



# PacTrans

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University Transportation Center Newsletter

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## PacTrans Student Researcher Invited to 2018 Eno Future Leaders Development Conference

Last May, PacTrans supported UW student Elyse Lewis by giving her the opportunity to attend the 2018 Eno Future Leaders Development Conference, in which she acted as a representative for the College of Civil and Environmental Engineering.

The Eno Center for Transportation (Eno) is a non-profit organization based in Washington D.C. whose mission is to nurture creative and visionary leaders with programs like the Leaders Development Conference (LDC), an event that offers participants professional growth in the transportation sector.

The LDC is a four-day long session consisting of panels and site visits in D.C., featuring industry leaders, planners, advocates, and policy makers from a variety of transportation sectors. Panels consisted of speakers sharing their experiences with participants in a Q&A-style format.

Lewis further commented on the great networking opportunity that the LDC provided to its attendees, mentioning that the presence of current leaders and the cohort of fellows allowed for continued discussion outside the panel.

Key topics of discussion during the conference included ideas regarding new funding transportation methods with a debate on the gas tax, passenger safety regulations for autonomous vehicles, and the management of newer mobility services, like Uber and Lyft, taking their disruptive potential into consideration.

Solutions to some of these challenges were brought to light, ranging from land use to fee-based demand management, which attempts to limit sprawl and protect high-capacity transportation modes, including buses and trains.

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## PacTrans Assistant Director Attends First UTC National Mobility Summit



Last April, PacTrans Assistant Director, Cole Kopca, traveled to Washington D.C. to take part in the First Annual 2018 National Mobility Summit of USDOT University Transportation Centers. Mobility21 National University Transportation Center (UTC), lead by Carnegie Mellon University, hosted this one day summit which brought together UTC researchers with national government, industry and association leaders who are working to improve the mobility of people and goods. With over eighty in attendance, goals of the summit include: highlighting research, education and technology transfer activities of mobility-themed USDOT

UTCs; aligning UTC efforts with current and emerging “real-world” transportation mobility needs; and developing public and private partnerships.

The summit was comprised of a public agency panel discussion, a private industry panel discussion, a UTC overview session, and a reception. There was also a keynote address delivered by the Honorable Finch Fulton, Deputy Assistant Secretary for Transportation Policy and the US Department of Transportation. Kopca had the opportunity to give a brief overview of PacTrans and the mobility funded research currently underway, and also hosted an information table at the reception for those who wanted to further discuss ongoing research as well as potential new partnerships during the reception at the end of the day. In total there were nine UTCs in attendance representing 48 colleges and universities from around the country. There were also people present from USDOT, DOE, Community Transportation Association of America, Metropolitan Washington Council of Governments, Conference of Minority Transportation Officials, National League of Cities,

Mobility Lab, Paccar, Federal Highway Administration, SAE International, American Public Transportation Association, Transportation Research Board, American Road & Transportation Builders Association, Institute of Transportation Engineers, FDA, League of American Bicyclists, Qualcomm, ITS America, Federal Transit Administration, and many others.

In previous years, the T-SET National UTC, housed at Carnegie Mellon University, hosted an annual Safety Summit of UTCs. With new FAST Act funding, the consortium transitioned from a safety focused center to a mobility focused center. Their new national UTC is called Mobility21. PacTrans has been a proud participant in the previous safety summits for the past three years they were held and has also now transitioned to a new focus on mobility. This event continues to be a wonderful opportunity for agencies and private industries to share concerns and research gaps, while also offering UTCs the opportunity to present the many great endeavors they are involved in. We look forward to continued participation in future years!

## Eno Future Leaders Development Conference continued

The concept of building relationships, particularly professional connections with advocates and more personal ones with mentors, was another topic of discussion during the panel. Lewis recalled an interesting note which focused on the fact that women are typically over-mentored while men are often over-advocated. The “Kitchen Cabinet” concept, in which an individual

essentially has a handful of allies in his or her back pocket, was also introduced.

The most popular topic of conversation was the importance and development of a variety of communication skills in order to successfully relate to all audiences invested in transportation.

Lewis mentioned that there was an even greater emphasis on how communication could be improved with the

travelling public, particularly in regard to funding. The use of media tools, such as blogs and news briefs, was suggested during the discussion, as well as the translation of material so it is easily digestible by audiences.

Lewis left the conference more than pleased with her experience, equipped with both a better understanding of niche transportation topics and enough contacts to start filling a Kitchen Cabinet.



