



2026 Region 10 Transportation Conference Program



Anchorage, Alaska
October 9, 2026

Transportation Systems Empowered by Innovation:
Safe, Adaptive, and Connected

Welcome to the 2026 Conference

On behalf of the Pacific Northwest Transportation Consortium (PacTrans) and the University of Alaska Anchorage, it is my pleasure to welcome you to the PacTrans 2026 Regional Conference in Anchorage, Alaska.

This year's theme, "Transportation Systems Empowered by Innovation: Safe, Adaptive, and Connected," reflects both the opportunities and challenges facing transportation systems across the Pacific Northwest and Alaska. The conference brings together researchers, transportation agencies, industry professionals, students, and community partners to exchange ideas, share research and practical experience, and strengthen collaboration across Region 10.

Throughout the day, the program will feature keynote addresses, technical sessions, an executive and agency panel, and opportunities for professional networking. Topics span artificial intelligence and connected transportation, safety and operations, infrastructure resilience, mobility and accessibility, cold-region transportation, workforce development, and emerging transportation technologies.

We are especially grateful to our speakers, moderators, sponsors, exhibitors, partner universities, agency and industry participants, conference committee members, students, and volunteers whose contributions have made this conference possible.

We hope the conference provides an opportunity not only to learn from one another, but also to develop new partnerships and ideas that advance safer, more resilient, accessible, and innovative transportation systems throughout Region 10 and beyond.

Welcome to Anchorage and to the PacTrans 2026 Regional Conference.

Osama A. Abaza
Conference Chair

Thank you to our sponsors!

