PacTrans

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PacTrans sends UW students to Norway for transportation design challenge

Norway's economy heavily relies on their ability to produce and sell fresh seafood to international markets. In order to ensure this product doesn't decrease in value due to delay in production and delivery, Norway's infrastructure, dedicated to the transportation of these goods, must be reliable.

Unfortunately, this rugged northern country experiences many challenges in transportation. Constrained right of ways, ferry routes, narrow tunnels and bridges, severe weather, rural areas with limited technology and infrastructure, and other issues make the transportation of fresh seafood incredibly difficult.

This past summer, PacTrans and the UW's Supply Chain Transportation and Logistics Center (SCTL), along with the Norwegian University of Science and Technology (NTNU), sponsored a transportation design challenge in Norway, a competition for which a handful of UW and Norwegian students worked together to come up with innovative designs to support Norway's seafood industry.

CONTINUES

The challenge was further funded by the University of Norway (UiT) and the Norwegian Public Roads Administration (NPRA).

The inspiration for UW to host a student design challenge of this scale came last June, at the CUTC summer meeting where Dr. Kevin Womack highlighted the "Research Twinning Opportunities with the European Commission".

The transportation challenges Scandinavia faces and the existing connections PacTrans had with Norway and other Scandinavian countries made the area a top contender when PacTrans discussed where in the world students should be sent.

We were able to connect with NTNU and begun discussing ideas for collaboration with the help of NPRA's ITS program manager, Torgeir Vaa.

Haena Kim and Ruimin Ke, two research assistants and Ph.D. students in UW's Civil and Environmental Engineering program, had the opportunity to participate in the challenge and were both members of the winning team.

"I love salmon and I wanted to learn more about where my salmon comes from, that was my main motive for applying to this program," Kim said. "A lot of the challenges that this program is trying to solve align with my values of trying to solve and improve the quality of people's lives."

During the trip, students visited various sites, including fish farms, at which they were exposed to how some of the seafood in Norway gets processed. Site visits served to give students a better understanding of the issues that occur in seafood production and transportation by allowing them to actually visualize the dilemma.

Narrow, single lane roads make the larger trucks' commute less efficient and more dangerous, putting the vehicles and their drivers at risk of getting into accidents and collisions with each other, particularly in the winter months, during which the driver's vision is often obscured by lack of daylight.

The winning team received a stipend of $5,000, which is meant to support the team in continuing their work on this project. Kim and Ke's Norwegian teammates made a visit to Seattle this past September in order to further discuss how the team can implement their design.

In continuation of this transportation design challenge, PacTrans partnered with SCTL and the Valle Foundation to host Norwegian students and faculty on the UW campus last September. This student and faculty exchange accomplished several things, including:

Education benefits:

- Student teams made significant progress on their proposed solutions.
- Two PacTrans seminars were delivered by Norwegian visitors: one faculty member from NTNU and one project manager from NPRA.
- PacTrans students learned from Norwegian partners about their practice on data collection and privacy protections.

Research benefits:

- Faculty shared ongoing research at each side and brainstormed potential collaboration research topics.
- Both sides agreed to look for resources and possibilities of research twinning projects.
- One collaboration research was present at TRB: PacTrans PI, Ed McCormack, and Torgeir Vaa.

Outreach and Technology Transfer benefits:

- NPRA decided to offer some small funds to several of the most promising student teams to continue their collaboration efforts.

Several PacTrans labs had the opportunity to showcase new research products to potential users from both sides. One direct outcome of these activities is a current evaluation and field testing of PacTrans research product by NPRA for possible deployment. The collective testing in different settings and environments will make the product more versatile.

A group meeting involving both sides just occurred at the TRB annual meeting this year. At the meeting, Vaa introduced Marit Due, who is in charge of international collaborations on behalf of NPRA.

PacTrans director, Yinhai Wang, receives ITE Innovation in Education Award

PacTrans director, professor Yinhai Wang, was honored this year with the Institute of Transportation Engineers (ITE) Transportation Education Council Innovation in Education Award for his dedication to bringing together students and professionals in the transportation realm.

