



ISSUE 12 | JULY 2015

University Transportation Center Newsletter

IN THIS ISSUE

PAGE 1

Safety Experts Gather for PacTrans Workshop, Identify Critical Regional Safety Issues to Study

PAGE 2

Casavant at 2015 ITEA Conference Dr. Haizhong Wang Recognized

PAGE 3

Imad Al-Qadi — Speaks on Uses of Ground Penetrating Radar PacTrans Hosts International Exchange, Connects Japanese and US Transportation Professionals

PAGE 4

PacTrans Student Leadership Training: Marsha Anderson Bomar 2015 CUTC Summer Meeting

PAGE 5

Emily Feenstra Speaks on Engaging in Public Policy Conferences Feature PacTrans' Traffic Sensing and Transportation Big Data Research

PAGE 6

Featured PacTrans Alumnus: Patrick Kemp ITS America Symposium

PAGE 7

Alternative Information Signs

PAGE 8

PacTrans STAR Lab Participates in Engineering Discovery Days Students, Teachers Visit PacTrans STAR Lab

PAGE 9

Meet our 2015-16 PacTrans Fellows

PAGE 10

Shangjia Dong Wins Grand Prize at 2015 OSU College of Engineering Research Expo

PAGE 11

PacTrans Fellow Ryan Hughes

PAGE 12

University of Idaho Students Present at Engineering Design Expo

PAGE 14

Upcoming Events

Safety Experts Gather for PacTrans Workshop, Identify Critical Regional Safety Issues to Study

The PacTrans Region 10 Transportation Safety Workshop on May 5 drew representatives from universities, public agencies, and private companies across the Pacific Northwest to discuss important regional transportation safety issues. This workshop was jointly organized by PacTrans, ITE Washington, ITE Oregon, ITE Idaho, and ITE Alaska. Open only to invited transportation safety experts, more than 70 attendees, both in-person and online, joined the workshop at the Talaris Conference Center to identify critical regional transportation safety issues for PacTrans to study. Participants representing industry, agency, and university perspectives contributed to PacTrans' research agenda, shared ongoing efforts in addressing critical safety problems, and solidified partnerships in transportation safety research and practice.

The morning sessions included keynote talks on transportation safety priorities at federal and state levels from Kenneth Feldman, Deputy Regional Administrator, Federal Transit Administration (FTA), and Chris Madill, Deputy Director, Washington Traffic Safety Commission (WTSC), respectively. From a national standpoint, Feldman explained the FTA's vision to make safe transportation safer and to see safety management systems (SMS) embedded in every transit agency. As deputy director of WTSC, Madill outlined

continues on next page

Dongho Chang, City Traffic Engineer, City of Seattle, moderates the Transportation Agency Panel



PacTrans Hosts Region 10 Transportation Safety Workshop continued from page 1



Carlos Ortiz, ITE Western District President

Target Zero, which aims for zero deaths and serious injuries on roadways by 2030, and highlighted key issues including motorcycles and pedestrians.

The transportation agency panel, moderated by Dongho Chang, City of Seattle, was comprised of representatives from Washington State Department of

Transportation, Idaho Transportation Department, City of Portland, and Alaska Department of Transportation. Common threads throughout the panel included prioritization of decreasing vehicle run off the road crashes, communicating effective safety messages with the public, and the importance of enforcement.

Carlos Ortiz, ITE Western District President, moderated the ITE panel with representatives from the City of Seattle, Toole Design Group, and Leidos. While covering a range of topics, conversational themes emerged on more and better data for vulnerable users, such as bicyclists and pedestrians, and regulatory and societal trends with safety implications.

To address specific research and education needs, the final session placed participants into several working groups to concentrate separately on safe infrastructure, safe users, and safe operations. The safe operations group identified pedestrian risk locations and behaviors as a top priority, as well as acquiring data on speed, research on bicycle improvements, and collision data. Among the priorities outlined by the safe infrastructure group, effectiveness of measures to reduce collisions, a template for collection and analysis of collisions, implications of measures on all users, and high-tech solutions for managing risk to lifelines ranked in the top four. Finally, the safe users group cited defining the tipping point of bicycle usage, data acquisition, changing user demographics in transportation, and the notion of designing transportation facilities to elicit safer operating speeds as vital issues for research in the region.