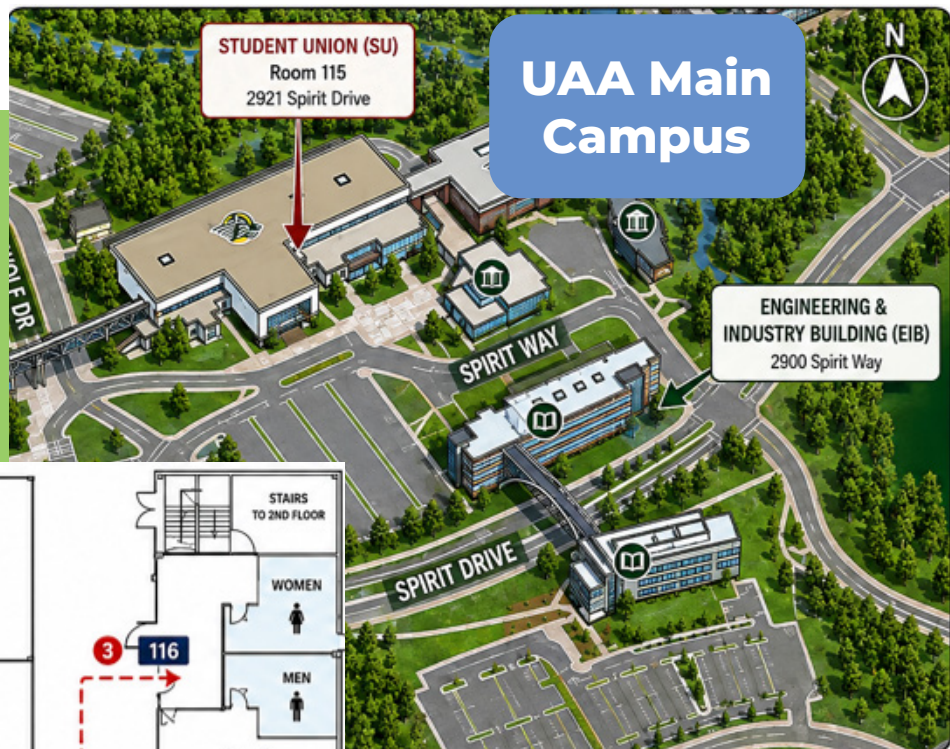


All you need to know for Getting Around

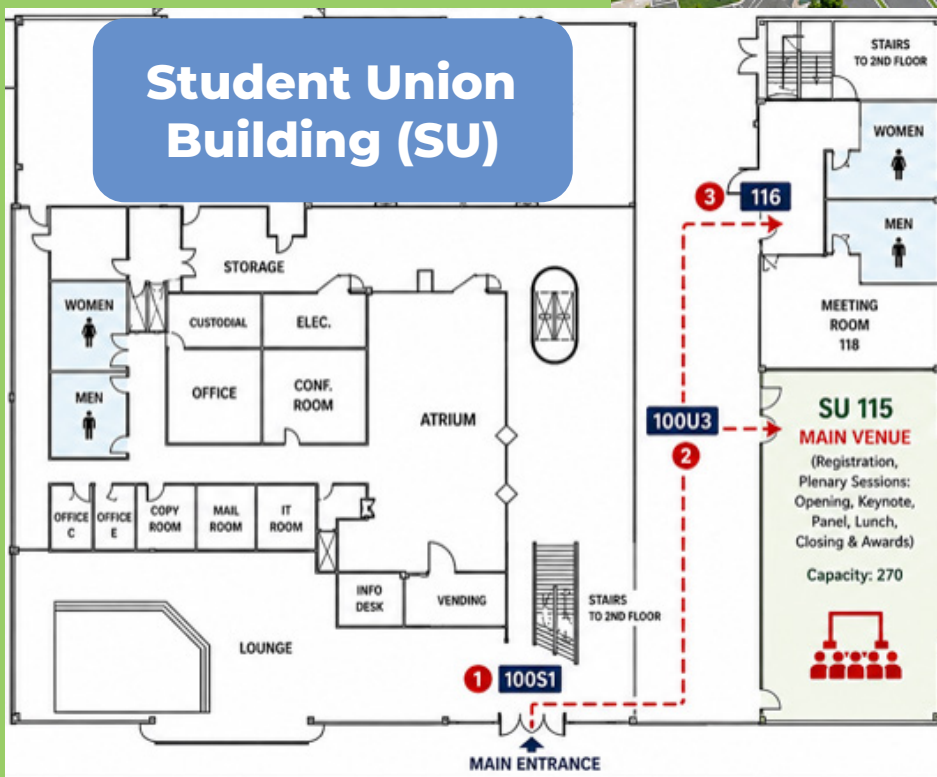
Location

The conference is held at **SU and EIB Buildings** on University of Alaska Anchorage Campus.

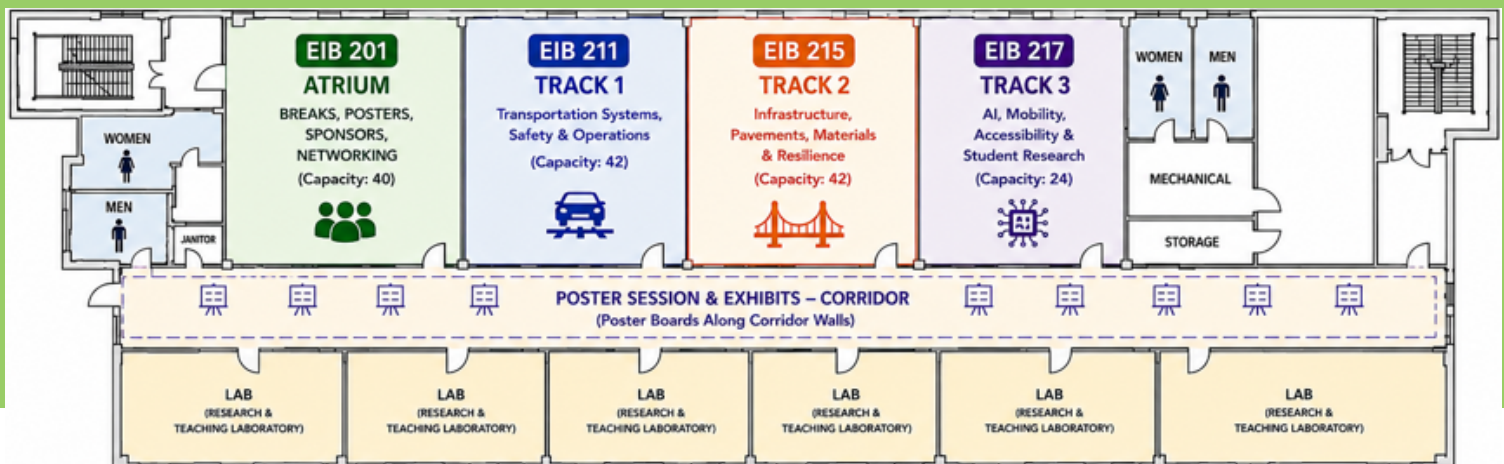
The physical address is:
**2921 Spirit Drive,
Anchorage, AK 99508**



Student Union Building (SU)



Engineering & Industry Building (EIB) (Second Floor)



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

What We Do

PacTrans focuses on developing human-centered and transformative multi-modal 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 collaborator.

