



## FEBRUARY 2021 NEWSLETTER

### *HIGHLIGHTS*

#### **PacTrans Makes Strong Showing at 2021 Virtual TRB Annual Meeting**



This year the Transportation Research Board (TRB) Annual Meeting celebrated its 100th anniversary. Also noteworthy this year, the conference was held virtually for the first time in its existence. This annual conference typically consist of more than 13,000 transportation professionals from around the

world hosting more than 5,000 presentations in nearly 800 sessions and workshops in what always amounts to a jam packed week in frigid Washington D.C. This year, the virtual event spanned the entire month of January but still featured thousands of activities and presentations that participant attended from behind the computer of their homes and/or offices. The theme of the 100th annual meeting was Launching a New Century of Mobility and Quality of Life.

[READ THE FULL STORY HERE](#)

## OSU's Amy Wyman Receives PacTrans UTC Outstanding Student of the Year Award

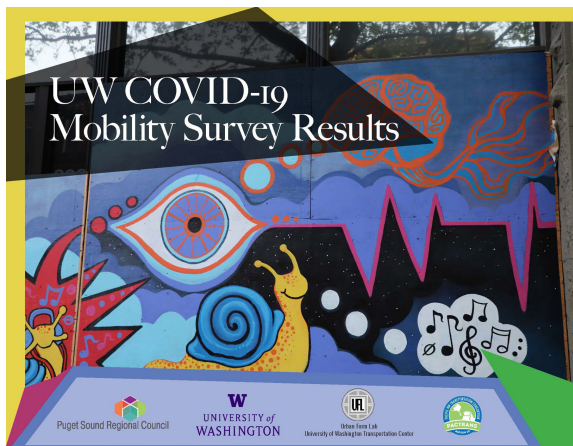
Each year, every University Transportation Center has the opportunity to recognize one of its many brilliant student researchers with the UTC Outstanding Student of the Year award. Students are evaluated on accomplishments in three areas: (1) Technical Merit and Research, (2) Academic Performance, and (3) Professionalism and Leadership. This year, that prestigious award went to Oregon State University PhD candidate Amy Wyman.



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## PacTrans-funded COVID-19 Research on Work from Home gets Published



In late Spring of 2020, PacTrans funded three quick research projects revolving around various aspects of COVID-19. One of these projects, titled, How to Sustain Work from Home? Employers' and Employees' Perspectives, is being led by Anne Vernez Moudon, Professor Emeritus in Urban Design and Planning at the University of Washington.

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## OSU's Mohammad Rayeedul Kalam Siam Receives Region 10 Michael Kyte Outstanding Student of the Year Award

Each year, PacTrans facilitates the submission and selection of the Region 10 Michael Kyte Outstanding Student of the Year Award. The Region 10 Michael Kyte Outstanding Student of the Year Award is available to any student attending a university in Region 10 (Washington, Oregon, Alaska, and Idaho) who participates in UTC funded work. Selection is based on accomplishments in three areas: (1) Technical Merit and Research, (2) Academic Performance, and (3) Professionalism and Leadership. This year, this award went to Oregon State University PhD candidate, Mohammad Rayeedul Kalam Siam.



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## App-Based Carpooling Company Scoop Publishes PacTrans-Funded Work on Effectiveness of Carpool Incentive Fund

### Mode substitution – descriptive graphs

Before / after you started using Scoop, how frequently did you commute using the following travel modes in a typical month?



- 57% used SOV as their primary mode before using Scoop, only 9% after
- 25% used transit as their primary mode before using Scoop, only 7% after

UNIVERSITY of WASHINGTON

Late last year, Scoop, an app-based carpooling company, published some PacTrans-funded work that was presented at the 2020 TRB Annual Meeting. The presentation was titled, *Building Partnership Between Transit Agency and Shared Mobility Company: Incentivizing App-Based Carpooling in the Seattle Region*, and was based on a 2018 PacTrans-funded a research

project titled, *Examining the Effects of King County Metro Carpool Incentive Fund*, lead by Qing Shen, a professor of Urban Design and Planning at the University of Washington.

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## OSU's Eileen Chai Received 2020-2021 Beverley Swaim Leadership Legacy Graduate Scholarship

Each year, WTS offers a variety of scholarship to students in transportation related fields. This year, Oregon State University Master's student and PacTrans student researcher, Eileen Chai received the 2020-2021 Beverley Swaim Leadership Legacy Graduate Scholarship.

