PROFESSIONAL ENGINEERS OF OREGON
A chapter of the National Society of Professional Engineers
NSPE

Join us at Eagle Crest Resort

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Bring your spouse and family –18 hole putting course | 3 golf courses | hiking and biking trails |Wednesday informal gathering at General Duffy's Annex in Redmond. Thursday Nights Awards Dinner – families welcome, Western theme! Tickets for guests and kids

Wednesday, May 17, 2023 Preconference Tours and Social		
11:00 12:00	**TOUR -- Stratos Aircraft** | max 20 253 SE Franklin Ave, Redmond, OR 97756 Stratos Aircraft is singularly focused on building aircraft for one specific performance quadrant of the turbine market.	
1:00 5:00	**TOUR -- Daimler Trucks North America (DTNA) Proving Grounds** | max 30 1772 NW Daimler Rd, Madras, OR 97741 A durability test drive using a DTNA vehicle | Electric powered truck vehicle demonstration and charging experience |Driving a conventional diesel truck over the challenging track	
2:30 3:30	**TOUR -- BasX** | max 30 3500 SW 21st Pl, Redmond, OR 97756 BASX Solutions is an industry leader in the manufacturing of high efficiency data center cooling solutions, cleanroom systems, custom HVAC systems and modular solutions.	
5:00 7:00	**SOCIAL -- General Duffy's Annex** 404 SW Forest Ave, Redmond, OR 97756 Informal no host social gathering for drink and food	
Thursday, May 18, 2023, 6 PDHs		
7:00	**CONTINENTAL BREAKFAST – CHECK IN**	
8:00	**WELCOME** – Paul Sellke, PE, GE | President, PEO	
8:15 9:15	**OPENING SESSION | The Future of the Engineering Team and Managing Multi-Generational teams** William Atkinson, PE | Vermont Mechanical Inc. | NSPE President Elect If you ask any Manager or Team leader one of the biggest issues they face is how to attract and retain talent. We will discuss trends in the workforce of ever-changing communication mediums and the reality of employees often shifting from Job to Job what does it take to get the most out of your team members.	
9:30 10:30	**ODOT Bend North Corridor** Miranda Wells, PE | ODOT ODOT was awarded a $60mil INFRA grant by FHWA for Bend North Corridor. With that came a requirement to expedite the project beyond what ODOT is used to. This led to ODOT embracing design-build for the first time in 10 years. This project will improve mobility, access, connectivity, and travel time reliability in one of the busiest areas in City of Bend.	**Clean Water Services State Revolving Fund** Ransom Horner-Richardson | Circuit Rider | Alli Miller Oregon DEQ DEQ's CWSRF program offers below-market rate loans to public agencies for planning, design, construction and implementation of water quality improvement projects including wastewater collection, treatment, and disposal systems; nonpoint source water pollution control projects; as well as others. The Program acts like an environmental infrastructure bank by providing below-market rate loans to eligible recipients for water infrastructure projects.
10:30 - 11:00 **Break | Exhibits**		
11:00 12:00	**Nondestructive Testing** Kurt Steinhagen | Intertek-PSI Intertek-PSI Corporate NDE Level III Discuss the methods and techniques used in structural steel testing and inspection. Kurt will describe the different types of nondestructive testing, their applications, as well as the advantages and disadvantages of each method. inspection methods will include Visual Inspection, Magnetic Particle Inspection, Liquid Penetrant Inspection, Ultrasonic Inspection, Radiographic Inspection	**Cavitation and NPSH** Robert Smith | Pump Tech This presentation will go over the phenomenon of cavitation, what it is and why it occurs. We will also review NPSH, and how it is used for pump selection or troubleshooting. Lastly, we will look at the different types of damage caused by cavitation, and how the location and nature of the damage can give us clues as to what exactly is occurring, and how it might be rectified.
12:00 - 1:00 **Lunch | Member's Meeting** Paul Sellke, PE, GE | President, PEO		
1:00 2:00	**I-5 Bridge Replacement** Casey Liles Washington State DOT The IBR program is using previous planning work to maximize investments and support efficient decision-making. The IBR program has engaged citizens and stakeholders and received endorsement from partner agencies of a Modified Locally Preferred Alternative to be analyzed through a Supplemental Environmental Impact Statement. Get the latest update and how the program is centering equity and climate.	**Engineers Rising: Students Panel** Kayla Sorenson (PhD student - PSU) and Yumei Wang (PEO's PE in Education) Panel students from various engineering disciplines. Each student will describe their engineering interest and seek career advice from PEO leadership as well as audience members.