Conference Planning Committee



Osama A Abaza PhD

University of Alaska Anchorage

Conference Chair

Professor, Civil Engineering (UAA)

Associate Director, PacTrans



Ahmed Abdel-Rahim PhD

University of Idaho

Professor, Civil & Environmental Engineering (UofI)

Associate Director, PacTrans



Tanmoy Bhowmik PhD

Portland State University

Assistant Professor, Civil & Environmental Engineering (PSU)

Research Faculty, PacTrans



Jon Froehlich PhD

University of Washington

Professor, Allen School of Computer Science and Engineering (UW)

Associate Director of Tech

Transfer, PacTrans

Research Scientist Google Research



Haifang Wen PhD

Washington State University

Professor, Civil & Environmental Engineering (WSU)

Associate Director, PacTrans

Keynote Speakers



Intelligent Listening for Digital Transportation

8:30 AM – 9:10 AM

Jie Zhang PhD

Founder, LifeSeis Inc

Bio

Dr. Jie Zhang is the founder of LifeSeis Inc., a Houston-based AI company developing intelligent listening technologies for digital transportation. He holds a B.S. from the University of Science and Technology of China and a Ph.D. in geophysics from MIT. A professor, entrepreneur, and multidisciplinary scientist, he has founded several technology companies and taught at MIT, Stanford University, and USTC. He has published over 220 technical papers and holds more than 30 patents. His honors include major awards from the EPA, NSF, and Society of Exploration Geophysicists. In 2020, he was elected to the U.S. National Academy of Engineering and currently serves in leadership roles with TAMEST and the SEG Foundation.



Shared Foundations: Transportation That Creates Opportunity

11:40 AM – 1:00 PM

Ryan Anderson PE

Commissioner, Alaska Department of Transportation and Public Facilities

Bio

Ryan Anderson brings over 26 years of experience in Alaska's transportation systems, including highways, airports, and marine infrastructure. Appointed Commissioner in 2021, he is a licensed civil engineer with expertise in multimodal project delivery and operations. He serves on the boards of the Alaska Railroad Corporation, Alaska Gasline Development Corporation, and Alaska Permanent Fund Corporation, aligning infrastructure investment with economic and energy strategy.

Schedule at a Glance

Friday, October 9, 2026

All events will be held at the **Engineering & Industry Building (EIB) and Student Union (SU)** on the UAA Campus.

The Opening Keynote and Lunch will take place in SU 115. Concurrent Sessions and Posters will be held in the EIB Rooms.

Time	Event	Location
7:30 AM	Registration Open & Breakfast	SU 115
9:00 AM – 9:20 AM	Welcome Yinhai Wang, PhD , University of Washington Director, PacTrans Osama A. Abaza, PhD , Professor, UAA Chair, PacTrans Conference Planning Committee	SU 115
9:20 AM – 10:00 AM	Opening Keynote Intelligent Listening for Digital Transportation Jie Zhang, PhD Founder, LifeSeis, Inc.	SU 115
10:00 AM – 10:20 AM	Break	
10:20 AM – 11:40 AM	Concurrent Sessions I Session 1A: AI & Connected Transportation Safety Session 1B: Resilience, Hazards & Infrastructure Risk Session 1C: Mobility, Accessibility & Workforce: Data Systems & Research	EIB 211 EIB 215 EIB 217
11:40 AM – 1:00 PM	Lunch & Keynote Speaker Shared Foundations: Transportation That Creates Opportunity Ryan Anderson, P.E. Commissioner, Alaska DOT & Public Facilities	SU 115
1:00 PM – 1:50 PM	Executive/Agency Panel - Transportation Innovation in the AI Era	SU 115
1:50 PM – 1:55 PM	Stretch Break	

Time	Event	Location
1:55 PM – 2:15 PM	Posters - Lightning Pitches	EIB Corridor/ Atrium
2:15 PM – 2:20 PM	Stretch Break	
2:20 PM – 3:40 PM	Concurrent Sessions II Session 2A: Safety Operations & Decision Support Session 2B: Smart Infrastructure & Monitoring Session 2C: Community Mobility & Workforce	EIB 211 EIB 215 EIB 217
3:40 PM – 3:50 PM	Break	
3:50 PM – 5:05 PM	Concurrent Sessions III Session 3A: Emerging Applications and Industry Innovation Session 3B: Materials, Cold Regions, & Major Facilities Session 3C: Active Transportation, Walkability, & Community Health	EIB 211 EIB 215 EIB 217
5:15 PM – 5:30 PM	Awards, Sponsor Recognition, & Closing Remarks	SU 115

For full program, visit
www.pactransconference.com/2026-pactrans-conference-program/
 or scan the QR code.