The award recognizes those who have shown an immense amount of support and aid in the development of transportation professionals through innovative programs. For his efforts, Wang has been referred to as a "great connector" by the ITE nomination committee.

Wang founded the Smart Transportation Applications and Research (STAR) Lab in 2003. The lab serves as a resource for students to rely on, allowing them to further delve into the world of transportation through problem solving, instrument and software training, and networking with transportation agencies that offer real-world research opportunities.

Along with inviting guest speakers into the classroom to further inspire students and helping them secure funding for travel expenses, Wang uses his involvement with the UW ITE to encourage students to expose themselves to the larger transportation research community by attending conferences, at which they can present their own findings and build professional relationships.

PacTrans and WSDOT TDM/CTR Workshop sees Great Turn Out

PacTrans and WSDOT saw a great turn out at the TDM/CTR workshop they worked together to organize and held late last August.

The workshop's theme was focused on transportation demand management (TDM) and commute trip reduction (CTR) strategies, the new opportunities they have to offer, and the challenges they will inevitably pose in the era of shared mobility services.

The workshop featured four panels, at which panelists were able to share their insights on new mobility options and how they can help CTR programs. Topics covered during the panels included current CTR programs and their challenges, new opportunities offered by emerging mobility services, active transportation options, and potential collaboration between transit agencies and new mobility services.

The workshop also witnessed active discussions from the event's 50 participants regarding possible collaborations between public and private sector stakeholders.

This event was made possible by PacTrans Associate Director for Research, Jeff Ban, PacTrans Associate Director for Education, Anne Moudon, Qing Shen from UW, and Michael Wandler and Richard Lee from WSDOT, who worked together to co-organize the workshop.

Additionally, SP+, a newer mobility service provider, offered generous financial support for this event.

Sharing with New Friends: Civil Engineering Faculty Discuss Their Practices and Problems at the 3rd Transportation Engineering Education Workshop

Members of the civil engineering faculty specializing in transportation engineering gathered in Auburn, AL to attend the 3rd annual Transportation Engineering Education Workshop late last May.

The two-day workshop and conference offered transportation engineering faculty the chance to share their best practices in engineering education, develop activities for their classes, and build a stronger professional relationship with other teaching faculty through networking.

45 professors were in attendance, along with a handful of Ph.D. students in civil engineering. PacTrans PI, Kevin Chang, from the University of Idaho, also made an appearance as a guest speaker.

The workshop's committee, consisting of four members total, featured two of PacTrans' constituents; David Hurwitz, an associate professor of transportation engineering at OSU, and Rhonda Young, an associate professor of civil engineering at Gonzaga University.

The workshop covered topics going beyond transportation engineering and saw active engagement from its participants. Over the course of the two days, attendees worked in groups to develop their curricular material and course activities, allowing them to meet and collaborate with others across the nation in similar positions and who faced the same issues, and further strengthen the development of a professional network between attendees through face-to-face interactions.

With the support of the Southeastern Transportation Research, Innovation, Development and Education Center (STRIDE), Auburn University, the National Science Foundation, and PacTrans, the event was offered without a registration fee. PacTrans director, Yinhai Wang, authorized a $1,000 contribution from PacTrans.

Mandar Khanal on Tansportation Education at the Annual ITE Statewide Conference

PacTrans partner and associate professor at Boise State University, Mandar Khanal, was a featured speaker at the 11th Annual ITE (Idaho Chapter) Statewide Conference in Eagle, Idaho last September.

The theme of Khanal's presentation was focused on transportation education and research. His talk included many examples of undergraduate senior capstone design work pertaining to three intersections in Boise, Idaho.

Students suggested several alternative designs that could improve the operations of intersections, such as partial displaced left turns or a median U-turn.

In addition, Khanal discussed one graduate student's project that considered utilizing aerial and mobile LiDAR data in design planning.