Eileen is a first-year master's student advised by David Hurwitz, professor of transportation engineering and the Eric H.I. and Janice Hoffman Faculty Scholar. She earned the honor in recognition of her many accomplishments including a stellar undergraduate GPA, membership in the honors societies Phi Theta Kappa and Tau Beta Pi, and serving as the Community Service Chair of the OSU ITE Student Chapter.



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## WSU PI Xianming Shi Elected ASCE Fellow



Xianming Shi, PacTrans PI and associate professor in Washington State University's Department of Civil and Environmental Engineering, has been elected a fellow of the American Society of Civil Engineers (ASCE).

ASCE Fellows are recognized for their contributions and solutions that change lives around the world. According to the ASCE website, fellows make up only three percent of the approximately 150,000 members of the organization, which is the oldest engineering society in the U.S.

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# RECENTLY COMPLETED RESEARCH

PacTrans researchers from our consortium member institutions have recently completed the following projects in the 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.



Erica Fischer (OSU), "[Agent-based Modeling of Emergency Management Networks with Public Mobilization after a Disaster](#)" | 2018-S-OSU-1

Joe Louis (OSU), "[Application of Augmented Reality and Tangible Interfaces to Minimize Workzone Effects on Mobility through Participatory Planning](#)" | 2018-S-OSU-2

Haizhong Wang (OSU), "[Integrating Driving Simulator Experiment Data with a Multi-agent Connected Automated Vehicles Simulation \(Ma-CAVS\) Platform to Quantify Improved Capacity](#)" | 2018-S-OSU-4

Don MacKenzie (UW), "[Analyzing the Long-term Impacts of COVID-19 Disruption on Travel Patterns](#)" | 2020-COV-UW-2

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## UPCOMING EVENTS

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# Developing Design Guidelines for Commercial Vehicle Envelopes on Urban Streets

**Tuesday, February 16  
11:00am - 12:00pm PST**

Registration Link: [https://washington.zoom.us/webinar/register/WN\\_gVfLxYHQSTetSnBZq2WhQQ](https://washington.zoom.us/webinar/register/WN_gVfLxYHQSTetSnBZq2WhQQ)

Commercial vehicles using urban curbside loading zones are not typically provided with a consistent envelope, or a space allocation adjacent to the vehicle for delivery operations. While completing deliveries, drivers are required to walk around their vehicle, extend handling equipment, and maneuver goods; these activities require an envelope around the vehicle. This research aimed to improve the understanding of this envelope. Observations of delivery operations by trucks determined common practices such as door location and accessories used. This information guided simulated loading activities that quantified different loading space requirements. This resulted in a robust measurement of the operating envelope required to reduce conflicts between truck's delivery actions with adjacent pedestrian, bicycle, and motor vehicle activities.

A bicycling simulator experiment examined bicycle and truck interactions in a variety of commercial vehicle loading zones (CVLZ) designs, informed by the field work and simulated loading activities. The bicycling experiment was completed by 50 participants. The bicycling simulator collected data regarding a participant's velocity, lane position, and acceleration. Three independent variables, sourced from the field work, were included in this experiment: pavement marking (No, Minimum, or Recommended CVLZ), Courier Position (none, behind vehicle, on driver's side), and Accessory (none or hand truck). The results support the development of commercial loading zone design recommendations that will allow our urban street system to operate more efficiently, safely, and reliably for all users.



**Ed McCormack**  
Research Associate Professor  
Civil and Environmental  
Engineering  
University of Washington

Dr. Edward McCormack is a Research Associate Professor and the Director of the on-line Master of Sustainable Transportation Program in Civil and Environmental Engineering at the University of Washington. At the UW, his research has focused on the use of technology to improve people and freight mobility. His projects have included exploring the impacts of e-commerce in urban areas, developing truck performance benchmarks using global positioning systems (GPS), testing the use of unmanned aircraft for transportation agencies, and exploring the use of electronic security seals to facilitate freight movements over international borders.



**Hisham Jashami**  
Research Associate  
Civil and Environmental  
Engineering  
Michigan State University

Hisham Jashami is a research associate in the School of Civil and Environmental Engineering at Michigan State University. He received his Doctor of Philosophy from Oregon State University in Transportation Engineering. His research has been focused in areas related to transportation safety, human factors, driving & bicycling simulation, and autonomous vehicle simulation. He also minored in statistics during his graduate studies at OSU. Prior to his graduate studies at OSU he accumulated 5 years of consulting engineering experience designing roadway and civil utility projects at a consulting firm based in Turkey.



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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