## PacTrans Research Highlighted and Discussed during NIATT Advisory Board Meeting

Last spring, PacTrans assistant director, Cole Kopca, attended the National Institute for Advanced Transportation Technology (NIATT) advisory board meeting on the University of Idaho campus in Moscow, Idaho. NIATT is a center of excellence for transportation research, education, and technology transfer in the state of Idaho, the Pacific Northwest, and Intermountain regions in the United States. Much like PacTrans, they have an advisory board that meets

regularly to discuss new developments, both nationally and regionally, and ways that their center can continue to leverage their expertise to better service their state, region, and county. Seeing as PacTrans has an overlapping mission and focus, we play a role in that advisory board.

Items discussed during this meeting included: the new USDOT strategic directions of infrastructure, safety,

innovation, and accountability as they pertain to NIATT's current activities, as well as a focused discussion about areas of improvement and needs for increased focus within NIATT. Kopca had the opportunity to present PacTrans' new focus on mobility, as well as the research projects that have just been selected for funding during the newest upcoming research cycle.

## UW Hosts PacTrans Board Meeting

Late last April, PacTrans convened an in-person board meeting on the University of Washington campus in Seattle, Washington. We regularly host board meetings in order to spend time discussing new developments, evaluate our processes, brainstorm new opportunities, and give updates on current activities. During this meeting the board discussed implementation of our new data management plan, the newly required technology transfer plan, USDOT's new strategic directions, research management processes, and several other key items. Each consortium partner university

gave updates on current and recently completed activities, and four UW PacTrans funded PIs gave updates on the progress of their ongoing research projects. Many great ideas were generated for ways we can continue to improve the way we foster and support research, workforce development, education, outreach, and technology transfer. The next in-person board meeting will include the PacTrans advisory board and will take place in Fairbanks, Alaska in October, coinciding with the Region 10 Transportation Conference.



# STUDENTS

## Past PacTrans Region 10 Student of the Year Named 2018 Traffic Safety Scholar

Oregon State University graduate student, Masoud Ghodrat Abadi, who received the Michael Kyte Region 10 Outstanding Student of the Year Award in 2016, has been named a 2018 Traffic Safety Scholar and awarded a \$1,000 scholarship to attend the 37th annual National Lifesavers Conference on Highway Safety Priorities in San Antonio, Texas. Ghodrat Abadi, who

was pursuing a PhD in transportation engineering at the time, was one of 50 U.S. and international college students selected through this competitive application process. The Lifesavers Conference showcases the latest research, evidence-based strategies, proven countermeasures, and promising new approaches for addressing the nation's most pressing traffic safety



problems. Dr. Ghodrat Abadi is now an assistant professor of transportation engineering at California State University, Sacramento.

## PacTrans Supported OSU Students Help UMASS Launch First ITE Student Leadership Summit

Last April, three undergraduate, student members of the OSU ITE student chapter, Travis Larsen, Cadell Chand, and Ivan Zaw, attended the ITE Student Leadership Summit in Amherst, Massachusetts. The conference spanned over the course of three days, from Apr. 13–15, and focused on leadership and professional development within the contexts of both student activities and preparation for future careers. Conference activities included speed

interviews and resume building, small group discussions with industry leaders, and a group leadership activity where teams brainstormed and then presented ideas on how to better engage students in ITE and other professional societies at their respective colleges. This conference was unique because not only was it hosted for students, but it was also organized by students. Travel to this conference was made possible because of funds provided by PacTrans.



## OSU at the 2018 ITE Western District Annual Meeting

Last June, five lucky students from PacTrans constituent university, Oregon State University, had the chance to attend the ITE Western District Annual Meeting in Keystone, CO.

The joint Western and Texas District Meeting gave participants the opportunity to listen in on technical sessions led by professionals in the transportation sector, a seemingly endless string of networking possibilities, and even the option to engage in fun family events.

OSU's ITE Student Chapter saw much success at this year's meeting, winning the ITE Western District Chapter of the Year Award, which supports student chapters in reaching the charter's goals and offers its winners a certificate and \$1,000 in travel funds for the Annual Meeting, and placing 2<sup>nd</sup> in the ITE Western District Traffic Bowl, an event in which students are challenged with questions on the transportation profession in the style of Jeopardy.

Additionally, PacTrans Associate Director at OSU, David Hurwitz, received a plaque commemorating the ITE Western District

Transportation Educator Award for the year of 2018.

