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SEPTEMBER 2022 NEWSLETTER

HIGHLIGHTS

PacTrans Conference Registration is Open



The Region 10 Transportation Conference will be held this year on October 14, 2022 on the University of Washington Seattle Campus. Registration is open and the early bird discount rate is available until Monday, September 26. More information, including the registration link can be found <u>here</u>.

PacTrans WDI Partners with UW Youth & Teen Program to Deliver Two-Week Course on Autonomous Cars



This summer, the PacTrans Workforce Development Institute worked with the UW Continuum College's Youth and Teen Program to develop and offer a two-week course to middle school students called, Introduction to Autonomous Cars. In this course, students learned principles of automation using LEGO Education Spike kits. To better connect what they were learning through these hands-on activities, the course also featured a series of guest speakers and UW lab visits where professionals presented on a variety of transportation related topics.

READ THE FULL STORY HERE

OSU Hosts Third Annual National Summer Transportation Institute



This summer, PacTrans consortium partner, Oregon State University, hosted their third annual National Summer Transportation Institute (NSTI). In all, twenty-one, high-school age students had the opportunity to spend a week on the OSU campus, learning about a variety of transportation related disciplines, free of charge.

READ THE FULL STORY HERE

PacTrans Supports UI's Clean Snowmobile Team to Podium Finish



Over the years, PacTrans has been a strong and consistent supporter of the University of Idaho's Clean Snowmobile Team. This year, University of Idaho placed 3rd overall, which is Idaho's first podium finish since 2014! In addition to overall placement, U of I placed 1st in acceleration with rider Will Thielman, 2nd in emissions, and 1st in subjective handling.

READ THE FULL STORY HERE



PacTrans Alumni Spotlight: Chen Chen

PacTrans comprises a diverse cohort of people hailing from a variety of places, institutions and backgrounds. Our stories bring us together and give us the opportunity to get to know each other better. We want to take a moment to look back at some of our previous student researchers and see where those alumni are today.

Chen Chen graduated from Oregon State University with a PhD in Transportation Engineering in 2021. He is currently a postdoctoral research fellow for the U.S. Army Corps of Engineers and will very shortly step into a new role as an Assistant Professor of Fire and Emergency Management at Oklahoma State University.

READ THE FULL STORY HERE

UW Undergrad Researcher Awarded Two Accolades



Peter Yu is an undergraduate researcher in the UW Smart Transportation and Application Research (STAR) Lab. We are very excited to announce that he has recently received a handful of prestigious student accolades. He recently earned four awards/scholarships including: the ITE Western District Best Student Paper Award, the R.H. Thomson Memorial Scholarship, the Luther E. Gregory Scholarship, and the Hans M. & Billie A. Skov Scholarship in Civil Engineering.

READ THE FULL STORY HERE

A PacTrans Student Research from WSU Publishes new Work on Highway Animal Crossings



A PacTrans student researcher from Washington State University's School of Economics, Wisnu Sugiarto, recently had some research published in the Transportation Research Record on highway animal crossings. This work intended to quantify whether the addition of these structures had an added financial benefit, beyond the benefit to animal populations and migratory health. The paper found that these crossings appear to reduce wildlife-vehicle collisions in Washington state, saving roughly \$235,000 to \$443,000 every year per structure. Sugiarto said, "Wildlife crossing structures not only benefit the ecosystem but may also improve road safety."

READ THE FULL STORY HERE

PacTrans PI John Gambatese from OSU Elected to National Academy of Construction



PacTrans PI and Oregon State University Professor of Civil and Construction Engineering was recently elected to the National Academy of Construction. The induction ceremony will take place on October 6 in Scottsdale, AZ. President and CEO of the Academy, Wayne Crew, speaking about Professor Gambatese, said, "Our 2022 class represents dedication to the industry and significant contributions to improving the built environment. John Gambatese is one of our industry's most important contributors to construction safety and safety in design. We welcome him."

READ THE FULL STORY HERE

UPCOMING EVENTS





Dr. Elise Miller-Hooks holds the Bill and Eleanor Hazel Endowed Chair in Infrastructure Engineering at George Mason University, is an advisor to the World Bank Group, and the founding Editor-in-Chief of Elsevier's Sustainability Analytics and Modeling journal., Prior to this, Dr. Miller-Hooks served as a program director at the U.S. National Science Foundation and on the faculties of the University of Maryland, Pennsylvania State University and Duke University. Dr. Miller-Hooks received her Ph.D. (1997) and M.S. (1994) degrees in Civil Engineering from the University of Texas - Austin and B.S. in Civil Engineering from Lafayette College (1992). he has expertise in: disruption planning and response; multi-hazard civil infrastructure resilience quantification and protection; stochastic and dynamic network algorithms; transportation systems engineering; intermodal passenger and freight transport; real-time routing and fleet management, including paratransit, ridesharing, bikeways and delivery; hospital capacity planning for surge; and collaborative and multi-objective decision-making.