2:00 - 2:30 **Break | Exhibits**		
2:30 3:30	**City of Redmond Wetlands Complex** Jessica MacClanahan, PE | City of Redmond Redmond's Water Pollution Control Facility is part of a collection and treatment system that serves over 37,000 residents. With the population tripling since 2000, the City's current wastewater treatment facility is reaching maximum capacity. The new Wetlands Complex will provide expanded treatment capacity and recreational opportunities for our growing community.	**Regional Stormwater Management Benefits** Chris Hass & Benjamin Boice | Oregon Stormwater Consultant | Contech Engineered Solutions LLC This presentation focuses on large, regional scale stormwater management systems. Presenters will define the key benefits to a regional approach, such as maximization of land use, long term maintenance costs, and aesthetic benefits. In addition to lessons learned and local case studies.
3:00 - 3:30 **Break | Exhibits**		
4:00 5:00	**Engineers & Public Service: Where Technical Expertise Meets Elected Office** Shannon Wedding, PE This presentation will discuss the importance of professionals with technical backgrounds to become involved in committees, commissions and elected positions and the development path of how to get there.	
5:00 **RECEPTION | AWARDS DINNER Western Theme for attire** Recognizing engineers for their outstanding accomplishments and commitment to the profession, the community, and humankind: PEO Fellow | Oregon Professional Engineer of the Year | Oregon Young Engineer of the Year		
Friday, May 19, 2023, 6 PDHs		
6:00	**BOARD MEETING – Members Welcome!**	
7:00	**CONTINENTAL BREAKFAST OREDER OF THE ENGINEER**	
8:00	**Day Two Kickoff** – Paul Sellke, PE, GE | President, PEO	
8:15 9:15	**Hydrogen Fuel Cell Technology for Heavy Duty Long Haul Trucking** Derek Rotz, DTNA This presentation explores the transformation in the trucking industry to reach the goal of reaching Zero Emissions by 2039. Achieving this will require a fundamental way in which trucks are designed, built and operated. A particularly pressing challenge is to decarbonize the long haul, heavy duty segment, which is technically most challenging to address. One potential technology, namely the application of hydrogen fuel cells in trucks, will be discussed in more depth.	**Engineering Applications with Photogrammetry** Paul Tice | ToPa 3D | CEO The use of aerial imagery from manned and unmanned aircraft has grown exponentially in capability and speed over the past 5 years. Photogrammetry software and its application in the AEC industry has developed to produce high-precision DSM, DTM, and point cloud data to inform professionals through the design process. In this presentation, Paul will present case studies on how his companies have leveraged this technology.
9:30 10:30	**The Lower Snake River Dams: Hydropower, salmon, and the region's clean energy future** Kurt Miller | Executive Director | Northwest RiverPartners Hydropower accounts for roughly 50% of Northwest's electric generation. As a result, the region boasts the cleanest, most affordable electricity in the nation. Yet the region has long been a critical battleground reflecting controversial aspects of the clean energy drive -- at its center, a longstanding debate over the role of the lower Snake River dams in Eastern Washington and their place in our clean energy future.	**Prefabrication/DfMA –** **Why prefabrication: The impact it makes to the project** Jeff Briscoe |PreFabrication Manager | Fortis Construction and Dave Watson | Sr. Project Manager | Fortis Construction The benefits it brings to the project and the client. -What type of projects benefit the most from prefabrication. -Some examples of prefabrication Fortis has implemented on projects, and the benefits we have experienced: Prefabricated exterior wall panels, Multi-trade racks, Server Aisle Models, MEP Structural models. -Design coordination between The EORÂ's and delegated Design by The Site teams: What does good look like, and the timing behind this collaborative process.
10:30 - 11:00 **BREAK | EXHIBITS**		
11:00 12:00	**Prineville Aquifer Storage and Recovery Project** Eric Klann, PE | Owner | Divergent Engineering Services The Water management tool used to help the City meet peak demands by taking advantage of existing aquifers, natural storage space found in geologic formations underground. Water is collected in the aquifer during periods of cooler temperatures, higher streamflow, and lower demands then recovered later during periods of higher demand. This eases peak demand on native water sources and reduces the need to construct expensive storage facilities.	**Coaching Engineers Who Manage Hazardous Work** Dr. Kevin Lyons | Wes Lematta Professor in Forest Engineering | OSU An important attribute of hazardous work is uncontrolled variation. Under these conditions workers must make significant decisions that affect their safety while performing their tasks. Traditionally engineers are trained in reductionist thinking; however, when managing work with uncontrolled variation a systems approach is required. Coaching through conditioned games is an effective method for training engineers, and machine simulators are a valuable tool in developing these games.
12:00 - 1:00 **LUNCH OSBEELS Update** Jason Barbee, Agency Director, OSBEELS		
1:00 2:00	**Mass Timber Construction - Innovative Building Solutions** Brian DeMeza, Field Engineer for Simpson Strong-Tie This presentation will give an overview of this material with a focus on sustainability. Recent changes to the building code have allowed for taller timber structures to be permitted. Changes and how to understand the designer's role in constructing a mass timber building, with examples of testing performance and connection design.	**Overview of engineering at OSU-Cascades** Rebecca Webb | Senior Instructor – Engineering | OSU-Cascades An overview of the two skill/solution-driven engineering degree paths offered at OSU-Cascades will be provided. This discussion will allow the audience to learn more about these multidisciplinary programs that are producing engineers well-prepared for today's difficult problems

