



ISSUE 23 | WINTER 2018

University Transportation Center Newsletter

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PacTrans Sponsors ITE Western District Student Leadership Summit

This past January, PacTrans had the distinct opportunity to sponsor the Oregon-State-University-ITE-student-chapter-hosted Western District Student Leadership Summit in Corvallis, OR. This, the fifth annual student leadership summit of the Western District, was a three-day event that included over 120 students from twenty-five different schools from the Western District and two students form U-Mass Amherst, who are preparing to host their first Student Leadership Summit in April, and professionals from several industry firms. The summit focused on leadership, networking, and professional development through a variety of small group and panel discussions, talks, and professional development workshops.

A key component of the Student Leadership Summit was the group project that focused on how ITE student leaders can successfully develop their chapter. Dr. Scott Paja, Assistant Dean at Oregon State University, introduced concepts from motivational theory to encourage officers to reframe how student chapters market ITE to fellow students.

Afterwards, students worked with one another to develop posters highlighting ideas, strategies, and challenges ITE chapters face with fundraising, member recruitment and retention, outreach, and professional development. Working on creating this project and listening to the project presentations helped members to gain new insights from other student chapters on new strategies that could be integrated back at home in their chapters. This includes ideas like reaching out to multiple departments, such as, urban planning or computer science, that might be interested in attending some ITE sponsored events. These ideas can be easily implemented to broaden our visibility and reach new members as ITE student chapters grow and mature.

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NEWS & EVENTS

PacTrans 2018 Reception at the Annual TRB Meeting





PacTrans would like to extend a huge thanks to our external advisory board, principal investigators, student researchers, agency partners, industry partners, and friends for coming out to our annual reception that is held in conjunction with the TRB meeting each January in Washington DC. This year, our reception attracted over 200 people to enjoy refreshments, and discuss new and exciting partnerships in and around the Pacific Northwest.

Among other accomplishments this year, PacTrans was able to support the travel of over 60 students from consortium universities to the TRB annual

meeting to present papers, explore research, and build relationships outside of their respective universities.

During the reception, PacTrans directors Yinhai Wang (UW), and David Hurwitz (OSU), presented PacTrans' prestigious Michael Kyte Region X Outstanding Student of the Year Award to Oregon State University PhD student Alireza Mostafizi. This award is given each year in recognition of the region X student who displays superior abilities and effort in the areas of: technical merit and research, academic performance, and professionalism and leadership.



PacTrans Consortium Member UAF Partners with StoryCorps

PacTrans consortium member
University of Alaska Fairbanks has
recently partnered with StoryCorps,
an independent nonprofit project,
whose mission is to honor and
celebrate the lives of everyday
Americans by listening to their
stories. UAF's role is leading and
recording science-based stories and
dialogues. PacTrans PI, University of
Alaska Assistant Professor Nathan
Belz, will be recording conversations related to transportation.

This partnership has even blossomed into an NSF proposal that was just submitted in which Dr. Belz will play a role as thematic leader in charge of coordinating and condensing conversations based in engineering, technology, and energy. Identifying real world needs and presenting them to the researchers who have the resources to investigate those needs is of top priority to PacTrans. The hope is to use these conversations to identify common themes for research needs and to make a meaningful impact on our transportation systems.

CONTINUED FROM FRONT

Throughout the conference, students had many opportunities to talk with other student chapter leaders and even transportation professionals that were also attending the conference. Panel and small group discussions talked about both professional development and leadership development with current ITE Western District members. Workshops for attendees also focused on reviewing resumes and getting

practical feedback on interview skills. This was a unique opportunity to connect with transportation students in ITE from multiple schools and to further support the growth of our student chapter.

PacTrans sponsorship included financial support for the event space, door prizes, and travel support to two UW ITE Student Chapter representative to attend the summit.



NEWS & EVENTS

PacTrans OSU PI named Glenn Willis Holcomb Professor in Structural Engineering

Oregon State University professor of structural engineering, and PacTrans PI, Michael Scott, was recently named the Glenn Willis Holcomb Professor in Structural Engineering. Scott's research interests include nonlinear structural analysis and dynamics, structural response sensitivity, object-oriented software design, parallel computing, and numerical methods.

