2025 Region 10 Transportation Conference Program

Portland, Oregon
October 10, 2025

Connecting Communities:
Improving Mobility Under Uncertainty

www.pactrans.org

Welcome
to the 2025 Conference

The Pacific Northwest Transportation Consortium (PacTrans) Region 10 University Transportation Center is excited to welcome you to the Annual PacTrans Transportation conference in Portland, Oregon!

We are proud to continue the tradition of providing a premier forum for transportation research in the Pacific Northwest. Each year the conference aims to hear from leaders in transportation, showcase innovation in technology and research, provide a means for collaboration, and advance the transportation workforce.

We have a wonderful in-person agenda planned and we hope it will provide you with a special opportunity for greater reach within and outside our region. As has been tradition, our conference features a keynote address, a series of technical breakout sessions, and posters, among other activities. Enjoy the day!

Jennifer Dill
Conference Chair

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Jennifer Dill PhD

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Research Scientist Google Research

Haifang Wen PhD

Washington State University (WSU)

Professor, Civil & Environmental Engineering (WSU)
Associate Director, PacTrans

About
PacTrans

The Pacific Northwest Transportation Consortium (PacTrans) is the Regional University Transportation Center (UTC) for Federal Region 10.

Who We Are

PacTrans is a consortium of transportation professionals and educators from six colleges and universities located around the Pacific Northwest: Northwest Indian College (NWIC), Portland State University (PSU), the University of Alaska, Anchorage (UAA), University of Idaho (UofI), University of Washington (UW), and Washington State University (WSU).

What We Do

PacTrans focuses on developing human-centered and transformative multimodal mobility solutions for the Pacific Northwest. Major goals and objectives of PacTrans include serving as Region 10's research engine, applied technology showcase, workforce development base, education leader, information center, and collaboration platform.

General
Information

Portland, Oregon

We are excited to make Portland the hub of transportation this PacTrans Conference!

Portland, Oregon's largest city, sits on the Columbia and Willamette rivers, in the shadow of snow-capped Mount Hood. It's known for its parks, bridges and bicycle paths, as well as for its eco-friendliness and its microbreweries and coffeehouses. Iconic Washington Park encompasses sites from the formal Japanese Garden to Oregon Zoo and its railway. The city hosts thriving art, theater and music scenes.

To plan your trip, visit www.travelportland.com.

Hotel Info

Hotel Zags is the primary conference hotel for the 2025 PacTrans Region 10 Transportation Conference. The hotel is 0.30 miles from the conference location, about a seven minute walk. For more info, visit www.thehotelzags.com.

All you need to know

Conference Day

Location

The conference is held at **Smith Memorial Union Ballroom** on the Portland State University.

The physical address is:

1825 SW Broadway
Portland, OR 97201

Registration

Participants can check in on the morning of the conference, at the Registration Counter in front of the main Ballroom.

Name Badges

Participants will be provided with a name badge at the Registration Counter. Badges are required for access to all conference events, meals, and receptions.

Consent to record

By participating in this conference, you consent to the recording of your image and voice for promotional purposes.

Meals

Participants will be provided with all meals during this event, accomodating partcipants' dietary preferences. For specific mealtimes, please refer to the agenda.

Wi-Fi Access

The conference venue provides complimentary Wi-Fi access to all participants. To access, connect to the network titled **PSU Guest**.

Schedule at a Glance

Friday, October 10, 2025
All events will be held at the **Smith Memorial Union** on the PSU Campus.

The Opening Plenary, Lunch, and Posters sessions will take place in the Ballroom and connecting Vanport room on the third floor. Concurrent Sessions will be held in Room 296/8 on the second floor and Rooms 327 and Rooms 328/9 on the third floor.