With this information and support, PacTrans is equipped to continue investing in high-impact transportation safety research for the Pacific Northwest.



Casavant Presents at 2015 ITEA Conference

Dr. Ken Casavant, Director of the Freight Policy Transportation Institute at Washington State University and member of the Board of Directors of Pactrans presented a paper at the International Transportation Economics Association Conference June 18th, 2015. The paper, co-authored with Dr. Jeremy Sage as lead and You Zhou, was entitled, "Applying Practical Design Methods to Multi-Modal Supply Chains." The overall aim of the conference was to promote scientific excellence in the field of transport economics and to provide a forum for stimulating scientific exchange.



Dr. Haizhong Wang Recognized for Journal Reviewing Excellence

Dr. Haizhong Wang, Assistant Professor of Transportation Engineering at Oregon State University, was recognized by the editor of the ASCE Journal of Transportation Engineering as an ASCE 2014 Outstanding Reviewer. The award was presented "in recognition of outstanding service as a reviewer."

Imad Al-Qadi Speaks on Uses of Ground Penetrating Radar



Dr. Imad Al-Qadi, an internationally renowned professor in pavement materials and engineering, visited the University of Washington on April 28 to speak at the Spring PacTrans Regional Transporta-

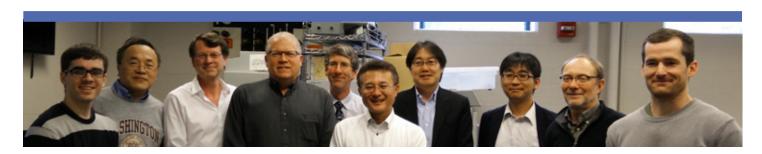
tion Seminar. Dr. Al-Qadi, Founder Professor at the University of Illinois at Urbana-Champaign, delivered his talk entitled "Transportation Infrastructure Assessment Techniques Using Ground Penetrating Radar." (Watch the <u>recorded lecture</u>).

Continuous monitoring of transportation infrastructure allows for the maintenance of durable and safe systems. Ground penetrating radar (GPR) technology, based on electromagnetic waves, is an important non-destructive evaluation method, and yet GPR works better in some situations than in others. Bridge and pavement assessment, primarily for estimating layer thickness and localizing moisture accumulation within structure layers, has successfully used GPR.

However, the "images" obtained from GPR-reflected signals are dependent on the priori unknown dielectric properties of structural materials, which can make GPR data interpretation difficult. It can also prove difficult to detect layer interfaces, but signal and data processing techniques have been developed to estimate the dielectric properties of surveyed structures from GPR reflected signals. These techniques have improved GPR data interpretation and the quality of the GPR signal.

GPR provides quick and reliable information about subsurface characteristics when appropriately used. Pavement layer thickness can be accurately predicted, for example, as well as the location of rebar.

Dr. Al-Qadi has been working on GPR research for more than two decades, among his other diverse research interests. He is the Director of the Advanced Transportation Research and Engineering Laboratory (ATREL) and the founding Director of the Illinois Center for Transportation (ICT). A registered professional engineer, Dr. Al-Qadi has authored/co-authored more than 550 publications and has delivered more than 550 presentations, including numerous keynote lectures.



PacTrans Hosts International Exchange, Connects Japanese and US Transportation Professionals

On May 26, PacTrans welcomed transportation professionals from Japan as part of an international exchange to share best practices in data, organizational collaboration, and road management. Kenji Saita, Assistant Manager, West Nippon Express Company (NEXCO), and Seishu Kitamura, Senior Researcher and Kzuhiko Makimura, Deputy Director, both of the Institute of Behavioral Sciences, visited the PacTrans STAR Lab to learn about the center's work in intelligent transportation systems (ITS).

The group discussed the different types of traffic detectors employed by Washington State Department of Transportation (WSDOT) and those under development at the University of Washington, and ways to navigate the privacy concerns of data collection in Japan.