The Glenn Willis Holcomb Structural Engineering Professorship was established in 2011 through an estate gift from Col. Roy C. Edgerton (1914-2011), a 1948 graduate of the College of Engineering. It honors one of Edgerton's civil engineering teachers, Glenn Holcomb.

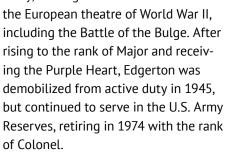
To many at OSU, Glenn Holcomb was simply known as "The Prof." After earning his master's degree from Oregon State in 1931, he taught at OSU for over 30 years, retiring as head of the civil engineering department in 1965. The Prof mentored countless students and was very active within

the profession, serving on the State Board of Engineering Examiners and as president of the national-level American Society of Civil Engineers.

Holcomb led engineering projects for the cities of Portland, Eugene, and Corvallis, as well as the State Highway Department. In 1942, he was principal engineer in the construction of Camp Adair, located nine miles north of Corvallis. On campus, Holcomb took the lead in the design of Oregon State College Pavilion, later renamed Gill Coliseum. He loved Oregon State's athletic program, and served with the Intercollegiate Athletic Board and the National Collegiate Athletic Association. Holcomb was also a Corvallis city councilman. He died in 1988 at the age of 92.

A Louisiana native, Roy Edgerton graduated from high school in Klamath Falls, Oregon, and worked for two years to save money for his education prior to enrolling at Oregon State in 1934. He interrupted his schooling to work for the Oregon State Highway Department

and then for stints in the U.S. Army, serving in



Edgerton returned to OSU to complete his Civil Engineering degree then worked for the Oregon State Highway Department prior to serving as the Assistant Director for Technical Activities for the Transportation Research Board, a division of the National Research Council. Among other honors he received the prestigious W. N. Carey, Jr., Distinguished Service Award and was a fellow of the American Society of Civil Engineers. He and his wife, Shirley, were married for 64 years.

Congratulations Dr. Scott!

Two PacTrans PIs Named to Idaho Autonomous and Connected Vehicle Deployment Committee





The State of Idaho Governor, Butch Otter, has recently issued an executive order, NO. 2018-01, creating an Autonomous and Connected Vehicle Deployment Committee. PacTrans Associate Director and Professor of Civil Engineering at the University of Idaho, Ahmed Abdel-Rahim, and PacTrans PI and Professor of Computer Science at the University of Idaho, Axel Krings, have been appointed to the technical advisory committee for this executive committee. PacTrans and its researchers are extremely devoted to the mission of efficiently and responsibly seeing the successful implementation of connected and autonomous vehicles into our vehicle fleets and the hope that this innovation in cutting edge technology will revolutionize mobility and the way people move in their every-day lives.

NEWS & EVENTS

PacTrans PI Named Transportation Club of Seattle Person of the Year

This past February, PacTrans PI Anne Goodchild, was named the Transportation Club of Seattle (TCS) 2017 Person of the Year. Dr, Goodchild is a Professor of Transportation Engineering at the University of Washington (UW), the Founding Director of the Supply Chain Transportation and Logistics Center, the Academic Director of the Supply Chain Transportation and Logistics Master's Program, and an Adjunct Associate Professor, Industrial & Systems Engineering at the UW.

The Transportation Club of Seattle is a non-profit organization that has been at the center of the Seattle area transportation community for over 108 years. The club was formed to encourage the study by members of transportation issues; promote closer business relationships; promote the welfare of its membership as well as to sponsor

educational programs and discussions pertaining to traffic and transportation matters. The TCS Person of the Year award honors an individual who has made extraordinary efforts, impact and contributions to the local transportation field and community.

Dr. Anne Goodchild joined the UW faculty in 2005 after completing her PhD at University of California -Berkeley. Last year she launched the Urban Freight Lab, a strategic partnership of private companies and publicsector agencies working with the City of Seattle to address urban delivery issues. She is an expert in international freight and logistics and chairs the National Academies of Sciences, Engineering, and Medicine's Transportation Research Board (TRB) Freight Group. Her research focuses on the intersection between supply chain management and freight



transportation and addresses the nexus of private and public actors and infrastructure in the movement of goods. Recent research includes evaluating the changing nature of ecommerce and implications for goods delivery on CO2 emissions, local pollutants, and vehicle miles traveled.