2:00 - 2:30 **BREAK EXHBITS**		
2:30 3:30	**Demising Walls - The Challenge of Separating Commercial Floor Space** Charlie Rowles, PE | C A Rowles Engineering, PC If you work in commercial floor space, have you ever thought about putting up a demising wall to create some separate space for better business management, or more storage? Surprisingly, there are some pretty stringent commercial building code requirements in place to allow your new wall to be permitted. We'll explore these in some detail to provide a clearer picture of what it takes to permit a demising wall in a commercial floor space.	**Cascade Renewable Transmission Project** Suzanne Cavanagh, P.G., Senior Project Manager, HDR The Cascade Renewable Transmission Project (CRT) is a proposed 1,100-megawatt (MW) electric transmission facility designed to move renewable energy from wind and solar generation on the east side of the Cascades to the west side of the Cascades. To accomplish this, CRT would bury a bundle of two 6-inch diameter high voltage direct current cables in the bed of the Columbia River between the Big Eddy substation in The Dalles and the Harborton substation in Portland.
3:30 - 4:00 **BREAK | EXHIBITS**		
4:00 5:00	**Strengthening Oregon's Fuel Infrastructure** Yumei Wang, PE, FASCE, Affiliate Faculty Portland State University CEE Dept | Mike Kortenhof, Manager Fuel Tank Compliance Sect., OR DEQ | Deanna Henry, ODE Oregon's fuel infrastructure has a high risk of catastrophic failure in the next magnitude 9 Cascadia earthquake with no projected recovery time to resume to normal service levels. Activities required by the passage of the 2022 Senate Bill 1567 are an important first step that will steer Oregon towards safer, more reliable gasoline, diesel, biofuels and jet fuel supplies. Wang, a co-author of SB 1567, will recount the developments leading up to the legislation. **CLOSING REMARKS** – Paul Sellke, PE, GE | President, PEO	

MEET OUR PRESENTERS

William Atkinson | NSPE President Elect |NSPE - Vermont Mechanical Inc. -- Bill Atkinson P.E. is a Licensed Professional Engineer in three states (VT,NH,NY) and is the 2022-2023 President Elect for NSPE. Bill currently Directs the Service and Engineering departments at Vermont Mechanical Inc. a Mechanical and Plumbing design build contractor, and has spent most of his career volunteering for Engineering organizations that support and foster the profession.

Jason Barbee | Agency Director |OSBEELS -- Jason joined the Oregon Department of Revenue in 2000 after graduating from the University of Oregon. In his 13 years at the DOR, he worked in and managed various tax programs. He then spent six years working for the Oregon Employment Department; most of that time was in the role of Unemployment Insurance Division Deputy Director for Policy and Operations. He joined the Oregon State Board of Examiners for Engineering and Land Surveying as their Agency Director in October of 2019.

Benjamin Boice | Contech Engineered Solutions LLC Ben is a Stormwater Consultant for Contech and hold a B.S. in Environmental Engineering. He has 6 years of industry experience at Contech and enjoys working with engineers and agencies developing stormwater solutions.