PacTrans, Washington State Transportation Center (TRAC), and WSDOT have a history of close collaboration. Doug Brodin, WSDOT Research Manager for ITS, Traffic and Congestion, and Freight, emphasized

continues on next page

PacTrans Student Leadership Training: Marsha Anderson Bomar and the Language of Leadership



Anderson Bomar is a transportation entrepreneur, leader, and trailblazer for women

Marsha

in transportation engineering with a list of awards and recognitions that rivals the length of a term paper. To get to where she is today, Anderson Bomar recognizes the importance of developing strong communication skills for career and leadership success. For the PacTrans Student Leadership Training on April 20, Anderson Bomar critically examined the way language can work for and against us, the communication differences between men and

women, and what students can do now to build skills to grow as strong leaders.

Of particular focus were the challenges faced by women in light of different communication styles. For instance, Anderson Bomar explained that women "often start off with words that weaken what we say, even if we're sure." I think, I believe, I guess all become disclaimers in the way women introduce ideas.

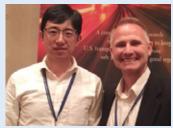
"If the idea is even worthy of being spoken, don't undermine it," said Anderson Bomar. She offered a more confident way of posing an idea: "I have an idea I would like to run by you. It may need some refining, but it's good."

In addition to gender, generational differences offer an opportunity to bridge the language style divide. Anderson Bomar cited sports as a galvanizing force of the baby boomer generation. By using sports-oriented terms such as "game plan," one can appeal to and incite action in this age group, particularly with men.

Anderson Bomar also offered suggestions for how students can prepare for leadership now, including practicing public speaking. Also, when the opportunity for volunteering to participate on a project arises, say yes. Eventually, volunteer to lead a project and in the process, Anderson Bomar explained, students will simultaneously learn and build confidence.

PacTrans Attends 2015 CUTC Summer Meeting

PacTrans joined University Transportation Center representatives from across the nation for the 2015 Council of University Transportation Centers Summer Meeting, June 1-4 in Brunswick, New Jersey. Held at Rutgers, the event brought transportation and university professionals and administrators together to share best practices and success stories to advance research, education, and development in the transportation field.



PacTrans Research Associate Zhibin Li and University of Washington alumnus Paul Barr.



L – R: Maria Bayya, University of Washington, Tami Noble, University of Idaho, and Denise Dunn, Grants Manager, UTC OST-R

PacTrans Hosts International Exchange

continued from previous page

the importance of the long-term relationships with PacTrans and TRAC and considered it the key in the successful collaborative efforts between WSDOT and universities, which is visible in the many PacTrans intern students working in WSDOT.

Dr. Yinhai Wang, PacTrans director, highlighted the center's interest in international collaborations and potential future partnership with NEXCO and IBS and the Japanese delegation responded very positively.

Emily Feenstra Speaks on Engaging in Public Policy



Emily Feenstra, Director for Infrastructure Initiatives of the American Society of Civil Engineers (ASCE), spoke at the PacTrans-sponsored Transportation Seminar on June 4. Her talk, "The Case for Engaging in Public Policy – Your Projects Depend on It," related the current status of infrastructure funding, how ASCE

has engaged in the policy debate, and the importance of engineers' involvement in policy.

Making infrastructure visible is a main priority for ASCE, explained Feenstra. Often, the public does not notice the aging infrastructure, in part due to the slow - and undramatic - nature of deterioration. ASCE aims for infrastructure to be as high a priority as health care and education, and one step toward this goal is communicating ASCE's Report Card for America's Infrastructure (Report Card).

The Report Card provides an assessment of current infrastructure conditions and needs, assigning grades in an A to F school report card format, and makes

recommendations on how to raise these grades. With America's cumulative GPA for infrastructure at a D+ in 2013. Feenstra demonstrated the need for increased investment. By investing an additional \$157 billion per year through 2020, the country can prevent a \$3.1 trillion loss in GDP, \$3.5 million job losses, and a \$3,100 per year drop in personal disposable income per household.

To improve the Report Card, Feenstra offered three key solutions: bold leadership and a compelling vision, sustainability and resilience, and prioritize, plan and fund. Several issues at the national level, however, remain important to consider, including infrastructure spending decreasing relative to other countries, and the looming insolvency of the Highway Trust Fund.

Feenstra suggested a host of ways civil engineers can get involved. To influence policy and issue awareness, Feenstra proposed engineers share their state's infrastructure report card through social media, host an infrastructure event, or tweet questions to state legislators and members of congress.

Feenstra's talk clearly broadens PacTrans students' knowledge by introducing the policy side of projects to them.