Congratulations Dr. Goodchild!



RESEARCH HIGHLIGHTS

PacTrans Funded Research Leads to SCTL Pilot on Innovative **Goods Delivery Systems**

One of PacTrans' ongoing research projects, lead by UW PI Dr. Anne Goodchild is titled, Final 50 Feet of the Urban Goods Delivery System: Pilot Test of an Innovative Improvement Strategy. Dr. Goodchild is the founding director of the Supply Chain

and Transportation Logistics Center housed at the University of Washington, where this research is being conducted. Dr. Goodchild, along with her student researchers and staff, are partnering with the Seattle Department of

Transportation (SDOT) to pilot test a common-carrier smart locker system in the Seattle Municipal Tower from late March through April 2018. The pilot will test the ability of new mini-distribution centers in cities-such as smart lockersto create delivery density and reduce the time delivery people have to spend in urban towers to complete their work. The Lab is collecting 'before' and 'after' data to evaluate the pilot's premise: that when delivery trucks can pull into a load/unload space that's close to a

> To learn more about this upcoming pilot please see their press release here.

mini-distribution node with delivery density (lots of deliveries in one place),

everyone benefits.



PacTrans Consortium Member UI Promotes Transportation Safety in Middle- and Elementary-Schools Through Art

In the past, PacTrans has reported on a recently completed, three-year safety education project that sought to raise teen awareness to some of the most common transportation safety issues facing this country. This past fall, the National Institute for Advanced Transportation Technology (NIATT), housed at PacTrans Consortium Partner, University of Idaho, funded an extension of that project and sent an educator into twelve classrooms (grades 1 – 8) to teach about traffic safety. Each lesson consisted of 15 minutes of traffic safety education/discussion, then 20 minutes were allocated to art creation. Key ideas and easy-to-remember phrases such as "Stop, Look and Listen," "Look Left, Right, Left Again" "Be Safe, Be Seen" "It Can Wait!" were taught.



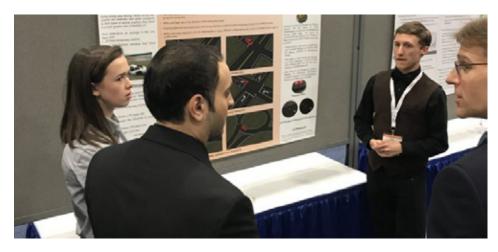
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RESEARCH HIGHLIGHTS

OSU Student Traffic Control Devices Challenge Team Places 2nd

Each year, the Transportation Research Board (TRB) Standing Committee on Traffic Control Devices (AHB50) and the American Traffic Safety Services Association (ATSSA) join together to sponsor and conduct an exciting design competition, the Traffic Control Device (TCD) Challenge, to promote innovation and stimulate ideas in the traffic control devices area with a goal to improve operations and safety. This year, twenty-four teams from around the country participated, one of which was a group of four students from Oregon State University (OSU).

The top nine teams were invited to give live poster presentations during the 97th TRB Annual Meeting in Washington D.C. this past January. Here, thirty judges walked through the posters where students from each team gave short presentations of their work. The top three teams were then invited to the ATSSA Annual Convention and Traffic Expo to present their work. The OSU student team was not only invited the present at the TRB Annual Conference, but places 2nd and was further invited to the ATSSA Annual Convention and Traffic Expo in late January in San Antonio, Texas, where they presented their work.



The problem statement for this year's challenge was as follows:

"Wrong-way driving can be described as a situation when a vehicle enters a traffic stream travelling in the opposite direction and drives against the on-coming vehicles. These events continue until the operator realizes he/she is in error, leaves the roadway, redirects her/his vehicle to the proper direction, or causes a collision. This behavior results in hundreds of highway fatalities every year.

While the development of programs, and specific countermeasures, has been resolute, the problem persists claiming

the same number of lives, year in and year out. Therefore, designers or design teams will have to consider how the current system needs to change to prevent this behavior and attendant crashes. What are the traffic control device designs, ideas, enhancements, and/or standards that will stop motorists from entering the wrong roadway and driving the wrong way? How will technology compliment these traffic control device strategies? That is the challenge for you and your teammates."

