



**88th Annual Pacific Northwest Section
ASEE Conference**

"Engineering for the Common Good"

**April 5 - 7, 2023
Gonzaga University**

ASEE PNW Section Conference



Lodging: Ruby River Hotel 700 N. Division St. Spokane, WA 99202	Hotel Reservation Link: ASEEPNW	Conference Registration: ASEE PNW Conference Registration
---	---	---

Local Contact:		
	Rhonda Young youngr1@gonzaga.edu 509-313-5754	


Conference Committee		
	Krishna Pakala (Boise State University) Shiny Abraham (Seattle University) Rhonda Young (Gonzaga University) Kevin Chang (University of Idaho) Jonathan Verrett (University of British Columbia)	
Conference Schedule		

Wednesday, April 5, 2023	
Jundt Art Museum – Gonzaga Campus, 200 E Desmet Avenue, Spokane	

7:00 PM to 9:00 PM	Reception (Drinks and Heavy Appetizers)
---------------------------	---

Thursday, April 6, 2023	
Jundt Lounge, Hemmingson Center 201, 200 E Desmet Avenue, Spokane	


7:30 AM to 10:00 AM	Registration
7:30 AM to 8:15 AM	Breakfast
8:00 AM	Welcome from Dr. Karlene Hoo, Dean & Professor, School of Engineering & Applied Science, Gonzaga University
8:15 AM	Welcome from <i>Krishna Pakala, Chair, ASEE PNW Section</i>
8:20 AM	Keynote Presentation: "More than Just a Skill: Articulating Communication as an Engineering Process", <i>Dr. Juliane Mora, Gonzaga University</i>

<p>An exploration of the engineering discipline as a form of communication that creates meaning between people (speakers and audiences, creators and end-users, companies and clients). Followed by an argument that communication, as both process and product, is a type of engineering concerned with the design, construction, and use of symbols and structures in society.</p>	
	<p>Dr. Juliane Mora is an Assistant Professor of Communication Studies at Gonzaga University has worked as liaison to the School of Engineering and Applied Sciences. She earned her Bachelor's and Master's degrees at California State University, Sacramento in Organizational Communication and Instructional Communication respectively. She earned her Doctorate in Communication and Instruction at the University of Utah while also working with their School of Engineering to improve communication, leadership, ethics and research in the engineering curriculum within the Materials Science and Engineering Department. Her primary academic research interests are in pedagogy (innovative teaching approaches and techniques) for social justice (diversity, equity, access, and inclusion) and communication across the curriculum.</p>

9:00 AM to 9:45 AM	ASEE PNW Section Business Meeting and Q&A with ASEE National Board Representative (all attendees invited)
---------------------------	---

Thursday, April 6, 2023	
10:00 AM – 11:30 AM	

Session 1A (Firenze 312)		Session 1B (Goa 306)
Active Learning Moderator: Ashton Greer		Assessment Tools and Techniques Moderator: Kyle Larsen
Design an Energy-Saving Device: An Engaging Module for a Laboratory Course <i>Joseph Hoffbeck, Dan Moldovan</i> <i>University of Portland</i>		Technical Assessment of Electrical Engineering Design Projects Using Standardized Rubrics <i>Nile Morecraft</i> <i>Montata State University</i>
From Ash to Action: Student-Led Sustainable Trail Resurfacing Using Mt. Mazama Volcanic Ash <i>Ashton Greer, Charles Riley, Jintai Wang</i> <i>Oregon Institute of Technology</i>		The Microcontroller Applications R&D Lab: A Model for Course-Based Undergraduate Research in First Year Engineering <i>Eric Davishahl</i> <i>Whatcom Community College</i>
Community Engaged Learning, Social Justice, and Engineering <i>Rhonda Young</i> <i>Gonzaga University</i>		Teaching an Undergraduate Introductory Engineering Economics Course: Successful Implementation for Students Learning <i>NM Hossain, Hani Saad, Kyle Larsen, Heechang Bae</i> <i>Eastern Washington University</i>
Increasing Global Education Opportunities for Engineering Students: Pilot Collaborative International Project Studying Coffee Wastewater Treatment <i>Katie Kuder, Joseph Pacini, Patricia Jones</i> <i>Seattle University</i>		Effect of Self-Directed Learning Modules to Prepare Students to Take the FE Exam <i>Tao Xing, Steve Beyerlein, John Crepeau</i> <i>University of Idaho</i>
How Cornstarch Monsters, The Mythbuster's, and Rube Goldberg Collaborate to Create Drama and Enhance Student Motivation, Engagement, and Retention in the Classroom <i>Sue Niezgoda</i> <i>Gonzaga University</i>		Innovations in Remote Teaching of Engineering Design Teams <i>Soyoung Kang, Ken Yasuhara, Kathleen Kearney, Jonathan Liu, Jonathan Posner</i> <i>University of Washington</i>