Conferences Feature PacTrans' Traffic Sensing and **Transportation Big Data Research**

PacTrans research on traffic sensing and transportation big data has recently received great attention. As the principal investigator for the Digital Roadway Interactive Visualization and Evaluation Network (DRIVE Net) project and the mobile sensing project, Dr. Yinhai Wang was invited to share his research findings in five conferences, including the International Conference on URBAN Traffic Safety in Edmonton, Canada; IEEE Smart Cities Workshop in Wuxi, China; the 100th TRC Meeting in Little Rock, Arkansas; King County Metro OD Data Collection Seminar; the 12th Intelligent Transportation Systems (ITS)

Expo in Shenzhen, China; the Second Open ITS Data Workshop; and NGDM'15: Big Data for Connected Cars and IOT in Novi, Michigan. The DRIVE Net system is under active development and Washington State Department of Transportation is interested in making it its data analytics tool for reporting and decision support.



Featured PacTrans Alumnus: Patrick Kemp

Patrick Kemp has had a storied career in the Alaska Department of Transportation & Public Facilities (AK DOT&PF). After graduating from the University of Washington with a Bachelor of Science in Civil Engineering in 1977, he spent over forty years with AK DOT&PF, rising from project engineer to commissioner.

During his tenure, Kemp was involved in thousands of capital projects. He led the final negotiations on the purchase of two new ferries for Alaska.

"This work is now underway and it was delivered to a shipyard in Ketchikan using CM/GC (construction manager/general contractor) method of contracting," Kemp said. "This is the first time that method of procurement was used for vessel construction."

Kemp was also involved with building new roads to resources. "Alaska is resource rich but transportation poor, it is very difficult to get our resources to tidewater for shipment throughout the world so improving surface transportation was a mainstay of my tenure as commissioner."

Reflecting on his time at the UW, Kemp found that it gave him a great start to his career, and viewed his education going hand in hand with his work experience. "The curriculum at the university along with the faculty seemed to be geared to turn out good practical engineers, and I am very proud to always mention that I was a graduate of the institution."



When asked what civil engineering students can do to prepare for a similar career, Kemp recommends that students seek summer work or internships focused on engineering basics. "I think students should get their name out there by dropping in on engineering consultants, DOT offices or local city offices," said Kemp. There is always work to be done in private and public offices, explained Kemp, and students can offer their skills to index records or perform CAD work.

PacTrans Sponsors, Participates in ITS America Symposium



PacTrans is proud to sponsor the ITS America Symposium on Building a Smart, Diverse, and Shared Travel Network, July 16 – 17 at the University of Washington. Three technical tours are included in the symposium registration, including one to the PacTrans STAR Lab. Participants visiting the PacTrans STAR Lab will learn about its work supporting advanced ITS research, cultivating ITS professionals, exploring effective solutions to transportation problems, providing hands-on training in instruments and software applications for students in ITS classes, and constructing a bridge between the UW and agencies of transportation practice.

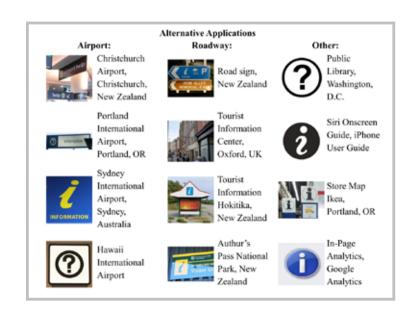
RESEARCH

Alternative Information Signs: An Evaluation of Driver Comprehension and Visual Attention

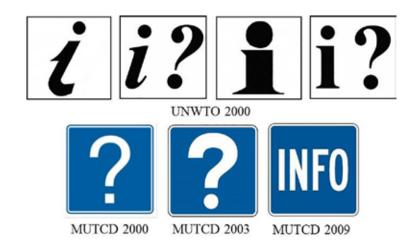
Dr. David Hurwitz (PI), Michael Olsen (Co-PI), and Justin Neil—Oregon State University

The effectiveness of a traffic sign is collectively influenced by the sign's understandability, legibility distance, glance legibility, and learnability; however, understandability has been repeatedly identified as a one of the most important measures of effectiveness. This study compared a variety of online survey questions and driving simulation tasks to assess the understandability of alternative Tourist Information signs in Oregon. In all of these tests, the "INFO" Sign was shown to be the most understandable of the alternatives evaluated in this study by a significant margin. The two "i" Sign alternatives had the second and third highest comprehension rates for driving simulator subjects.