Jeff Briscoe | Prefabrication Manager |Fortis Construction – Jeff has 25 years construction experience -Licensed Electrician since 1997 - 13 years electrical Contractor 97 – 2010 -7 years at a Federal Research Facility 2010 Â– 2017-With Fortis Construction since 2017-MEP Superintendent 2017 – 2020 Prefab/DfMA manager from 2020-Present -Currently coordinating multi-trade prefabrication within Data Center market sector.

Suzanne Cavanagh | HDR Engineering, Inc. | Sr. Project Manager / Permitting Specialist Suzy Cavanagh holds a M.S. in Geosciences from Boise State University. She has spent the last 22 years permitting various projects in the Pacific Northwest. In the last 10 years she has focused on permitting energy projects (transmission, substation, wind, solar, and battery energy storage) through the Oregon Department of Energy, Energy Facility Siting Council (EFSC). She currently works at HDR Engineering, Inc. as a Senior Project Manager and Permitting Specialist.

Brian DeMeza | Field Engineer | Simpson Strong-Tie, is a licensed engineer in the state of Oregon with a focus in Structural Engineering. He graduated with his Master's degree in Civil Engineering from Oregon State University where he participated in a large collaboration research project studying the seismic performance of mass timber lateral force resisting systems. Prior to joining Simpson, Brian worked as a structural design consultant for a multi-discipline frim in Portland, OR.

Chris Hass | Contech Engineered Solutions LLC Chris is a Sales Engineer for Contech Engineered Solutions. He has eleven years of stormwater industry experience working in the public and private sector. Chris has a B.S. in Civil Engineering from Portland State University and is a licensed professional engineer in Washington.

Deanna Henry | Emergency Preparedness Manager |Oregon Department of Energy -- Deanna Henry is the Emergency Preparedness Manager at the Oregon Department of Energy. She directs the agency's Petroleum Emergency Preparedness Program and is the project manager overseeing the development of the Oregon Energy Security Plan.

Ransom Horner-Richardson | Circuit Rider |Oregon Department of Environmental Quality -- Ransom is the Easter Region Circuit Rider for the CWSRF program providing technical assistance to borrowers and potential borrowers with infrastructure planning, financing options, and related needs, as well as providing engineering assistance to the program. Ransom has a BS in Civil Engineering and an MS in Environmental Engineering from the University of New Hampshire. He worked as a consulting engineer for 5 years in New Hampshire on municipal drinking water and wastewater treatment projects.

Eric Klann | Owner/Acting City Engineer |Divergent Engineering Services/City of Prineville -- Eric Klann founded Divergent Engineering Services in July of 2022. Prior to that he was the City of Prineville Engineer and Public Works Director. In that position, Eric became known for his commitment to bettering the Prineville community through the forward-thinking projects such as the award-winning Crooked River Wetlands, a boon to both conservation efforts and City wastewater users; and the Aquafer Storage and Recovery Project. He holds a B.S. in Mech. Engr and a P.E. in Civil Engineering.

Mike Kortenhof | Manager Fuel Tank Compliance Section |Oregon Departemnt of Environmental Quality -- MIke Kortenhof, RG, PE is manager of the Oregon DEQ Fuel Tank Compliance Section and is leading implementation of the new DEQ Fuel Tank Seismic Stability Program.

Dr. Kevin Lyons | Wes Lematta Professor in Forest Engineering |OSU -- Dr. Lyons worked in the BC logging industry in engineering, road building, and logging from 1980 to 1994. He obtained his BSF (1997) and MF (1998) in Forest Operations from UBC, and his PhD (2001) in Forest Engineering from OSU with minors in Mathematics and Mechanical Engineering. Dr. Lyons was a faculty member at UBC (2001 to 2018) and joined OSU (2018-present). Current projects include designing log truck cab guards to survive impact loads, developing risk management tools for cable logging,

Jessica MacClanahan | City Engineer |City of Redmond -- Jessica MacClanahan is the City Engineer for the City of Redmond. In her current role, she manages the City's 5-year Capital Improvement Program and oversees planning and construction of public improvements within private developments. Prior to Jessica's time in Redmond, she spent time managing and building large capital improvement projects in Bend, Oregon and the California Bay Area. She holds degrees in Civil Engineering and Music from Santa Clara University.

Jim Martin | Director, Product Validation Engineering |Daimler Trucks North America -- Jim Martin, Director of Product Validation Engineering at Daimler Truck North America (DTNA), a degreed engineer with one of the largest truck manufacturing companies in the world, leads DTNA's truck testing and performance validation operations. The comprehensive validation program assures that vehicles all vehicles produced meet or exceed all North American vehicle regulatory standards and also demonstrate DTNA's vehicular performance in the competitive marketplace.