Thursday, April 6, 2023		
11:45 AM – 1:15 PM (Jundt Lounge, Hemmingson Center 201, 200 E Desmet Avenue, Spokane)		
11:45 AM	Lunch	
12:15 PM	ASEE PNW Awards	
12:30 PM - 1:15 PM	Keynote Presentation: "Advancing Engineering Education with Sustained Professional Development and Collaborative Research" <i>Dr. David Hurwitz, Oregon State University, 2019 ASEE PNW Outstanding Teaching Award Winner</i>	
Dr. Hurwitz will share his experiences as a student, mentor, and member of a coordinating committee for the Excellence in Civil Engineering Education (ExCEED) Teaching Workshop. He will describe how this experience inspired him to contribute to a team of professors who delivered two multi-day workshops promoting best practices in transportation engineering education. Finally, he will discuss research that he and his collaborators have conducted on developing and disseminating conceptual traffic signal questions and desktop learning modules.		Dr. David Hurwitz is a professor of transportation engineering, Director of the Kiewit Center for Infrastructure and Transportation Research, and Director of the Driving and Bicycling Research Laboratory in the School of Civil and Construction Engineering at Oregon State University. David conducts research in the areas of transportation safety, human factors, traffic control devices, bicyclists and pedestrians, commercial motor vehicles, and Engineering Education. In particular Dr. Hurwitz is interested in the consideration of user behavior in the design and innovation of transportation systems. David is the immediate past chair of the PNW Section of ASEE.
Thursday, April 6, 2023		
1:30 PM – 3:30 PM (Jundt Lounge, Hemmingson Center 201, 200 E Desmet Avenue, Spokane)		
Session 2A		
Workshop		
Benefits and examples of finding and developing true personal stories in engineering courses <i>Eric Jankowski, Krishna Pakala, Anne Hamby, Sara Hagenah, Brooke Ward</i> <i>Boise State University</i>		
Thursday, April 6, 2023		
3:45 PM – 5:15 PM		
Session 3A (Firenze 312)		Session 3B (Goa 306)
Peer Mentoring		Course Design
Moderator: Jill Davishahl		Moderator: Kyle Larsen
A hands-on activity for team building and consideration of audience for technical writing <i>Stephanie Wettstein</i> <i>Montana State University</i>		Effectiveness of a Multi-Disciplinary First-Year Engineering Course <i>Kevin Chang</i> <i>University of Idaho</i>
Agency, Learning, Uncertainty, and Culture: Examining the Impacts of Being a Peer Mentor in Engineering <i>Jill Davishahl</i> <i>Western Washington University</i>		Correlating the Mechanical Properties of Fiberglass Composites for Different Flaw Defects <i>Awlad Hossain, Heechang Bae, Tyler Scheff, Michenzie Kinney</i> <i>Eastern Washington University</i>
Institutional efforts to foster community building among first year students: Establishing measures for engineering cohorts and exploring the influences on community and academic progress <i>Kirk Reinkens</i> <i>Gonzaga University</i>		Work in Progress: Restructuring a Mechanical Engineering Capstone Design Sequence <i>Eli Patten, Vipin Kumar, Brian Polagye, Kendra Burdett, Jill Kaatz, Dorian Varga, John Kramlich, Per Reinhall</i> <i>University of Washington</i>
Hands-on Drone Workshop for first year undergraduate students to improve their STEM identity and career development <i>Jae Ryu</i> <i>University of Idaho</i>		Using Combined Theoretical, Numerical, and Experimental Methods to Teach Weld Design Concepts in Mechanical Engineering <i>Awlad Hossain, Kyle Larsen, Robert Gerlick, Dustin Santora</i> <i>Eastern Washington University</i>
Steeped in Engineering: Using coffee to introduce students to engineering <i>Seung-Jin Lee, Heather Dillon</i> <i>University of Washington</i>		Mobile Assisted Gains through Innovative Curriculum for Students in a Core Engineering Course <i>Maeve Bakic, Krishna Pakala, Devshikha Bose</i> <i>Boise State University</i> <i>Diana Bairaktarova</i> <i>Virginia Tech</i>
Thursday, April 6, 2023		
6:00 PM – 8:00 PM (Jundt Lounge, Hemmingson Center 201, 200 E Desmet Avenue, Spokane)		
Dinner and Sharing of Stories from Workshop from Session 2A		
Friday, April 7, 2023		
10:00 AM – 12:00 PM		
Field Trip to Downtown (New Bus Rapid Transit and Electric Buses, Historic Power House and Waterfall)		