Time (PT)	Event	Location
7:30 AM	**Registration Open & Breakfast**	Ballroom
8:15 AM – 8:30 AM	**Welcome** ***Yinhai Wang, PhD,*** *University of Washington* *Director, PacTrans* ***Jennifer Dill, PhD,*** *TREC at Portland State University* *Chair, PacTrans Conference Planning Committee*	Ballroom
8:30 AM – 9:10 AM	**Opening Plenary** **Transport Truths for Linking Research and Practice** ***Greg P. Griffin, PhD*** *University of Texas at San Antonio* *Oregon Department of Transportation*	Ballroom
9:10 AM – 9:30 AM	**Break**	
9:30 AM – 10:40 AM	**Concurrent Sessions I**	
	Track 1: Smart Mobility Analytics **Data Analytics for Improved Active Mobility**	296/8
	Track 2: Human-Centered Mobility **Engaging Communities in Transportation Planning: The Role of AI and Technology**	328/9
	Track 3: Innovations for Infrastructure Resilience **Adapting to Extremes: Enhancing Resilience in Arctic and Disaster-Prone Regions**	327
10:40 AM – 11:00 AM	**Break**	
11:00 AM – 12:10 PM	**Concurrent Sessions II**	
	Track 1: Smart Mobility Analytics **Autonomous Mobility: Applications and Control**	296/8
	Track 2: Human-Centered Mobility **Expanding Mobility for All**	328/9
	Track 3: Innovations for Infrastructure Resilience **From Grid to Gravel: Building Resilient Mobility**	327

Time (PT)	Event	Location
12:15 PM – 1:45 PM	**Lunch & Keynote Speaker** **How Cities Can Prepare for Self-Driving Cars** ***David Zipper*** *MIT Mobility Initiative*	Ballroom
1:50 PM – 2:40 PM	**Posters**	Vanport
2:45 PM – 3:30 PM	**Lightning Talks**	
	Track 1: Smart Mobility Analytics	296/8
	Track 2: Human-Centered Mobility	328/9
	Track 3: Innovations for Infrastructure Resilience	327
3:30 PM – 3:50 PM	**Break**	
3:50 PM – 5:15 PM	**Concurrent Sessions III**	
	Track 1: Smart Mobility Analytics **AI-Driven Traffic and Safety Insights**	296/8
	Track 2: Human-Centered Mobility **Infrastructure and Active Mobility**	328/9
	Track 3: Innovations for Infrastructure Resilience **Geotechnical Insights and Simulation Tools for Infrastructure Safety**	327
5:15 PM – 6:30 PM	**Awards & Social Hour**	Ballroom

For full abstracts and bios, visit
www.pactransconference.com/speaker-info
or scan the QR code.

Opening Plenary

Transport Truths for Linking Research and Practice

8:30 AM – 9:10 AM

Greg P. Griffin PhD

Professor of Practice
University of Texas at San Antonio

Principal Research Analyst
Oregon Department of Transportation

Abstract

Transport futures are always uncertain. Researchers and practitioners nonetheless are responsible for building knowledge and delivering projects that aim toward common goals. This talk explores how critical realism can help uncover layered truths in transport planning. Through case studies in The Gambia and Austin, it shows how blending qualitative and quantitative insights reveals deeper impacts and supports more honest, inclusive communication of findings.

Bio

Greg Griffin, Ph.D., AICP coordinates traffic safety and human factors research at the Oregon Department of Transportation, and leads operations of ScooterLab, a National Science Foundation testbed at The University of Texas at San Antonio. His first book is Transport Truths: Planning Methods and Ethics for Global Futures (2025).

Track Descriptions

Track 1

Smart Mobility Analytics

This track examines how recent advances in machine learning and sensing systems contribute to new understandings of mobility. Sessions highlight applications to active transportation, autonomous mobility, traffic operations, and safety.

Track 2

Human-Centered Mobility

This track explores how users of the transportation system can be engaged in planning, design, implementation, and research, and how to create a transportation system to better support users of all abilities. Sessions focus on the role of technology in public engagement, expanding mobility options, and active transportation infrastructure.

Track 3

Innovations for Infrastructure Resilience

This track highlights cutting-edge research and practical solutions aimed at enhancing the resilience of transportation infrastructure in the face of environmental stressors, natural hazards, and extreme weather—especially in cold and remote regions. Attendees will gain insights into scalable innovations applicable across Region 10 and beyond.

For full abstracts and bios, visit
www.pactransconference.com/speaker-info
or scan the QR code.