Associate Director at OSU is ITE Western District's Outstanding Transportation Educator of the Year

PacTrans Associate Director at OSU, David Hurwitz, was awarded ITE Western District's 2018 Outstanding Transportation Educator Award at this year's Western District Annual Meeting and received a plaque to commemorate the award.

The award recognizes individuals who, in the past year, have demonstrated creativity in teaching, taken great measures to elicit student engagement in the transportation sector, given unwavering support to students, or provided unequal service to the ITE.

Hurwitz is an associate professor of transportation engineering at OSU, as well as the director of the Driving and Bicycling Research Laboratory in the School of Civil and Construction Engineering.

Hurwitz's research is focused on a variety of areas in transportation, with a particular interest in user behavior in response to the design, evaluation, and innovation of transportation systems.

Congratulations on the award, David!

OSU Outreach Project Recognized for Enhancing Transportation Safety Awareness

Early last May, a project led by PacTrans associate director and associate professor of transportation engineering at OSU, David Hurwitz, was recognized at the Vice Provost Awards for Excellence Celebration, an annual event that showcases 10 outreach and engagement projects that are particularly exceptional.

The project received an Outreach and Engagement Award for Excellence, which honors a project's efforts to create and develop healthy communities and economies. The project focused on "Mitigation of Lane Departure Crashes in the Pacific Northwest through Coordinated Outreach", aiming to educate the public on lane departure crashes.

The award-winning project was composed of a competition challenging high school and college students to create a public service announcement. Dozens of submissions were received and resulted in six winners from each participating state. The winners were honored with a plaque and a monetary prize.

The project also consisted of 18 interactive presentations regarding local transportation safety issues given to 488 elementary and middle school students. Following each presentation, the young audience was asked how crashes could be prevented, prompting them to collectively create 408 drawings, 124 narratives, and participate in four interviews with researchers about their ideas, which were then used in word clouds and mosaics representing each state in the PNW.

Students at OSU used the 408 traffic safety drawings by elementary- and middle-school students to generate this photo mosaic of the PacTrans logo."

University of Idaho's Clean Snowmobile Team takes home the gold (four times)!

Early last March, University of Idaho's Clean Snowmobile Team participated in the SAE International Clean Snowmobile Challenge (CSC) at Michigan Technological University, from which they brought home a number of awards for their innovative designs.

The PacTrans consortium member's Clean Snowmobile team is made up of both graduate and undergraduate students, and has been competing in the challenge since 2001, taking home first place in 2002, 2003, and 2007. The team's aim is to reduce emissions and build a quieter machine that remains reliable and maintains performance.

The SAE International CSC is an engineering and design competition that challenges college and university students to reinvent and modify existing snowmobiles, which are then judged based on a variety of sustainable categories regarding emissions and fuel economy, as well as more design and function based classifications, like acceleration and handling.

Ultimately, students attempt to develop mobiles that would be acceptable to use in national parks, pristine areas, and other environmentally sensitive spaces. In addition to reengineering a quieter machine that is both more fuel-efficient and cleaner burning, students must also strive to make their mobiles cost-effective and comfortable for the operator's use.

This year's challenge, hosted by the Keweenaw Research Center and the Department of Mechanical Engineering-Engineering Mechanics, featured the use of snowmobiles powered by either a special gasoline or a diesel mix. In the gasoline categories, UI's team was rewarded for best acceleration, best handling, best value, and CAN-DO-E-Controls. Furthermore, the team was able to successfully complete the endurance run.

Congratulations to UI's Clean Snowmobile Team for their achievements at this year's challenge, and good luck to them with their future competitions!

UW Steel Bridge Team competes in nationals for the first time in 20 years

Last spring, the UW Steel Bridge team, sponsored by PacTrans, had the opportunity to participate in both the Regional and National Student Steel Bridge Competition (NSSBC).

