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PacTrans University Transportation Center of Federal Region 10



JUNE 2021 NEWSLETTER

HIGHLIGHTS

PacTrans Partner Gonzaga University Hosts Civil Engineering Social Justice Events

Panelists	
	Rhonda Young Professor and Chair of Civil Engineering, Gonzaga University
	Dave Richardson Executive Director of the Northeast Community Center
	Betsy Wilkerson Spokane City Council representing District 2
	Charlene Kay Eastern Region Planning and Strategic Community Partnerships Director, Washington State Department of Transportation
	Mike Gribner Regional Administrator, Washington State Department of Transportation Eastern Region

Recently, the School of Engineering & Applied Sciences at the Gonzaga University hosted a series of Civil Engineering Social Justice events. These events supported by PacTrans funding, were moderated by Abigail Marquez (student), and were led by Dr. Rhonda Young, P.E., Professor of Civil Engineering at Gonzaga University.

[READ THE FULL STORY HERE](#)

PacTrans Supported Research Helps Nathan Belz Testify Regarding Off-Road Vehicle Use

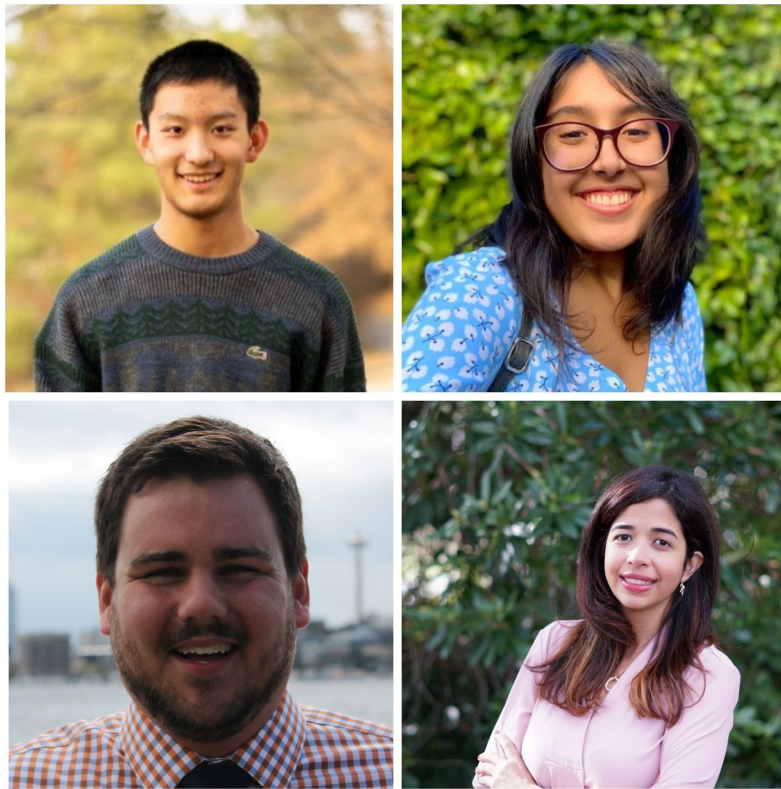


Recently, PacTrans PI and Associate Professor of Civil Engineering at the University of Alaska Fairbanks, Nathan Belz, was invited to testify to the Alaska House Transportation Committee about four-wheeler and snow machine use on public roads in the State. Belz was invited by the chair of the House Transportation Committee, Rep. Grier Hopkins, due to his profound knowledge on the subject, acquired through research funded jointly by PacTrans and the Alaska Department of Transportation & Public Facilities back in 2017. This

research evaluated safety issues related to off-highway vehicle and snowmachine use on and near roads in Alaska.

[READ THE FULL STORY HERE](#)

Four PacTrans Students Receive ITE Washington Student Scholarships



Recently, four PacTrans Students were awarded the Institute of Transportation Engineers (ITE) Washington Student Scholarships. The Washington State Section of ITE offers scholarships to students planning on pursuing a career in transportation engineering or planning. ITE is an international educational and scientific association. It is one of the largest and fastest-growing professional transportation organizations in the world. ITE members include engineers, planners, and other transport professionals who are responsible for meeting society's needs for safe and efficient surface transportation.

[READ THE FULL STORY HERE](#)

PacTrans PI Erica Fischer wins National Science Foundation Career Award

PacTrans PI and Assistant Professor at Oregon State University, Erica Fischer, Ph.D., P.E. recently won a prestigious award from the National Science Foundation (NSF). Fischer was selected for the NSF Career Award for her proposal to create new technologies for the mass timber modular construction of buildings.