TRANSPORTATION SAFETY CONTINUED

Over 200 pieces of student art were created and then displayed at NIATT. Leaders from the University, City and Schools were invited to attend a reception in February to celebrate and highlight the students' works. Approximately forty-five people attended the reception

(nineteen students, twenty-four adults). Fifteen students were chosen by NIATT for exceptional art that portrayed clearly the aspects of safety that were taught during in-classroom instruction.

PacTrans is unbelievably proud of the impact that this safety education project has generated across the Pacific Northwest. If you would like to learn more about this particular outcome or to see more of these students' exceptional art pieces, see the info sheet here.

STUDENTS

PacTrans Student Research Selected for the Eno Future Leaders Development Conference

Each year, the Eno Future Leaders
Development Conference (LDC) gives
twenty of the nation's strongest
graduate students in the transportation field, those with potential to
become national-level leaders in the
field, a first-hand look at how national
transportation policies are developed.
Students apply to the program early
in the year, and those selected as "Eno
Fellows" come to Washington, DC for a
week in the Spring for meetings with
federal officials and leaders of business and non-profit organizations. At
the University of Washington, PacTrans

hosts an internal competition where advisors can nominate top students for this highly competitive program. Once the transportation faculty identifies a student finalist, that student is then submitted to the Eno Future Leaders Development Conference. This year, the UW selected Graduate Student Research, Elyse O'Callaghan Lewis, a PhD candidate working under Dr. Don MacKenzie. Ms. O'Callaghan Lewis has since been selected as one of the twenty students who will have the opportunity to attend the Future Leaders Development Conference in

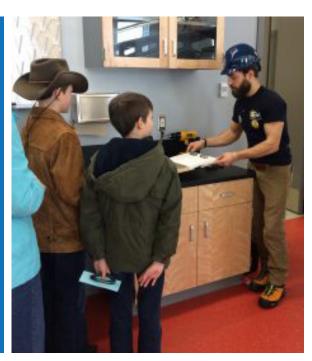
May. Her research interests focus on sustainable urban transportation



development topics, such as, human factors related to mode choice, the impact of the shared economy on transportation networks, measures of social equity, and the impact of newlyformalized public transit systems on informal settlement integration in Latin American cities.

Congratulations Elyse!

PacTrans Member UAF Hosts Engineering Week Open House



UAF's College of Engineering and Mines (CEM) hosts an engineering week open house every year in conjunction with national engineer's week. The event is an opportunity for the Fairbanks community to discover, engage and enjoy all things engineering. This year's open house held on Saturday, February 24th, was attended by approximately 500 people, and all activities were located in the newly completed Engineering Learning and Innovation Facility. The Center for Safety and Equity in Transportation (CSET) Tier 1 UTC provided everyone with the opportunity to drive a remote-control car on a track that included a roundabout, and race toy cars on a track. Both actions provided opportunities to discuss road safety concepts and engineering concerns.

Center for Environmentally Sustainable Transportation in Cold Climates (CESTiCC) Tier 1 UTC offered an activity titled "Making Concrete" which taught young engineers and their families about the materials that go into building roadways and maintaining traction in the winter. The hands-on component of the activity was making playdough, introducing them to following a recipe, measuring ingredients and mixing the materials together to make something new.

EDUCATION & WORKFORCE DEVELOPMENT

David Noyce Presents Communication- and Connectivity-Driven Transportation Systems for Regional Transportation Seminar



Several weeks ago, PacTrans hosted the quarterly Regional Transportation Seminar. This winter quarter, we were very privileged to have Dr. David Noyce of the University of Wisconsin join us as the speaker. Dr. Noyce presented on new work concerning innovative signal-

ization techniques at intersections. If you missed the seminar but are interested in the content, please watch the video link.



PacTrans Seminar on High Speed Rail—Airport Integration

Several weeks ago PacTrans hosted Dr. Xueming Chen, a Professor, Head of the Department of Urban Planning and Design, and Head of the Build Environment Cluster, at Xi'an Jiaotong-Liverpool University in Suzhou, China, for a seminar. His talk, titled Probing into China's and Europe's Air-High Speed Rail Integration: A Policy Analysis discussed an inventory of different levels of high speed rail - airport integration around the world. Specifically, he discussed characteristics that make better integration more plausible and more effective. As this research progresses, he hopes to develop methods for better accessing the potential demand for better integration surrounding specific airports around China and to identify best practices that make this integration a success. It was a privilege to have Dr. Chen, and we are grateful that he took the time to speak with us!