The NSSBC was held on May 25-26 at the University of Illinois, Urbana-Champaign. This was the first time "in 20 years that the UW team had been able to compete in nationals, with the exception of 2013, when the UW CEE hosted nationals, allowing the team to participate.

The team placed 31st, competing against 42 other teams, including those from Canada, China, and Mexico. The team was judged on six different engineering categories: construction speed, display, economy, efficiency, lightness, and stiffness, in which they placed 16th, 21st, 24th, 32nd, 20th, and 33^{rd,} respectively.

At last year's regional competition, held from April 5-7 at the Oregon Institute of Technology in Klamath Falls, Oregon, the team competed against 16 other schools and took first in the construction speed category, assembling their bridge in 8 minutes and 45 seconds.

Gonzaga Senior Design Team Finishes Work on CV Pilot Deployment Project

One of Gonzaga University's many senior design teams has recently finished up their work on a USDOT Connected Vehicle (CV) Pilot Deployment project for the Wyoming Department of Transportation (WYDOT) after a year-long commitment to the program.

ENSC05, working under the school of engineering and applied science, consisted of Jennifer Delgado, Drew Fuller, and Kyle Peltz. Their advisor, Gonzaga faculty member and PacTrans constituent Rhonda Young, is also a member of the Wyoming CV Pilot Deployment Team.

ENSC05 was tasked with assessing the effectiveness of CV technology for freight trucks and passenger cars that frequent the I-80 corridor in Wyoming. The idea behind the project is that the driver receives an alert regarding oncoming forward collision, upcoming work zones, changing speed limits, or a variance in weather conditions via an onboard unit, and is able to react to avoid either situation.

The team was able to establish a set of conditions regarding speed and safety based on crash, speed compliance, and weather data prior to CV deployment in order to measure the technology's performance, the objective being to observe how speed and crash data is altered as a result of the driver's response to the CV technology.

The team's work on the project began in the summer of 2017, when they headed out to Wyoming, giving them the opportunity to see the project corridor in person and spend time in the University of Wyoming Driver Simulator Lab, designed to test the CV technology, as well as train freight drivers before adding the installment into their trucks.

PacTrans was able to provide funds for students to attend the Transportation Research Board meeting last January, as well as participate in other summer research opportunities.

Wyoming, one of three locations chosen to test and deploy advanced dedicated short-range communication (DCRS) technology, is a crucial freight corridor that plays an important role in the movement of goods between the US, Canada, and Mexico. However, harsh weather conditions that coincide with the winter months make safe transportation a difficult feat and often call for road closures.

The CV Pilot is hoped to decrease the number of weather related incidents, which can also lead to delays in the delivery of goods across the country, along the corridor and improve safety.

OSU student wins Graduate Student of the Year from ORITE and ITE Western District

OSU graduate student and a PacTrans UTC Student of the Year Award winner, Kayla Fleskes, was recently selected to receive the Graduate Student of the Year Award from both the Oregon Institute of Transportation Engineers (ORITE) and ITE Western District. She accepted her awards this past summer.

Both the ITE Western District and ORITE's Graduate Student of the Year Awards recognize incredible dedication to the transportation profession, with ORITE further supporting that passion by offering one undergraduate student and one graduate student a $2500 scholarship each per year.

Fleskes, who had previously acted as the president of OSU's ITE Student Chapter, recently defended her thesis and graduated from OSU with an MS in Civil Engineering. In addition to these accomplishments, she has also been welcomed on board by DKS Associates, a transportation planning and engineering firm, as a consultant.

Fleskes previously worked with DKS Associates as a transportation planning intern. She has been heavily involved with numerous projects with the firm, including analyzing existing and future traffic operations using microscopic traffic modeling software, and evaluating the efficiency of speed zone limits based on field radar data and reevaluating advisory speed zones for curves.

UW Concrete Canoe Team places High at Nationals

After taking first place at regionals last year, the UW Concrete Canoe Team headed to San Diego, California and placed seventh overall at the ASCE National Concrete Canoe Competition.