Concurrent Session I

Data Analytics for Improved Active Mobility

Session Description

Active transportation modes are usually underrepresented in traditional transportation planning and decision-making, often because of a lack of data. “What doesn’t get counted doesn’t count” is a phrase commonly applied to this problem. This session will share how new analytical tools can help address this problem. Learn how:

- A county traffic engineering team used data tools to examine crashes in urban and rural areas and to help select projects and safety countermeasures in developing the Walk-Bike Clackamas Plan.
- Computer vision models which detect objects using video, such as YOLO, can be used to detect pedestrians and bicycles and reliably support mobility planning and real-time monitoring of vulnerable road users.
- Training process and practical steps for cost-effective, scalable traffic monitoring without proprietary sensors.

Kevin Chang PhD
Moderator

Professor
Civil & Environmental Engineering
University of Idaho (UofI)

Director
National Institute for Advanced Transportation Technology (NIATT)

TRACK 1

Room 296/8
9:30 AM – 10:40 AM

Session Speakers

Increased Role of Safety and Volume Data in the Walk-Bike Clackamas Plan

Joseph Marek PE, PTOE

Senior Traffic Engineer
Clackamas County

Evaluating YOLOv5–v11 for Real-Time Pedestrian and Bicycle Detection in Video Data

Banafsheh Rekabdar PhD

Assistant Professor
Computer Science
Portland State University (PSU)

Director
AI Research Lab at PSU

Training Open-Source Computer Vision to Monitor Bicycle and Motorcycle Delivery Traffic

Michael Lowry PhD

Professor + Chair
Civil & Environmental Engineering
University of Idaho (UofI)

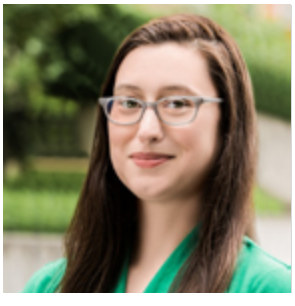
Concurrent Session I

Engaging Communities in Transportation Planning: The Role of AI and Technology

Session Description

Artificial Intelligence (AI) and computer visualization are becoming common tools in the transportation industry. This session will explore how they may or may not be useful in improving how we engage community members in transportation planning. Learn how:

- Language Models can discover patterns in large-scale qualitative data, such as stakeholder comments, synthesize and narrate insights from the data, and engage with users in interactive formats.
- Using AI as a tool for public engagement tasks creates possibilities, but can also present challenges, such as missing local context, language and values – all fundamental parts to getting right when engaging the public.
- Realistic renderings, via 3D visualizations, can be used for obtaining meaningful input on multi-modal design concepts.



Brandy Steffen
Moderator

Partner + Senior Program Manager
JLA Public Involvement

Room 328/9
9:30 AM – 10:40 AM

Session Speakers

Reshaping the Toolset for Public Engagement in Transportation Planning with Large Language Models

Antonie Jetter PhD
Professor + Associate Dean for Research
Maseeh College of Engineering & Computer Science
Portland State University (PSU)

AI: An Emerging Tool in the Public Engagement Toolbox

Jessica Pickul
Principal + Sr. Strategist
JLA Public Involvement

3D Visualizations Change the Conversation

Wende Wilber
Senior Principal
Kittelson & Associates

Concurrent Session I

Adapting to Extremes: Enhancing Resilience in Arctic and Disaster-Prone Regions

Session Description

Building and maintaining transportation infrastructure in the Pacific Northwest is challenging, given the variety of climates and potential disasters we face. In this session, learn how to:

- Identify and analyze key infrastructure challenges faced by Arctic and disaster-prone regions.
- Evaluate adaptation strategies and best practices used globally to enhance resilience in extreme climates and disaster-prone areas, with emphasis on infrastructure.
- Develop actionable frameworks for applying resilience-enhancing approaches to real-world scenarios, integrating engineering, policy, and community-based solutions to reduce risks and improve long-term adaptability.