Congratulations to David and OSU's ITE Student Chapter for all their achievements this year!





## UW Grad and Georgia Tech Professor Kari Watkins Delivers PacTrans Seminar

Last May, former University of Washington PhD student, Kari Watkins, joined us to present a ten-year retrospective on OneBusAway on the UW campus in Seattle. Watkins, now an Associate Professor at Georgia Tech, began work on OneBusAway with several other UW students and faculty back in 2008. For those not familiar, OneBusAway is an open source platform for real time transit information which originally launched in Seattle in 2011 and is now operating in several cities across the country and around the world.

After sharing some background about the impetus for the project, Dr. Watkins went on to share about some of the great research that she and her students have done using the data that has become available due to the process of developing this service. She also spoke about some of the functions that they still hope to include moving forward such as crowdsourcing data gathering. The original project was funded by PacTrans' predecessor, TransNOW, the regional University Transportation Center that operated for over 20 years prior to PacTrans. We were very grateful

and fortunate to get to hear from Watkins about this great work!

Beyond simply sharing about the research, Watkins' underlying theme through this presentation was about openness and sharing. The code for this platform is open source so that public agencies around the world can either implement it via OneBusAway, or use the code to build a custom platform that better suits their local needs, such as is the case in New York City. During the Q&A, there was some considerable discussion about data availability, privacy, and efficacy of data.



## Dr. Junyi Zhang Presents on Life-Oriented Behavioral Research

Late last May, students at the University of Washington were pleased to hear a PacTrans-sponsored seminar delivered by Professor Junyi Zhang, from Hiroshima University. The talk was titled, *Life-Oriented Behavioral Research for Urban Policy – A Focus on Mobilities*. Zhang explored the quality of life through an extremely broad lens, considering domains such as residence, neighborhood, health, education, work, family life, recreation, leisure and tourism, finance, and travel behavior. He presented on a number of different projects, both ongoing and recently completed. PacTrans would like to extend a big thanks to Zhang for coming and speaking with us.

## Dr. Lily Elefteriadou Presents on Traffic Signal Control with CAVs

This past spring, Dr. Lily Elefteriadou, Director of the UF Transportation Institute (UFTI) and the Kisinger Campo Professor of Civil and Coastal Engineering at the University of Florida, delivered our spring quarterly Regional Transportation Seminar on the University of Washington Campus. In this talk titled, *Traffic Signal Control with Connected and Autonomous Vehicles in the Traffic Stream*, Elefteriadou explored ongoing work to develop optimization algorithms, simulation tools, and sensor capabilities for enhancing traffic signal control operations when the traffic streams consist of connected vehicles, autonomous vehicles, and conventional vehicles. It was a pleasure to host and hear from her.



Briana Calhoun

## PacTrans Fellow Alumni Spotlight

Every year, PacTrans supports a [fellowship program](#) and offers enough funding to cover the tuition needed to receive a master's degree related to transportation to talented students who show great potential to succeed in the field.

Participants of our program have the opportunity to combine the knowledge they gain in a classroom setting and the experiences they are given working with topics circulating around transportation industries.

One of our past fellows is Briana Calhoun. Ms. Calhoun completed her undergraduate degree in environmental studies at the University of Oregon in 2010 and went on to receive a master's degree in engineering with a focus on transportation and highway engineering from the University of Washington in 2017.

At the University of Oregon, Calhoun participated in an environmental leadership program, for which she was responsible for monitoring and collecting data on western

pond turtle populations, leading her to present her findings to the [Bureau of Land Management](#) and the university's community.

Calhoun has previously worked with [Kennedy Wilson](#) as an assistant community director and Balfour Beatty Communities as a senior resident specialist, both agencies being real estate-centric. At [Balfour Beatty Communities](#), Calhoun was responsible for coordinating a 700 home housing area for military and civilian families in 2014.

Calhoun has been with [Fehr & Peers](#), an agency dedicated to improving communities and supporting non-profit organizations, for the past two years now, spending a year interning for them in Seattle, Washington, as part of her fellowship, and moving to Portland, Oregon to begin a position as a transportation planner in Dec. of 2017.