At the national competition, held last year from June 23-25 at San Diego State University, the UW team, representing the PNW, was one of 25 teams that competed in various categories in addition to the races, including final product, design paper, and oral presentation.

The team placed sixth in both the women's and men's slalom/endurance races, as well as in the coed final sprints. For final product, design paper, oral presentation, the UW competitors earned ninth, fourth, and sixth place, respectively. By earning seventh place overall, the team was able to claim their highest score since 2000.

The UW Concrete Canoe Team saw its beginnings in 1975. Together, the diverse group of 40 spend a few short months designing, building, and racing their canoe against other collegiate teams across the country.

For over 40 years, the completely student-run team has taken home a total of 12 regional championships and four top-10 national finishes.

University of Washington Hyperloop team earns #1 in the U.S. in SpaceX competition

Last July, UW's Hyperloop team, sponsored by PacTrans, journeyed to Hawthorne, California and placed fourth and #1 in the U.S. in the most recent running of Elon Musk's Hyperloop Pod Competition.

UW's Hyperloop team saw its beginnings three years ago with a handful of hopeful students who dreamed of improving transportation. Since then, the group has grown in size and experience, but continues to work towards a future that utilizes new, innovative technology and develops its engineers.

The team has seen great success in previous SpaceX competitions, winning the Subsystem Safety Technical Excellence Award at Design Weekend, placing fourth in the U.S. and sixth in the world in their first race, and competing in the final round of their second.

This SpaceX competition aims to encourage students to work on and invest in Hyperloop-style engineering projects, supporting a future world that features high-tech modes of transportation.

The competition consists of rounds of design analysis and safety checks, allowing those who power through these tests to the tube for open-air runs, and finishing off the race with the top three finalists participating in a series of depressurized runs.

Additionally, UW's team had the opportunity to meet with Musk to discuss their invention and designs.

Palouse RoboSub Club competes in 21st Annual International RoboSub Competition

PacTrans constituent WSU's Palouse RoboSub Club travelled to San Diego, CA to compete in the 21st Annual International RoboSub Competition last summer.

The RoboNation competition, held last year from July 30 – Aug. 5, aims to boost the research and development of autonomous underwater vehicles (AUV), which are designed to autonomously navigate through various tasks that reflect current and ongoing research in Autonomous Underwater Systems.

RoboNation invites students to participate in this exciting underwater robotics program every year. Forty-seven teams from around the world participated in the most recent competition, including Gonzaga University's very own RoboSub team.

Last year's theme was inspired by games of chance found in a casino, requiring the submarines to perform tasks in an underwater casino, complete with roulette tables and slot machines.

Since 2017, the WSU team has redesigned the stability of their submarine, who they've named Cobalt, as well as revamped its artificial intelligence and improved its artificial vision system allowing it to see better underwater. In addition, the team also decided to install hydrophones in order to better orient Cobalt underwater.

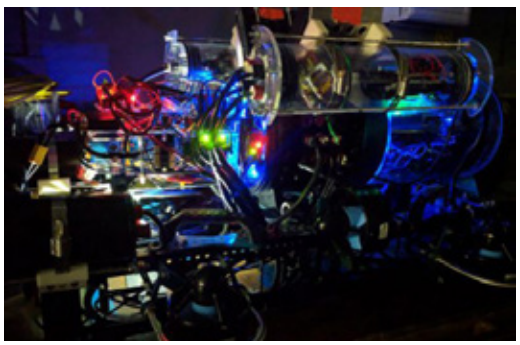
Running with the theme, the WSU team incorporated a device designed to drop balls onto a spinning roulette table located several feet underwater.

The WSU competitors were successfully able to complete the pre-qualification challenge, which required them to pass through a gate, make a U-turn around a pole, located 10 meters away, and return back to the gate.

Unfortunately, the WSU team did not place in finals. They did, however, earn one of the judges' awards: resource sharing.