Haifang Wen PhD
Moderator

Professor
Civil & Environmental Engineering
Washington State University (WSU)

Room 327
9:30 AM – 10:40 AM

Session Speakers

Degrading Warm Permafrost Impact on Transportation Infrastructure in Arctic Regions

Utpal Dutta PhD
Professor
Civil Engineering
University of Alaska Anchorage (UAA)

Mobility and Accessibility Resilience of Transportation Infrastructure to Natural Disasters

Osama Abaza PhD
Professor
Civil Engineering
University of Alaska Anchorage (UAA)

WSDOT's Resilience: Adapting to Changes

Carol Lee Roalkvam
Senior Adviser
Washington Department of Transportation (Retired)

Concurrent Session II

Autonomous Mobility: Applications and Control

Session Description

Autonomous driving is here, though in limited applications. There are still many technical challenges to address before autonomous mobility is widespread, and new computing methods and sensing technologies can help. In the session, learn how:

- To apply deep learning optimization techniques to enable efficient and effective decision-making for autonomous driving applications.
- Cooperation emerges in mixed autonomous driving systems through real-world data analysis and simulation evidence.
- AI methods can be applied to model, optimize, and evaluate emergency vehicle preemption systems.

Jason Spencer
Moderator

Territory Manager
Sierra Transportation Technologies

TRACK 1

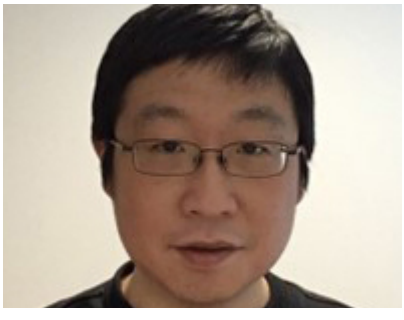
Room 296/8
11:00 AM – 12:10 PM

Session Speakers

Supporting Deep Learning Based Autonomous Driving

Xinghui Zhao PhD

Director + Associate Professor
School of Engineering and Computer Science
Washington State University (WSU) - Vancouver



Emergence of collective rationality in mixed autonomous driving systems: evidence from data and simulation experiments

Jia Li PhD

Assistant Professor
Civil & Environmental Engineering
Washington State University (WSU)

AI's role in the evolution of emergency vehicle preemption

Shane Burbridge

Territory Manager
Sierra Transportation Technologies

Concurrent Session II

Expanding Mobility for All

Session Description

Public agencies across the country are supporting efforts to expand mobility and address policy challenges through new vehicle technologies. However, these technologies face barriers to adoption, including costs and access. In this session learn how:

- The purchase of new, efficient vehicles may not translate into those vehicles actually being driven proportionally and how a new measure of vehicle miles travelled (VMT) can account for these differences.
- Purchase incentives may effect on travel behavior.
- Carsharing programs can lead to new economic opportunities and bolster existing options.

John MacArthur
Moderator

Sustainable Transportation Program Manager
TREC at Portland State University (PSU)

Room 328/9
11:00 AM – 12:10 PM

Session Speakers

Vehicle Miles Traveled and its Spatial Patterns

Lingzi Wu PhD

Director
CIRCUIT Lab

Assistant Professor
Construction Management
University of Washington (UW)

Evaluating the Impact of Purchase Incentives on Vehicle Travel via a Randomized Rebate Program

Rubina Singh

PhD Student
Civil & Environmental Engineering
University of Washington (UW)

The Future is Shared: Innovation and Access in Carsharing

Cat Plein

Director
Programs & Policy
Forth

Concurrent Session II

From Grid to Gravel: Building Resilient Mobility

Session Description

Disasters can happen anytime, and the transportation system must be ready to withstand them and support lifesaving and life-sustaining activities. Aging infrastructure is particularly subject to disruptions. In this session learn:

- How to integrate transportation with planning for resiliency, recovery, and emergency response, with an example of the Portland region's emergency transportation routes.
- Strategies for resilient transportation infrastructure that ensure that these systems can adapt to changing conditions and recover rapidly from disruptions, including prioritizing risk-based asset management, incorporating robust and adaptable design, leveraging technology for predictive maintenance, and fostering redundancy, diversification & network flexibility.
- How data analysis can be used to make multimodal freight corridors more resilient to different types of disruptions, from natural disasters to human-made acts.