However, it is likely that comprehension rates for the "i" Sign will continue to increase in the future due to its prolific usage in a wide variety of contexts.



In all of these tests, the "INFO" Sign was shown to be the most understandable of the alternatives evaluated in this study by a significant margin.



The results were accepted for publication in the ASCE Journal of Transportation Engineering. Separately, the results of the study will be presented at the 15th Annual COTA Conference in Beijing, China by Dr. David Hurwitz. The PIs and PacTrans would like to recognize the cash-match provided by Travel Oregon, without which the project would not have been nearly as successful.

Contact: Dr. David Hurwitz
Email: david.hurwitz@oregonstate.edu

OUTREACH

PacTrans STAR Lab Participates in Engineering Discovery Days





The University of Washington College of Engineering held its annual Engineering Discovery Days April 24 - 25, 2015. Engineering Discovery Days draws thousands of students from the region's elementary, middle and high schools. These visitors explore exhibits and demonstrations that showcase the work and research done by UW engineering students and faculty. The PacTrans STAR Lab demonstrated the exhibit "Beyond Red Light, Green Light," explaining how modern technology is improving transportation planning.

Students, Teachers Visit PacTrans STAR Lab

This June, 19 incoming first year women pre-engineering University of Washington students and high school science teachers had the unique opportunity to visit the PacTrans STAR Lab. As part of the Women in Science and Engineering (WiSE) UP Summer Bridge program, participants learned about the lab's work in intelligent transportation systems, data science, detection and data collection technologies, and conventional transportation engineering issues.

Graduate student Kristian Henrickson presented an overview of STAR Lab, while John Ash explored Digital Roadway Interactive Visualization and Evaluation Network (DRIVE Net), and Ruimin Ke demonstrated STAR Lab technologies on extracting data from video collected by unmanned aerial vehicles.



The WiSE UP program allows young women to explore engineering majors, gain a better understanding of STEM professions, and prepare for academic success at the collegiate level.

Meet our 2015-16 PacTrans Fellows

As part of PacTrans' mission to bring talented professionals into the transportation field, PacTrans provides funding to students seeking transportation-related graduate degrees each year.



Thomas Steckel is from Bainbridge Island, Washington and graduated with a degree in Civil Engineering with a focus in Transportation from The George Washington University in May 2015. He has past experience working in AutoCAD design programs as well as experience researching ITS

applications in Advanced Traffic Management Systems. He is currently interning with the Washington State Department of Transportation Toll Division, a position he will maintain during his pursuit of a Master's Degree in Transportation at the University of Washington. During his studies, Thomas plans to conduct research in sustainable transportation systems. After graduation, his goal is to find a job working to advance the field of transportation as society moves to be more sustainable.

Thomas has 4 years' experience as a coxswain for both the Bainbridge High School Rowing Club and the George Washington Rowing Team. He would like to continue rowing after he completes his degree.



Luke Peters is from Madison, Wisconsin and graduated with a Bachelor of Science in Civil Engineering from Marquette University in December 2012. He has spent the past two years working in the Traffic Engineering Division with the City of Madison, focusing on traffic operations and

safety enhancements through signing, pavement marking, and geometric design. His primary interest in transportation is the design of improvements for pedestrians, transit, and bicyclists on urban streets. Upon earning his Master's degree in Civil Engineering, Luke plans to work either with a municipality or with a transportation consulting firm. In his free time he enjoys playing and listening to music.



Riley Kimball is from Portland, Oregon, and he received his undergraduate degree in International Relations and Mathematics from Occidental College in 2012. He has been living in Seattle for the last three years working in tech sales. Riley currently serves on the Seattle Bicycle Advisory Board as

a member of Get Engaged, a youth leadership development program through the YMCA.

At the University of Washington, Riley will be working on his Master's in Civil Engineering in Transportation, focusing on multimodal transportation options. With his degree, he plans to pursue work in developing sustainable infrastructure in Seattle and abroad.

When he's not working or studying, Riley loves riding his bike around Puget Sound and swimming in the lakes.