PacTrans Seminar Series Presents: Dr. Yongqiang Lyu

This past month, PacTrans had the distinct pleasure to host Dr. Yonggiang Lyu, Associate Professor at Tsinghua University, Beijing, China. Dr. Lyu conducts research on the biosensing and human-computer security based on micro architecture and embedded system technologies. He came to the University of Washington deliver a presentation titled, Sensing and Measurement of Human Physiology.

The presenter gave a broad overview of a variety of human sensing technologies outside the conventional realm of transportation, and discussed potential transportation applications. Specifically, this talk addressed sensing methods for detecting and monitoring human vital signs, and a several signal processing and machine learning methods for extracting insight from noisy sensor data. He provided insight into his work on applying such sensing techniques to transportation and smart cities challenges.



TECHNOLOGY TRANSFER & PARTNERSHIPS

PacTrans Hosts Tech Workshop with DiDi

Recently, PacTrans director, Yinhai Wang, was contacted by DiDi, the Chinese ride-sharing company that provides transportation services for more than 450 million users across over 400 cities in China. Their interest was to visit and hear from university researchers with a broad range of expertise from artificial intelligence, to data driven smart transportation solutions, to voice recognition, to natural language processing.

On January 16, 2018, PacTrans hosted a half day technology and research scan and discussion of the topics listed above. This workshop was attended by a group of four people led by Jieping Ye, Vice President of DiDi, a group from Zhuhai Innovation Center, as well as several UW faculty and student researchers.

The program started with welcoming remarks from University of Washington (UW) professor Yinhai Wang, College of Engineering Vice Dean Gregory Miller, and Civil & Environmental Engineering Department Chair Laura Lowes. To start off the research session, DiDi vice President Jieping Ye, presented an introduction to the Al-related work that is taking place at DiDi, as well as their vision for the future of ride sharing in China and around the world. Mr. Ye's talk highlighted DiDi's interest in collaborating with researchers and agencies to apply their vast data resources to address current challenges in transportation planning and management.

In the research session, professors and researchers from the UW departments of Civil & Environmental Engineering

and Industrial & Systems Engineering presented their current research on emerging topics in transportation. Presentations included pricing and rider/driver matching for sustainable ride sharing (Dr. Cynthia Chen, UW CEE), Mobile sensing for Urband traffic monitoring (Dr. Jeff Ban, UW CEE), and data driven smart transportation solutions (Dr. Linda Ng Boyle, UW ISE/CEE). Over lunch, a great deal of discussion took place between DiDi representatives and University of Washington faculty regarding research collaboration, DiDi recruitment of UW graduate students, and current trends in ride sharing and data-driven transportation. In addition, UW graduate students in attendance were invited to discuss potential employment opportunities with DiDi representatives.



PacTrans Board of Directors



Yinhai Wang, PhD
Professor, Civil & Environmental Engineering
Adjunct Professor, Electrical Engineering
Director, Pacific Northwest Transportation
Consortium (PacTrans)
Director and Founder, Smart Transportation
Applications and Research (STAR) Laboratory
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University of Idaho



Eric Jessup, PhD
Research Associate Professor and
Associated Director
Freight Policy Transportation Institute
Associate Director, Pacific Northwest
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Scott Drumm, MUP *Director*, Research and Strategic Analysis Port of Portland



Angela Konert, MPA Vice President, Government and External Affairs BMW Group Representative Office, Sacramento, California



Jerry Whitehead
President and CEO
Western Trailer
Chairman, Idaho
Transportation Board
Idaho Transportation
Department

SAVE THE DATE

Region 10 Transportation Conference

Friday, October 12, 2018 | University of Fairbanks, Alaska

Region 10 Student Conference

Saturday, October 13, 2018 in Fairbanks, Alaska

Regional Transportation Seminar

Saturday, October 31, 2018, 1:30 - 2:30pm | Ram Pendyala - HUB 332

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.

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