Osama Abaza PhD
Moderator

Professor
Civil Engineering
University of Alaska Anchorage (UAA)

TRACK 3

Room 327
11:00 AM – 12:10 PM

Session Speakers

I. Emergency Transportation Routes for Disaster Planning and Transportation Resilience

Carol Chang
Senior Planning Coordinator
Regional Disaster Preparedness Organization (RDPO)

II. Emergency Transportation Routes for Disaster Planning and Transportation Resilience

John Mermin
Senior Transportation Planner
Oregon Metro

Data Needs Analysis for Resilient Multimodal Rural Freight Corridors

Ahmed Ibrahim PhD
Professor
Civil & Environmental Engineering
University of Idaho (UofI)

Building the Future: Strategies for Resilient Transportation Infrastructure

Akmal Durrani
SWR Pavement and Soils Engineer
Washington Department of Transportation (WSDOT)

Luncheon Keynote

How Cities Can Prepare for Self-Driving Cars

12:15 PM – 1:45 PM

David Zipper

Senior Fellow
MIT Mobility Initiative

Abstract

A deluge of self-driving cars could turn urban streets into a congested mess -- but it's not inevitable. Drawing from his recent investigation in Vox, MIT Mobility Initiative Senior Fellow David Zipper will suggest specific policies that can help cities future-proof themselves for the rise of autonomous vehicles.

Bio

David Zipper is a Senior Fellow at the MIT Mobility Initiative, where he examines the interplay between transportation policy, technology, and society. A Contributing Writer at Vox and Bloomberg CityLab, David's writing has also been published in outlets including The Washington Post, The Atlantic, Slate, and Fast Company. From 2013 to 2017, David was the Managing Director for Smart Cities and Mobility at 1776, a global entrepreneurial hub and venture fund. He previously served as the Director of Business Development and Strategy under two mayors in Washington DC, and as Executive Director of NYC Business Solutions in New York City under Mayor Michael Bloomberg.

Posters

Vanport Room

1:50 PM – 2:40 PM

A Collaborative Framework for Real-Time Validation and Anomaly Detection in Urban Traffic Sensors

Chaikasetsin Sruangsaeng, University of Washington

A Hybrid Temporal-Spatial Framework for Understanding Public Station Usage Patterns: Evidence from Bay Area

Zeyu Wang, University of Washington

A Proactive Approach to Examining Transportation Safety and Operation

Kevin Chang and Michael Kulas, University of Idaho

A Synthesis of the state-of-the-practice in Human-Centered AI-related education and workforce development activities

Hazem Aboutaleb, University of Idaho

Advances in Modeling the Resilience of Multimodal Freight Corridors under Disruptions

Tahseen Talukder, University of Idaho

Advancing Rural Autonomous Driving through Light Weight Segmentation ML Models on edge devices

Shaikh Tanveer Hossain, Washington State University – Vancouver

An Integrated Multivariate Econometric Modeling Framework for Risky Driving Behavior Related Crashes: Evaluating Crash Risk and Severity Across Zones

Pabitra Kumar Roy, Tanmoy Bhowmik, and Jason Anderson, Portland State University

Can Surrogate Safety Measures Explain Crash Patterns at Signalized Intersections? Evidence from Large-Scale Connected-Vehicle Data

Mehrdad Nasri, Muhammad Monjurul Karim, Jingyi He, and Yinhai Wang, University of Washington

CAV Testbed in the Pacific Northwest

Jeff Ban, Zili Qu, Bart Treece, University of Washington

Ahmed Abdel-Rahim, University of Idaho

Jia Li, Washington State University

Connecting Bicyclists and Transit: A Multimodal Routing Tool with Bicycle Facilities Scoring

Raphael Mrema, University of North Florida

Angela Kitali, University of Washington – Tacoma

CrashVLA: A Vision-Language-Action Framework for Online Generation of Safety-Critical Traffic Scenarios

Shucheng Zhang, University of Washington

Detecting & Classifying Non-Motorized and Low-Power Micromobility Using Amplitude-Based Inductive-Loop Signatures

Amr Lamloum, University of Idaho

Diffusion-Based Trajectory Planning for Safe Overtaking Using the OSHA Highway Dataset