Rich Lee's academic background is somewhat different than most in the civil engineering program, having earned a bachelor's degree in music composition from Wesleyan University. He subsequently received a master's degree in geography from Texas State University, where he used GIS and

remote sensing techniques to analyze post-wildfire vegetation regeneration.

Since graduating in December of 2013, he has worked as a research assistant for the Texas A&M Transportation Institute (TTI) in Austin, TX. During that time, he has authored three publications and presented research at several conferences covering a variety of topics including travel behavior modeling, passive data technologies, and health in transportation planning. Rich plans to continue working for TTI while studying transportation engineering at the University of Washington. Having grown up in Seattle for the first seven years of his life, he is looking forward to returning to the beautiful Northwest to continue his graduate studies.

2015-16 PacTrans Fellows continued from previous page



Jeffrey Conor is originally from Olympia, Washington. He has a Bachelor of Economics from Oberlin College and a Master of Math Education from Brooklyn College. He worked for three years as a public school 7th grade math teacher in New York City. He taught

special education, general education, honors, and English as a second language classes (not all at the same time, thank goodness). Jeffrey then switched gears and spent the past three years as an IT Support Specialist for the 9th Circuit Federal Court of Appeals in their Seattle Courthouse. This has allowed him to travel and take care of judges in Washington, Hawaii, Alaska, Montana, and Idaho. Despite these disparate experiences, nothing quite seemed right. Jeffrey's interests in transportation center on how different modes are balanced in an urban setting. At present he's happy as an intern with the Seattle Department of Transportation Traffic Operations Department and hopes to find a job that can become a career.

Shangjia Dong Wins Grand Prize at 2015 OSU College of Engineering Research Expo



Mr. Shangjia Dong is a transportation engineering PhD student in the School of Civil and Construction Engineering at Oregon State University under the supervision of Dr. Haizhong Wang. Shangjia was the grand prize winner from the 2015 OSU College of Engineering Research Expo on the topic "An

Agent-based Modeling Framework to Evaluate Dynamic Lifeline Interdependency: Stochastic Damage and Life Safety". Shangjia is developing a theoretical analysis framework through network theory and building a simulation environment to evaluate the results. The proposed framework will serve as a decision-making tool to improve the resilience of lifeline corridors.

Jennifer Warner Wins Second Place at OSU Scholar's Insights Competition



The third annual University-wide Scholars' Insights competition, an event based on the Three Minute Thesis (3MT) research competition developed by the University of Queensland, took place on May 6. Jennifer Warner, a civil engineering MS student advised by Dr. David Hurwitz was awarded second place for

her presentation "Out of Sight, Out of Mind... Right-Hook Crash Solutions". The presentation was based on Jennifer's research in the OSU Driving Simulator evaluating a variety of design treatments to mitigate right-hook crashes. Congratulations Jennifer! Jennifer successfully defended her MS Thesis and will be moving to Pennsylvania to start her career as a transportation engineer with Stantec.

Student Spotlight: Jason Anderson



Jason Anderson is a first year MS student at Oregon State University and has been instrumental in aiding Dr. Sal Hernandez secure funding from the Oregon Department of Transportation (ODOT) through his rigorous work ethic and his ability to conduct good research. The research that Jason has been

working on that has made this possible is related to the potential for freight mode shifting and the safety implications related to this mode shifting in Oregon. The research aims at preparing information on freight mode choice in a form that supports the State of Oregon in making informed decisions in the area of freight-related investments and long range planning activity. The study goal is to facilitate understanding of conditions necessary for freight mode shift to occur. Jason is a first generation minority student.

PacTrans Fellow Ryan Hughes



Ryan Hughes is one of four PacTrans Fellows for the 2014-15 academic year. As he nears the completion of his Master of Science in Civil Engineering, we spoke with Ryan to learn more about his time and involvement with PacTrans.

What are your studies focused on?

I have tried to tailor my studies more toward transportation planning and with a mix of urban planning and public policy. Those are things that really interest me and it seemed like the coursework here at UW was more aligned with those fields. I've taken two courses in the Evans School of Public Affairs, which I really enjoyed, one on science policy and one on economic development for communities.

Tell us about your experience as a PacTrans fellow.

It's been a whirlwind, only nine months in and I'm almost finished. I think what stands out the most with me is my experience with my peers and classmates. It's very collaborative and supportive, so a lot of working together, and hanging out after class and on the weekends, and doing social events, formal and informal with each other.