[READ THE FULL STORY HERE](#)

WHERE ARE THEY NOW: A Look Back at Past Michael Kyte Award Winners 2020 Mohammad Rayeedul Kalam Siam



Mohammad Rayeedul Kalam Siam received the Michael Kyte Region 10 Outstanding Student of the Year Award in 2020. Currently located in Corvallis, Oregon, Mohammad is a Ph.D. candidate in the School of Civil & Construction Engineering at Oregon State University.

[READ THE FULL STORY HERE](#)

WHERE ARE THEY NOW: A Look Back at Past Michael Kyte Award Winners 2019 Ruimin Ke

Ruimin Ke received the Michael Kyte Region 10 Outstanding Student of the Year Award in 2019.

Ruimin recently accepted a position as an Assistant Professor at the University of Texas at El

Paso. He previously served as a research associate at the University of Washington, Seattle.



[READ THE FULL STORY HERE](#)

RECENTLY COMPLETED RESEARCH

PacTrans researchers from our consortium member institutions have recently completed the following projects in the four mobility sub topics of: accessibility, reliability, efficiency, and safety. To learn more about each specific project, please click on the title to access the research profile page on our PacTrans Website.



Ali Hajbabaie (WSU), Sameh Sorour (UI), Ahmed Abdel-Rahim (UI), "[A Hierarchical priority-based Control of Signalized Intersections in Semi-Connected Corridors](#)" | 2018-M-WSU-2

Nathan Belz (UAF), "[Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals using In-Situ Hyperspectral Data – Phase II: In-Situ Terrestrial Field Data Collection](#)" | 2018-S-UAF-2

UPCOMING EVENTS



UAS Applications in Transportation

Friday, June 18, 2021
11:00am - 12:00pm PDT

Registration Link: https://washington.zoom.us/webinar/register/WN_hixlmGTsTQ6acgHEKo01jg

Uncrewed Aircraft Systems (UAS) are a powerful and increasingly-prevalent tool used by transportation agencies. Some of the primary applications of UAS include bridge inspection, traffic network monitoring, construction site monitoring, surveying and mapping, and landslide site monitoring. UAS enable safe and efficient acquisition of imagery, which can be analyzed visually and/or post-processed to generate high-resolution geospatial data products, such as orthomosaics and 3D point clouds. Additionally, UAS can be equipped with other sensors, such as lidar. However, there are also a number of challenges to enterprise-scale implementation of UAS, ranging from establishing pilot qualification procedures, to developing operational protocols and supporting the IT infrastructure needed manage huge volumes of data. Additional challenges relate to development and testing of algorithms and workflows for efficient auto-extraction of information from the data acquired by UAS. Through a series of eight research projects spanning seven years, researchers at Oregon State University have investigated UAS for the transportation applications listed above. UAS equipped with cameras and lidar systems have been used to acquire data, and numerous processing and analysis workflows have been tested. This presentation will cover the results of these studies, lessons learned, and recommendations for operational use of UAS by transportation agencies. We will conclude with a look ahead at anticipated developments in this rapidly-evolving technology.



Christopher Parrish
Associate Professor,
Civil and Construction
Engineering,
Oregon State University

Presenter

Dr. Christopher Parrish's research focuses on uncrewed aircraft systems (UAS), lidar, structure from motion (SfM) photogrammetry, hyperspectral imagery and other emerging technologies for rapid acquisition of geospatial data. Chris has served as Principal Investigator (PI) for UAS-related research projects sponsored by PacTrans, ODOT, FHWA, and NOAA. In 2018, Chris chaired the PacTrans-sponsored UAS in Transportation Research to Operations Expo. Chris holds a Ph.D. in Civil Engineering with an emphasis in Geospatial Information Engineering from the University of Wisconsin-Madison and an M.S. in Civil and Coastal Engineering with an emphasis in Geomatics from the University of Florida. He is President-Elect of the American Society for Photogrammetry and Remote Sensing (ASPRS), Director of OregonView, and Coastal Processes Lead for the NASA Surface Topography and Vegetation (STV) Incubation Study. Prior to joining OSU, Chris worked for NOAA, serving in multiple positions including as a junior officer on a hydrographic survey ship, geodetic liaison officer in the National Geodetic Survey (NGS), and lead physical scientist in NGS's Remote Sensing Division.



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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