Kurt Miller | Executive Director |Northwest RiverPartners -- Kurt Miller is one of the nation's leading advocates for hydropower and its role in our clean and equitable energy future. His expertise in energy policy has been featured in over 50 contributed pieces across numerous regional and national news outlets, and he is a frequent commentator on T.V., radio, and policy panels. As the executive director of Northwest RiverPartners, Kurt represents millions of public power customers across the Northwest who rely on the benefits of the hydropower system.

Charles Rowles, PE | Owner, Principle Engineer | C A Rowles Engineering and Building Design -- Charles A. (Charlie) Rowles, PE has 42 years engineering experience. For the past 32 years he has had a dual design career in both civil and building design. The building work includes commercial, industrial, retail and church designs in multiple regions. Completing retail tenant improvement designs has been a regular element in his design efforts. He has been a speaker on building code changes and has mentored design staff within his own firm over the past 18 years.

Robert Smith | Regional Sales Manager |Pump Tech -- Working in the manufacturing sector for most of the time since graduating the University of Washington with a BSME, and having managed many wastewater projects cradle-to-grave, Bob has had the opportunity to see, touch, and smell a lot of wastewater systems for applications as diverse as small communities to beverage bottling plants. In his current role with Pumptech, he has the opportunity to work with water and wastewater systems for municipalities and industry.

Kayla Sorenson | Ph.D. Student |Portland State University -- Kayla Sorenson is a PhD student in Geotechnical Engineering at Portland State University. Her research investigates how the degree of saturation within a soil affect its liquefaction resistance by microbially induced desaturation (MID), specifically focusing on non-plastic and low plastic soils. She was a key part in two large scale field trials using MID in the Portland, Oregon area. Kayla is currently a co-president on the EERI Student Leadership Council.

Kurt Steinhagen | Corporate NDE Level III |PSI -- Kurt Steinhagen has been in the nondestructive testing field for over 30 years. He is on the board of American Society for Nondestructive Testing (ASNT) and The American Welding Society (AWS). He is currently the Corporate NDE Level III and Principle Consultant for Intertek-PSI.

Paul Tice | CEO |ToPa 3D -- Paul has over 20 years of building and leading technical teams on various large datacenters and fab facilities, complex Survey, CAD, GIS and Reality Capture projects. Over the years, Paul has developed a passion for supporting 3D technicians worldwide with educational materials on 3D Reality Capture and construction technologies through LinkedIn Learning, industry periodicals, and speaking at conferences. In 2020, I launched FiOR Innovations to meet the needs of the Reality Capture industry.

Yumei Wang | Affiliate Faculty |Portland State University CEE Dept -- Yumei Wang, PE, FASCE, was awarded as PEO's 2022 Engineer of the Year. She is the Owner of SLS LLC, and Senior Advisor on Infrastructure Resilience and Risk Affiliate Faculty in the Civil & Environmental Engineering Department at Portland State University

Dave Watson | Sr Project Manager |Fortis Construction -- Dave has been in the construction industry for 23 years. His experience ranges across many market sectors including industrial, microelectronics, data centers, commercial, retail, municipal, higher education, K-12, healthcare, airport, and office construction. Dave has most recently led a large team in Prineville, OR to construct a multi-year, multi-project, multi-billion dollar operation for a Fortune 100 client.

Rebecca Webb | Senior Instructor - Engineering |OSU-Cascades -- Rebecca Webb is a senior instructor for the Energy Systems Engineering and Engineering Science programs at OSU-Cascades. Before joining OSU-Cascades, she was an associate professor at the University of Colorado Colorado Springs. Rebecca also worked as a R&D engineer at Agilent Technologies designing test and measurement equipment and as a senior engineer responsible for performing thermal analysis of laser cooling techniques at Directed Energy Solutions.

Shannon Wedding | Director of Business Development/City Councilor | McWane/City of Redmond -- Shannon Wedding, P.E., is the Director of Business Development for McWane and develops technology for drinking water systems. She was a Managing Engineer for the City of Houston Water Drinking Water Operations previously and prior to working for Houston, Shannon spent 7 years as a design consultant. She has a total of 18 years of experience in the industry and holds a B.S. in Civil Engineering and an M.B.A. from Texas Tech University. She also currently serves as a City Councilor in Redmond, OR.

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