As a PacTrans student, I kind of felt it my responsibility to be aware of what's going in the region in terms of transportation. I went to most of the PacTrans seminars that were great for understanding research or listening to hot topics. Also talking to people at work about transportation issues in Seattle, and discussing with my peers and professor all the different issues of the region, or even expanded nationally what's going in transportation.

What classes, experiences, or lessons learned in the program have had the most impact on you?

One thing I'm taking away is that we have an enormity of transportation issues to solve in the future and they're only getting bigger and more complex, but there are a lot of different ways I can come at those problems. I think I have a much better understanding of the problems that are out there, and how we as individuals, engineers, and as societies and cities are going to best attack those problems.

Read more from Ryan at depts.washington.edu/pactrans/ student-spotlight-ryan-hughes/

University of Idaho Students Present at Engineering Design Expo

In an effort to excite and inform young EXPO attendees about transportation engineering, graduate student Riannon Zender detailed the workings of a traffic control cabinet, presented examples of 3D simulation models, and spoke about unique transportation projects like the Tilikum Crossing in Portland, OR (a transit and pedestrian-only bridge opening Sept. 2015).

"Because of the nature of our capstone projects, civil engineering students are usually only able to present our projects through posters at EXPO. This was an opportunity to provide future engineers with tangible examples of why the field of transportation is so exciting," Zender said.

The UI Clean Snowmobile Team (pictured right) also won an award for Excellence in Technical Presentation. The Expo events took place on May 1st at the Bruce Pitman Center on UI's campus, and allowed students a valuable opportunity to showcase their senior design projects and interact with faculty, industry professionals, and potential future Vandals.



Part of the 2015 UI Clean Snowmobile Team – Meghan Hester, Jason Maas, Crystal Green, Cade Smith, and Zach Lipple – showcasing the sled.

More information on the College of Engineering's Design Expocan be found at www.uidaho.edu/engr/expo.

PacTrans Board of Directors



Yinhai Wang, Ph.D. *Director* University of Washington



Chris A. Bell, Ph.D. *Associate Director* Oregon State University



Anne Vernez-Moudon, Ph.D. *Associate Director of Education* University of Washington



Kenneth L. Casavant, Ph.D. *Associate Director* Washington State University



Linda Boyle, Ph.D. Associate Director of Research University of Washington



Billy Connor *Associate Director* University of Alaska Fairbanks



Mark Hallenbeck, M.S. Associate Director of Outreach University of Washington



Ahmed Abdel-Rahim, Ph.D. *Associate Director* University of Idaho

PacTrans External Advisory Board



Carolyn Morehouse
Chief of Research,
Development and
Technology Transfer
Alaska Department of
Transportation and
Public Facilities



Charlie Howard
Director
Integrated Planning
Puget Sound
Regional Council



Rhonda Brooks
Acting Director of
Research and Library
Services
Washington State
Department
of Transportation



Michael Bufalino *Research Manager* Oregon Department of Transportation



Wayne Kittelson
Senior Principal Engineer
Kittelson & Associates



Ned Parrish Manager Research Program Idaho Transportation Department



Scott Drumm

Manager, Research
and Strategic Analysis
Port of Portland
Portland, Oregon



Edward Mantey
Vice President of
Vehicle Planning,
Corporate Strategy,
Technical Administration
Toyota Technical
Center



Jerry Whitehead Chairman Idaho Transportation Board

SAVE THE DATE

Mark your calendars:



Join the Pacific Northwest transportation community for a time of networking, sharing research, and collaboration.

PacTrans Region X Student Transportation Conference Saturday, October 17, 2015

PacTrans Workshop at the WTSC Traffic Safety Conference

Thursday, October 15, 2015
DoubleTree by Hilton, SeaTac Airport

Please see www.pactrans.org for more details in the coming weeks.

Contributors

Yinhai Wang, PacTrans Director Maria Bayya, Administrator Elysse Reyna, Communications David Hurwitz Tami Noble Ken Casavant

Contact

Dr. Yinhai Wang University of Washington More Hall, Room 112 Email: PacTrans@uw.edu
Phone: (206) 685-0395
Find us on Twitter @PacTrans UTC

PacTrans.org