Jingyi He, University of Washington

Efficient LLMs for Autonomous Driving Applications

Ishparsh Uprety, Washington State University

From High-Dimensional Data to Actionable Insights: A Dynamic Factor Modeling Framework for Winter Road Resilience

Chuang Chen, Washington State University

Identifying and Addressing Workforce Gaps in Transportation Infrastructure Projects: Evidence from Employer–Practitioner Surveys and Topic Modeling

Mehrdad Nasri, Muhammad Monjurul Karim, and Ryan Avery, University of Washington

Mapping the Impact of Social and Economic Factors on Transportation Mobility in Rural Alaskan Communities

Osama Abaza, University of Alaska Anchorage

Mobility and Accessibility Resilience of Transportation Infrastructure to Natural Disasters

David Y. Yang, Portland State University

Quantification of Bias Representations in Transportation Datasets with Missing Values

Bingzhang Wang, University of Washington

Taking another look at TriMet's Park and Rides after the Pandemic

Udit Khandelwal, Fehr & Peers

Taxonomy of Existing Sustainable Smart City IoT Projects

Youssef Saleh, University of Idaho

Lightning Talks
Smart Mobility Analytics

2:45 PM – 3:30 PM

Xuegang (Jeff) Ban

Moderator

Comparing Ultralytics YOLOv8 and YOLOv10 for Multimodal Transportation Counts

River Johnson, Western Carolina University

Harnessing Big Data and Machine Learning for Monitoring and Predicting Traffic Speeds and Travel Times

Bill Cisco, PE, PTV Group

Loop detector based calibration of corridor traffic simulation models

Joshi Chetan, PTV Group

Smart and Cooperative Truck Parking Information Management System

Nutvara Jantarathaneewat, University of Washington

The Future of Lighting Design! Lighting Master Plans and AI Photometric Design: Using Data and Technology to Improve Transportation Safety and Access

Nick Mesler, Evari Consulting, Inc.

Isaak Ari, Photometrics AI

Understanding Pedestrian and Bicyclist Crash Risks through Intersection-Level Analysis

Ahmed Elsayed, University of Idaho

Lightning Talks
Human-Centered Mobility

2:45 PM – 3:30 PM

Jon Froehlich
Moderator

Advancing Multimodal Mobility: GIS-Based Routing and Bicycle Infrastructure Quality Scoring for Active Transportation Planning

Thobias Sando and Raphael Mrema, University of North Florida
Panick Kalambay, Texas Southern University
Angela Kitali, University of Washington – Tacoma
Monica Deibel, University of Washington – Tacoma

BikeButler: Creating and Previewing Personalized, Context-Sensitive Bicycle Routes

Jared Hwang, University of Washington

Catalyzing a Mobility Transition: Establishing Use Cases to Prioritize Public Access to Stations

Ashley Avila, Fehr & Peers

Deep Fictitious Play-Based Potential Differential Games for Learning Human-Like Interaction at Unsignalized Intersections

Kehua Chen, University of Washington

Modeling Pedestrian Volumes at Intersection for Safety Performance Function Development

Josh Roll, Oregon Department of Transportation

TestRide Your Streets: Action-Oriented Bikeway Design at a Future Green Plaza

Kuehn Aaron, BikeLoud PDX

Lightning Talks

Innovations for Infrastructure Resilience

2:45 PM – 3:30 PM

Osama Abaza
Moderator

Accelerating Community Connectivity: Rapid-Setting Concrete Solutions for Resilient Infrastructure

Daniel Akerele, University of Washington

Causal AI for Environmental and Transportation Data

Xinghui Zhao, Washington State University at Vancouver

Mobility in Cold Climates: Coordination of Energy and Transportation Networks

Namun Nahar Maria, University of Alaska Anchorage

Enhancing winter mobility of pervious concrete pavement via incorporation of engineered biochar