# TECHNOLOGY TRANSFER AND PARTNERSHIPS

## PacTrans Presents at Washington Traffic Safety Conference

Last spring, PacTrans director, Yin Hai Wang, had the great opportunity and privilege to present at Washington's 2nd Traffic Safety Conference in Kennewick, Washington. This three-day event, hosted by the Washington Traffic Safety Commission, is designed to promote dialogue around the hottest issues in traffic safety and build partnerships among public, private, and non-profit organizations. It promises to bring new information and innovation to attendees through break-out and networking sessions.

Wang presented at one such break-out session titled, *Innovation and New Approaches to Traffic Safety Analysis*. Attendees of this session heard from Natasha Close, a surveillance epidemiologist at the Department of Health, regarding the use of syndromic surveillance to monitor traffic-related injuries, Youngki Woo, a research assistant at the Washington State University, on cannabis intoxication and fatal crashes in Washington State, and Wang on large-scale roadway safety analysis using a regional map-based platform known as DRIVE Net.



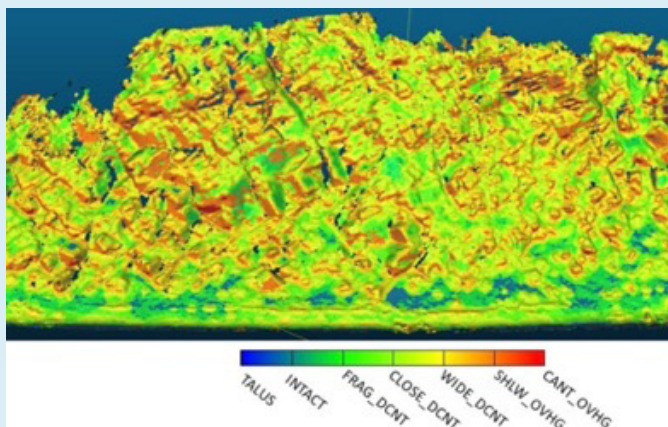
## PacTrans Project to Assess Rockfall and Landslide Activity Featured in UTC Spotlight Newsletter

In 2012, PacTrans and Alaska DOT, began funding a research project, carried out by four researchers from three different partner universities, looking into new and efficient ways to assess rock slopes that threaten the safety of highways. The project was featured in the UTC's Spotlight Newsletter last May and the first four phases of this project presented a variety of possible real-world executions.

The six-yearlong project collected baseline laser-scan surveys at two different locations in Alaska with a history of rockfall and landslide activity using Light Detecting and Ranging (LIDAR) in order to evaluate the magnitude and frequency of a natural event.

PacTrans went on to support the third phase of the project, focusing more on assessing the quality of Unmanned Automated Vehicle (UAV) collected photogrammetric data, of which helped in the development of a quantifiable rockfall and slope stability model, complete with a change detection system designed to forecast future slope behavior.

This project is primarily focused on safety, one of PacTrans' major themes, and, more recently with phase four, exploring mobility impacts. Because of PNW's mountainous surroundings, it isn't the easiest environment for maintaining the integrity of sustainable mobility, but it is critical in order for economic activity and the well-being of the community to continue to grow.



# OUTREACH



## UW Engineering Discovery Days

Most of our consortium universities offer some sort of platform for reaching out to elementary, middle, and high school students to expose them to the many opportunities in engineering and raise interest in STEM education and careers. At the University of Washington, this platform is called Engineering Discovery Days. Each year, this two-day event

offers students and faculty from all UW engineering departments the opportunity to share their work with students, teachers, families and the community, while featuring hands-on and interactive activities that demonstrate the exciting work of engineers.

This year, on April 19 and 20, PacTrans hosted our annual booth during Discovery Days. Hundreds of students participated in our facilitated activity, Rush Hour, which combines problem solving with the overarching theme of mobility in transportation. Also present was the PacTrans sponsored student Hyperloop team and several of the labs in Transportation Engineering.

The STAR Lab had demos on traffic signalization and controller boxes, driving simulations, and video detection. The Sustainable Transportation Lab featured hands-on activities introducing students to electrification and charging networks. PacTrans is very proud of the proactive approach we take to recruiting young students to engineering education and specifically to transportation related disciplines.





# PacTrans Board of Directors



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*Adjunct Professor, Electrical Engineering*  
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 Western Trailer  
*Chairman, Idaho Transportation Board*  
 Idaho Transportation Department

# SAVE THE DATE

## Reception during TRB Annual Meeting

Tuesday, January 15, 2019 | 6:00pm

Baby Wale 1124 9th St NW, Washington, DC 20001

## About Pacific NW Transportation Consortium

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.

### Contact

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