REGIONAL TRANSPORTATION SEMINAR Optimization and Machine Learning in Urban Transportation Under a Sharing Economy

Live Stream Link: https://www.youtube.com/watch?v=S-N7oYVvJMQM

Thursday, October 6 | 4:00 p.m. | UW HUB 340

As our cities grow, competition for staff (workers), stuff (equipment, such as cars) and space (location) grows, and greater efficiencies in resource (staff and stuff) and space utilitization in the context of transportation services are required to support vibrant local economies. On-line, optimization and machine learning can aid in the creation of new transportation markets and services, as well as new service mechanisms for existing services (e.g. equitable microtransit services), and, off-line, can inform urban transportation planning and policy. This talk will describe mathematical, algorithmic, and machine learning methods for designing and operating such urban transportation services in dense, competitive urban environments. Applications specific to bicycle and carsharing, ridesharing, parking, and delivery will be described.

All events are free and open to the public. Reception to follow and all are welcome.



RECENTLY COMPLETED RESEARCH

four mobility sub topics of: accessibility, reliability, efficiency, and safety. To learn more about each specific project, please click on the title to access the research profile page on our PacTrans Website.





Project Title: <u>Guidelines for using Photogrammetric Tools on Unmanned Aircraft Systems to</u>
<u>Support the Rapid Monitoring of Avalanche-prone Roadside Environments</u>
Pl(s): Ed McCormack (UW), Nathan Belz (UAF)
Project Number: 2019-M-UW-2



Project Title: <u>Automated Localization and ADA Functional Condition Assessment of Curb</u> <u>Ramps using Mobile Lidar</u> PI(s): Yelda Turkan (OSU) Project Number: 2020-S-OSU-1



Project Title: <u>Informing Predictions from Above with Data from Below: Al-Driven Seismic</u>
<u>Ground-Failure Model for Rapid Response and Scenario Planning</u>
Pl(s): Brett Maurer (UW)
Project Number: 2020-S-UW-4



Project Title: Impact of Autonomous and Connected Truck Platoons in the Pacific Northwest on Transportation Infrastructure PI(s): Ahmed Ibrahim (UI) Project Number: 2021-S-UI-2 The Pacific Northwest Transportation Consortium (PacTrans) is the Region 10 University Transportation Center (UTC) established in January 2012 with funding from the US Department of Transportation (USDOT).

PacTrans is a combined effort of transportation professionals and educators from the University of Washington (UW), Oregon State University (OSU), the University of Alaska Fairbanks (UAF), the University of Idaho (UI), Washington State University (WSU), Boise State University (BSU), and Gonzaga University (GU). With two active centers focusing on both Safety and Mobility, PacTrans serves as an engine and showcase for research, education, and workforce development in the Pacific Northwest.

The goal of PacTrans is to create an environment where consortium universities and transportation agencies within Region 10 work together synergistically. The PacTrans program focuses on the USDOT-identified priority of Improving the Mobility of People and Goods. This priority includes the following nonexclusive topic areas:

- Increase access to opportunities that promote equity in connecting regions and communities, including urban and rural communities;
- Smart cities;
- Innovations to improve multimodal connections, system integration, and security;
- Assistive technologies for those with physical or cognitive disabilities;
- Data modeling and analytical tools to optimize passenger and freight movements;
- Innovations in multi-modal planning and modeling for high growth regions;
- Novel (non-traditional or alternative) modes of transport and shared use of infrastructure; and
- · Regional planning and setting of transportation priorities.

The Pacific Northwest offers a unique blend of opportunities to examine a variety of transportation issues, including those related to urban centers, rural communities, diverse geographic features (e.g., coastal plains, mountain ranges), and a growing population of pedestrians and bicyclists. This diversity makes the Pacific Northwest a natural laboratory in which to investigate transportation solutions that are applicable both locally and nationally.

PacTrans is dedicated to collaborating with transportation agencies, companies, and research institutions to jointly develop safe and sustain-able solutions for the diverse transportation needs of the Pacific Northwest.



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