WSU's Palouse RoboSub Club gives motivated students the opportunity to do real-world engineering in robotics and artificial intelligence. Each year, the club builds an AUV and enters it to compete in San Diego.

Cobalt was developed with the help of the Naval Sea Systems Command (NAVSEA), whose mission is to design, build, deliver, and maintain ships and systems for the U.S. Navy.



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 lead 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. They also placed 2nd 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.

Crissy Fanganello to be featured at 2018 Michael Kyte Distinguished Lecture

How can we achieve success when innovation and constant disruption is the norm? Rather than asking, "how are we going to fix transportation," city builder and cultural transportation professional, Crissy Fanganello asks, "how can we make transportation better?"

Fanganello was featured as a speaker at the third annual Michael Kyte Distinguished Lecture at the U of I Moscow campus, held this year on Thursday, Sept. 27.

In the midst of her talk, Fanganello posed the question, "what is the public right of way?" It includes the roadway, the pedestrian realm, and the private realm, all of which have limited space to exist in. We often fail to consider other components that require a place in the public right of way, like wet and dry utilities. Even the air around us takes up space.

Figuring out where to put everything so that the space is divided fairly and everyone is able to function, on top of making the space aesthetically pleasing, is a challenge transportation officials and agencies are currently facing.

Innovations in technology are inevitably going to take up a lot of room, but is all this effort helping to meet transportation goals?

Fanganello's first step to reaching a solution is to define the problem. In this case, there is a finite amount of space that only so much public right of way can fit into. This hinders the widening of streets, sideways, and other lanes, if not just for the fact that we currently cannot afford to conduct a project like that.

The next step is to define the future. Many transportation officials are envisioning a future that is safe, reliable, affordable, accessible, and convenient. One with a complete and connected network of multi-modal options. A future that provides mobility freedom by offering more choice, strengthens the economy, and protects both the health of the public and environment. In order for this future to be tangible, there needs to be a goal that is clearly outlined.

As new technology is introduced into our world and innovations are being made, we become so caught up in worrying about disruptions to our lives that we don't realize those disruptions are already here.

Ridesharing services, like Uber and Lyft, promised to reduce traffic and pollution when in reality, they're contributing even more to those things. We've welcomed them into our society without giving much thought about what they might do to our environment, leading transportation professionals to consider what kind of effect is something having on the environment.

Another example is scooters. Because they're classified as a toy, scooters can only be ridden on sidewalks, even though it makes more sense for them to be placed in the bike lane. Transportation officials and agencies didn't prepare for their arrival, and assigning them to bike lanes now would only complicate things because even those networks aren't completed.

Fanganello emphasizes the importance of partnering with other entities if transportation professionals want to keep up with all the new technology that comes out, because as soon as something is implemented, something better and more advanced shows up on the market.

It used to be, "the bigger, the better." Now what matters is who's the fastest, but when you're going too fast, it gets harder to make thoughtful decisions.

We need to be willing to take risks and venture into uncharted areas.

"Someone a long time ago gave me a postcard, and it was a painting of a gentleman," Fanganello said. "He was walking on a tightrope and as he was walking on the tightrope, he's laying the rope out. This is where we are right now in terms of transportation."

PacTrans UW Seminar Series – Presenting Prof. Carl Thodesen

Norway has begun massive infrastructure changes in order for their economy to continue to grow and to keep their country connected with the construction of more bridges, tunnels, and roads.

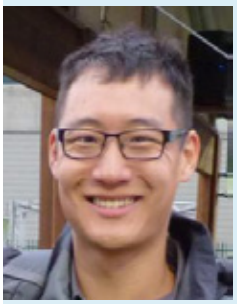
In response to this, political goals have been established to ensure that the amount of emissions is reduced. The goals also stand to greenify the vehicle fleet, ultimately resulting in no transportation related emissions produced by 2050.

Green thinking in Norwegian infrastructure projects was the topic of discussion at our PacTrans UW Seminar Series late last September, featuring Carl Thodesen, the Head of the Department in the Department of Civil and Environmental Engineering at the Norwegian University of Science and Technology (NTNU). Thodesen's talk focused on how we can apply research to politics and the real world, and receive back an international cooperation.

