were exposed to similar tsunami loadings; one was toppled and the other remained. When the survived building is flooded (due to breakaway walls or windows), the water inside the building increases the effective weight (body force); hence the building would become more stabilized. A few conceptual strategies are proposed for the development of design considerations for buildings and coastal structures to cope with the "beyond-the-design-basis" extreme hazards.

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PRESENTATIONS

Willamette Water Supply Program

Joelle Bennett, PE, Mike Britch, PE – Tualatin Valley Water District

The Willamette Water Supply System (WWSS) is a $1.6 billion new water infrastructure system currently under construction in Washington County. When complete in 2026, the WWSS will be one of Oregon's most seismically-resilient water systems—built to better withstand natural disasters, protect public health, and speed regional economic recovery by restoring critical water services more quickly.

With planning, design, and construction all underway since 2013, the presentation will provide an overview of why the new water supply is needed and how the Willamette Water Supply Program (WWSP) was developed to deliver the infrastructure. Participants will learn about program delivery vs. traditional project management, the coordination of critical planning decisions necessary to establish complex schedules and manage resources, and the regional coordination key to WWSP's success thus far.

Finally, the presentation will share WWSP's seismic design philosophy and how this infrastructure was designed to meet its seismic level of service goals and performance objectives for the Cascadia Subduction Zone Earthquake hazard.

https://www.ourreliablewater.org

I-5 Bridge Replacement

Shilpa Mallem, PE – WashDOT

The presentation will cover:

- Program Background
- General Project Overview
- Next Steps
- Design Concepts

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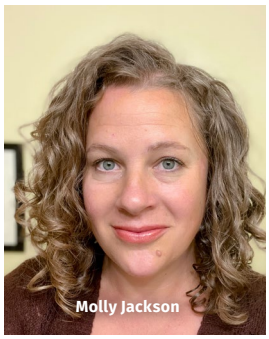
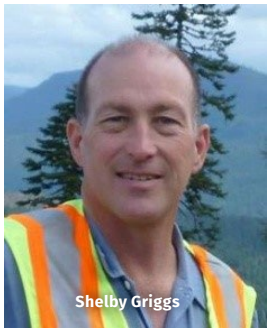
NuScale Power Overview

J.J. Arthur, PE – NuScale Power

What started as a university research project at Oregon State University in 2002 is now a mission to bring small modular reactor (SMR) technology to the global energy market. NuScale Power made history in 2020 as the first SMR to receive Nuclear Regulatory Commission (NRC) design approval, and we are set to make history again by bringing the first SMR plant online by 2030. Our mission is to improve the quality of life for humankind by advancing nuclear power. A VOYGR™ small modular reactor plant, powered by our groundbreaking NuScale Power Module™, can produce up to 924 MWe of carbon-free energy to replace retiring coal plants, provide reliable baseload power for wind and solar, and power desalination plants to support clean water production. The presentation will provide an overview of NuScale Power's history, technology, and current projects.





Aerial Base Mapping for Oregon Cities

Bret Hazell, RPP, Molly Jackson, GISP, Brad Hille, RPP, CPT, Shelby Griggs, PLS – GeoTerra Inc.

Key staff from GeoTerra, Inc. will be providing an overview of engineering grade aerial mapping using Lidar and photogrammetry.

Focused segments will review:

- Major processes & workflow
- Map control for engineering mapping
- New mapping vs. update mapping
- Map accuracy specifications for engineers
- Impervious Surfaces – What are they for?

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PRESENTATIONS

2022 Surveying Task Force Report

Pat Gaylord, PLS, CFedS – David Evans and Associates

2022 Surveying Task Force Report - How do we find more surveyors?

This presentation will present the results of the 2022 Surveying Task Force led by ACEC and PLSO. The presentation will focus on the state of the surveying profession, steps being taken to raise awareness about surveying, and the work yet to be done to recruit more surveyors. Success of recruiting more surveyors into the workforce is critical to successful project design and construction timelines in the future.

PLSS Overview

Dane Courville, PLS

The lesson on PLSS breakdown goes through the history, rules, reasoning, and process of the breakdown and survey of public lands states. The process from start to finish is described; from base line/principal meridian, to quadrangles, to townships, to sections. Will focus on history, purpose, timeline, and process of the US survey system layout.

Affordable Housing: A Discussion on the Design, Remodel, and New Construction

Tim Terich, PE, SE – Froelich Engineers

Affordable housing is a hot topic in the State of Oregon. City, County and State governments are actively pushing for more affordable housing. We will discuss some of the unique aspects related to the engineering design and development of affordable housing projects. We will touch on some of the financial challenges and how they relate to some additional design requirements. We will also share engineering experiences we have learned for both new and existing affordable housing projects.