Jialuo He, Washington State University

Ten Transportation Energy Topics You Should Be Researching and Two You Shouldn't

Steven Polunsky, Washington State Department of Commerce

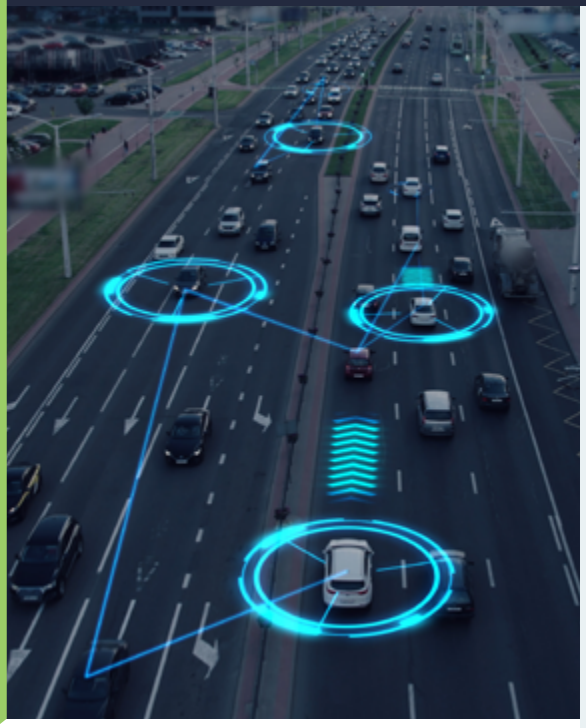
Toward Resilient Transportation Infrastructure: A Probabilistic Framework for Predicting Backward Erosion Piping in Geotechnical Flood Protection Systems

Zhijie Wang, Washington State University

Notes

Concurrent Session III

AI-Driven Traffic and Safety Insights



Session Description

Artificial Intelligence (AI) has great potential to improve our understanding of traffic operations and safety. In this session, learn how:

- Large language models (LLMs) can democratize traffic analytics and enhance transportation safety.
- Attention-based models can be used to enhance the classification of crashes and reveal critical crash factors to improve safety and mobility.
- Apply AI-based traffic monitoring to improve safety for Tribal and rural communities.

Fredrick (Rick) Sheldon PhD
Moderator

Professor
Computer Science
University of Idaho (UofI)

RACK 1

Room 296/8
3:50 PM – 5:15 PM

Session Speakers

Next-Gen Transportation Analytics: Enabling Large Language Models in Traffic Frameworks

Muhammad Karim PhD

Postdoctoral Scholar
University of Washington (UW)

AI Vision for Traffic Monitoring and Real-Time Safety Interventions: Field Results from Rural and Urban Deployments

Wei Sun PhD

Co-Founder + Chief Executive Officer
AIWaysion

Enhancing Crash Classification through Attention-based Models: Unveiling Causal Factor Importance and Interactions for Improved Transportation Mobility and Safety

Masoumeh Kapourchali

Assistant Professor
Computer Science
University of Alaska Anchorage (UAA)

AI powered solutions for safer streets

Billy Baker

Regional Sales Manager- West
Derq

Concurrent Session III

Infrastructure and Active Mobility

Session Description

Transportation agencies across the country are aiming to increase the share of travel by active modes, including walking and bicycling. Providing infrastructure that improves the safety, comfort, and convenience of these modes is key to those plans. In this session, learn how:

- Cities are using quick-build curb extensions, sometimes with mural art, to reduce crossing distances and improve pedestrian safety.
- An open-source web platform combines community assessments with AI to scalably assess pedestrian infrastructure and describe case studies of successes and failures.
- How to estimate behavior change and associated benefits from the installation of new active transportation infrastructure based.
- How agencies can change their processes to advance the implementation of active transportation infrastructure.

Jennifer Dill PhD
Moderator

Professor
Nohad A. Toulan School of Urban Studies and Planning at Portland State University (PSU)

Director
Transportation Research and Education Center at PSU

TRACK 2

Room 328/9
3:50 PM – 5:15 PM

Session Speakers

Tactical curb extensions and the pedestrian crossing experience

Nathan McNeil
Research Associate
Transportation Research and Education Center (TREC)
Portland State University (PSU)

Curb Ramps, Pedestrian Signals, Sidewalk Obstacles: Combining Community-Sourced Data with AI for Scalable Pedestrian Infrastructure Assessment

Jon E. Froehlich PhD
Professor
Allen School of Computer Science
University of Washington (UW)