NTNU works towards these goals by researching and developing technologies and processes that align with their objective, currently being the largest university in the country with leading national responsibility One way to move forward with these projects is to form international connections, such as the one UW has with NTNU.

Prior to his position at NTNU, Thodesen spent time working as a senior scientist and research manager at SINTEF Building and Infrastructure Research, focusing on road and railway engineering, and projects related to sustainability. Thodesen was also a senior civil engineer for a private industry in Phoenix, AZ and working in the production of asphalt rubber for highways.

PacTrans Fellow Alumni Spotlight: Rich Lee



Every year, PacTrans participates in 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.

Rich Lee is a UW alum and PacTrans fellow from 2015-2016.

"It was awesome to be a part of a program that provided so many opportunities and support for research while at the same time setting me up with relevant experience to enter the professional working world," Lee said in an email.

Lee previously worked as a Data Analyst for WSDOT's Public Transportation Division. While there, he was responsible for developing Python scripts and tools for reporting and analysis, conducting demographic and transit accessibility analyses, and managing the division's geographic information systems (GIS) datasets.

Through WSDOT, Lee was able to assist on a research project funded by PacTrans focusing on shared mobility.

"I guess I can't escape PacTrans!" Lee said in an email.

Most recently, Lee was offered and has accepted a position as a Transportation Analyst with King County Metro.

Lee's fellowship with us landed him a position as a research assistant for the Texas A&M Transportation Institute in 2014 and received internship credits which he was able to put towards an M.S. degree in transportation engineering at UW.

"Being able to gain work experience while earning my degree was critical to my professional development, and one of the main reasons I came to UW," Lee said in an email. "It's also nice to be plugged into the PacTrans/CEE network and the connections I established have helped in forming research partnerships between WSDOT and UW."

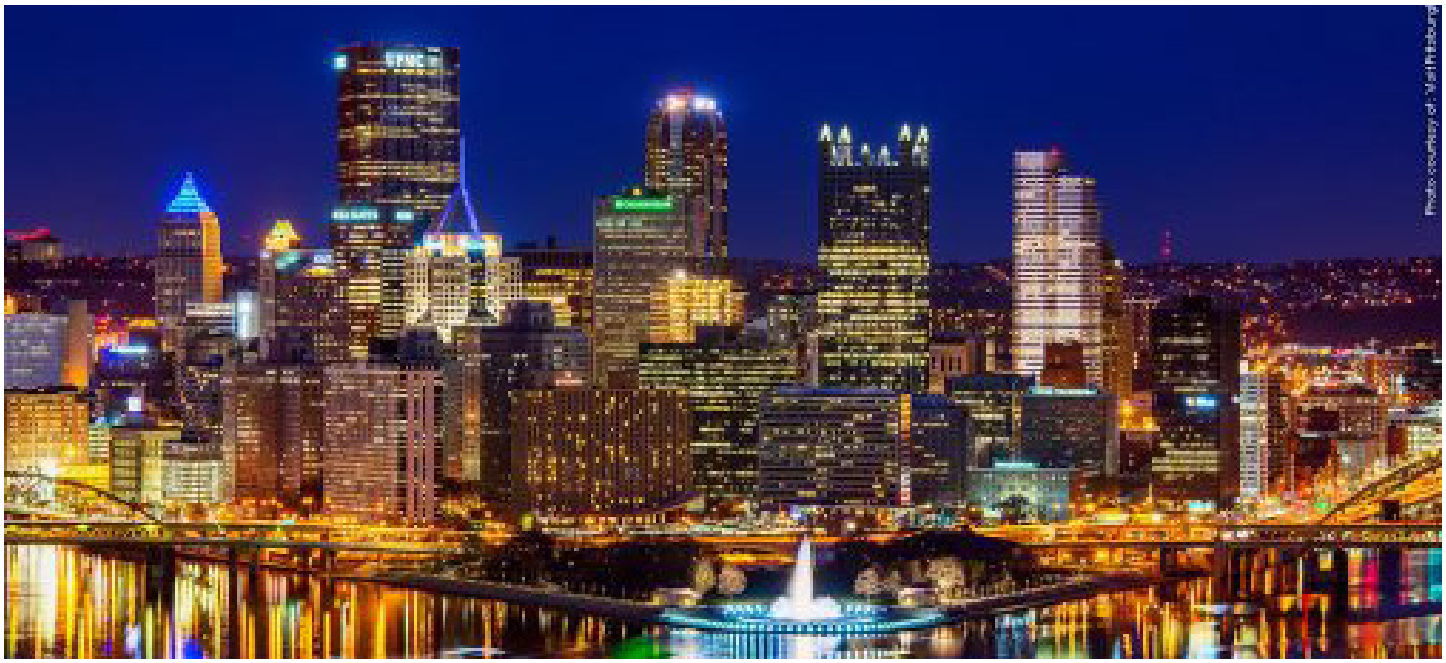
PacTrans Technology Transfer Success Story 2018 #1: UAS in Transportation Expo