Estimating behavior change and benefits from new active transportation infrastructure

Joseph Broach PhD
Senior Researcher + Modeler
Oregon Metro MPO

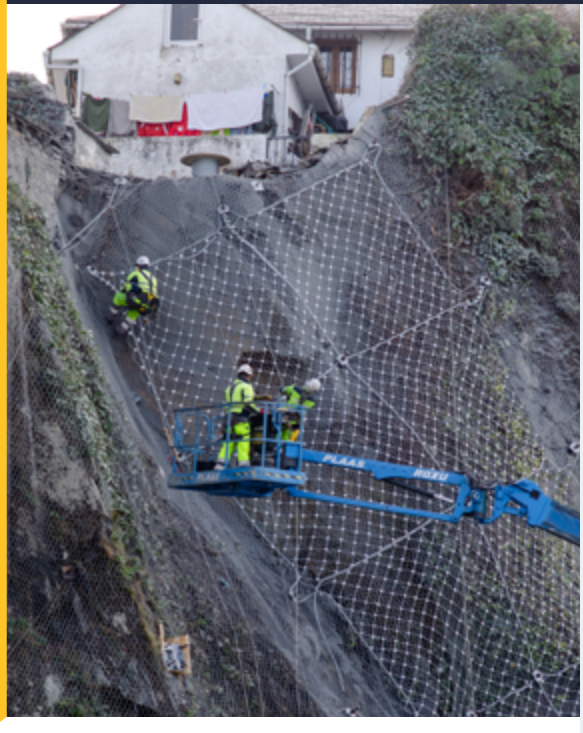
Research Associate
Transportation Research and Education Center (TREC)
Portland State University (PSU)

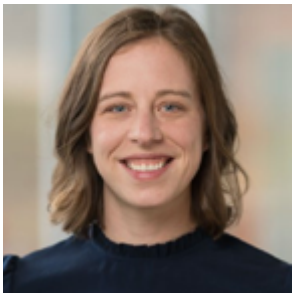
Shortcuts to Complete Streets

Talia Jacobson
Principal Planner + Portland Office Director
Toole Design

Concurrent Session III

Geotechnical Insights and Simulation Tools for Infrastructure Safety





Diane Moug
Moderator

Assistant Professor
Civil & Environmental Engineering
Portland State University (PSU)

Session Description

Liquefaction is a major threat to transportation infrastructure in the Pacific Northwest, though tools to understand this and related geotechnical challenges have been limited. This session will share insights from new research, tools, and applications. Learn how:

- A new method can characterize the seismic behavior of silt soils and improve hazard assessment for the region's transportation assets.
- AI-based geospatial models can produce high-resolution predictions of liquefaction damage across affected regions of large earthquakes and be used to improve evacuation and emergency-response route planning, network vulnerability analysis, community impact assessments, and public investment prioritization.
- A new method was used to understand landslide behavior to better inform new infrastructure investments.
- Robust field exploration, regional context, and emerging tools such as generative AI can identify trends and leverage historic data to better understand subsurface conditions when planning resilient infrastructure.
- Advances in national design codes through AASHTO address site and model variability, enabling tailored exploration and testing strategies and the use of more efficient resistance factors in geotechnical design.

Room 327
3:50 PM – 5:15 PM

Session Speakers

Laboratory Characterization of Geotechnical Earthquake Strength and Behavior of Silt Soils

Amir Barati Nia

PhD Student
Portland State University (PSU)

Liquefaction Impacts on PacTrans Mobility: Mechanics-Informed AI Modeling for Simulation, Disaster, and Near-Real-Time Response

Morgan Sanger PE

PhD Student
University of Washington (UW)

Geologic deposit strength inversion for coseismic slope stability along the Portland Water Bureau's transmission alignment

Michael W. Greenfield

Principal Engineer
Greenfield Geotechnical

Understanding subsurface conditions is critical for resilient infrastructure

Andrew Fiske

State Geotechnical Engineer
Washington Department of Transportation (WSDOT)

Notes

New Networking Contacts

Thank You
For Participating!

Next Year's Conference...
In 2026, we're headed to University of Alaska Anchorage, see you there!

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