"Unmanned aircraft systems (UAS), also called drones, are becoming an increasingly valuable tool for transportation agencies," said PacTrans PO and Oregon State University professor, Chris Parrish. "A number of state DOTs are considering implementing UAS programs, while others are already using UAS for a wide range of applications."

Parrish utilized PacTrans success story funds to host a UAS in Transportation Expo on OSU's campus on July 30 - 31. Represented at the expo were 40 attendees from private industry, public agencies, and research institutions. Several of the academic researchers involved in the expo have utilized PacTrans research funds for their own projects involving UAS in Transportation.

Over the course of the two-day event, there were a number of presentations made, as well as demonstrations and a hands on workshop. At the conclusion of the expo, Parrish lead the group in a discussion to identify lessons learned, unsolved challenges in UAS for transportation, and potential solutions. This was all typed up into a final report.

ASCE's International Conference on Transportation & Development



Technology continues to develop in our world at an increasingly rapid rate, meaning that there is a growing need to assess and prepare for the inevitable impact it will have on transportation and development.

The Transportation & Development Institute (T&DI) of the American Society of Civil Engineers (ASCE) were responsible for organizing ASCE's International Conference on Transportation & Development (ICTD) last year, which took place in Pittsburg, Pennsylvania last July.

The ICTD, held from July 15-18 at the Wyndham Grand Pittsburgh Downtown Hotel, was co-chaired last year by Yinhai Wang, a professor in Civil and Environmental Engineering at the University of Washington and the director of PacTrans UTC Region 10, and Mike McNerney, a research professor at the University of Texas at Arlington. Additionally, the two were responsible for organizing the UTC Technology Transfer Workshop.

The ICTD gives practitioners, researchers, leaders, policy makers, engineers, planners, students, and other individuals that are interested and invested in the realm of transportation and development the opportunity to exchange information, share their best practices, and advance their knowledge on the transportation sector.

The conference featured a variety of speakers, designated workshops, and technical programs and tours, all allowing participants to learn about innovations in technology and their impact on transportation, network with professionals that are heavily involved with infrastructure, get updated on new policies and initiatives, and earn professional development hours.

The T&DI of ASCE is an organization devoted to transportation, development, and the professionals within the industry. It is one of the ASCE's nine specialty institutions and is dedicated to promoting professional excellence in the realm of transportation engineering, urban planning, and overall development.

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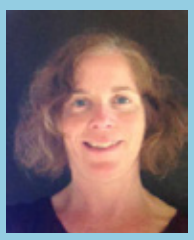

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Western Trailer
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For contact information and board member bios, see PacTrans website: pactrans.org

SAVE THE DATE

Friday, October 11, 2019: Region 10 Transportation Conference, UW Campus

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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