SESSION DETAILS

CONCURRENT SESSIONS I | 10:20 AM - 11:40 AM

Session 1A - AI & Connected Transportation Safety EIB 211 Moderator: <i>Tanmay Bhowmik, Portland State University</i>	
TIME	PRESENTATION
10:20 AM - 10:40 AM	AI-Driven Intrusion Detection for Enhancing the Cyber-Physical Resilience of Autonomous Vehicles <i>Damiano Torre, University of Washington Tacoma</i>
10:40 AM - 11:00 AM	Multimodal Intersection Monitoring and Real-Time Safety Interventions Using Edge AI and Connected Traffic Control Systems <i>Brian Brooke, AIWaysion</i>
11:00 AM - 11:20 AM	DriveMind: Mind-Evolving Belief Tracking for Closed-Loop Autonomous Driving <i>Yan Shi, University of Washington</i>
11:20 AM - 11:40 AM	AI-Enhanced Traffic Safety Digital Twin: From Intelligent Sensors to Simulation and Decision Support <i>Mehrdad Nasri, University of Washington</i>
Session 1B - Resilience, Hazards & Infrastructure Risk EIB 215 Moderator: <i>Dr. Wei Cheng, University of Washington</i>	
TIME	PRESENTATION
10:20 AM - 10:40 AM	Preparedness Tested: Leadership, Preparedness, and Infrastructure in the 2018 Anchorage Earthquake <i>Grace Amundsen Barnkow, WSDOT</i>
10:40 AM - 11:00 AM	Mobility and Accessibility Impacts of Seismic Transportation Corridor Disruption in Southcentral Alaska <i>Osama Abaza, University of Alaska Anchorage</i>
11:00 AM - 11:20 AM	Bridge-Specific Deep Learning for Deterioration Forecasting: A Geography-Aware HyperNetwork for Pacific Northwest Bridges <i>Haifeng Wang, Washington State University</i>
11:20 AM - 11:40 AM	Multi-Hazard Assessment Framework for River-Crossing Bridges Subjected to Flood-Induced Scour and Seismic Loading <i>Ahmed Ibrahim, University of Idaho</i>
Session 1C - Mobility & Accessibility: Data Systems and Research EIB 217 Moderator: <i>Jon E. Froehlich, University of Washington</i>	
TIME	PRESENTATION
10:20 AM - 10:40 AM	Examining Transportation Operations and Safety from Socioeconomic and Geographic Perspectives <i>Ahmed Elsayed, University of Idaho</i>
10:40 AM - 11:00 AM	From Community Input to Agency Action: Aviv ScoutRoute and TDEI Across the Pedestrian Data Lifecycle <i>Anat Caspi, Taskar Center for Accessible Technology, University of Washington</i>
11:00 AM - 11:20 AM	Measuring Livability from the Sidewalk Network: A Pedestrian Access Tool for Safer, More Connected, and Reachable Communities <i>Kunal Mehta, Taskar Center for Accessible Technology, University of Washington</i>
11:20 AM - 11:40 AM	Innovative Approaches to Analyze the Efficiency of Last-Mile E-Commerce Deliveries Using Real-World Data <i>Miguel Figliozzi, Portland State University</i>

SESSION DETAILS

CONCURRENT SESSIONS II | 2:20 PM - 3:40 PM

Session 2A - Safety Operations & Decision Support | EIB 211

Moderator: *Kevin Chang, University of Idaho*

TIME	PRESENTATION
2:20 PM - 2:40 PM	The Safe System Approach and Winter City Implementation Challenges <i>Brandon Telford, Municipality of Anchorage, Project Management & Engineering</i>
2:40 PM - 3:00 PM	WITNESS: Washington Integrated Transportation Networks Evaluation System and Security <i>Junaid Khan, Western Washington University</i>
3:00 PM - 3:20 PM	Evaluating the Safety Effectiveness of Shoulder and Centerline Rumble Strips on Rural Alaska Highways Using Empirical Bayes Methods <i>Osama Abaza, University of Alaska Anchorage</i>
3:20 PM - 3:40 PM	Adaptive Truck Parking Availability Prediction for Real-Time Operations <i>Nutvara J, University of Washington</i>

Session 2B - Smart Infrastructure & Monitoring | EIB 215

Moderator: *Dr. Xinghui Zhao, Washington State University*

TIME	PRESENTATION
2:20 PM - 2:40 PM	Lessons Learned from Deploying Minimally Infrastructure-Dependent Edge AI Roadside Monitoring Systems for Traffic Safety and Asset Management in Rural, Tribal, and Cold-Region Environments <i>Wei Sun, AIWaysion</i>
2:40 PM - 3:00 PM	Enhancing Infrastructure Resilience: An AI-Driven Solution for Road Management <i>Juhua Hu, University of Washington</i>
3:00 PM - 3:20 PM	Digital Twin-Based Modeling of Integrated Power and Transportation Networks — <i>Amr Lamloom, University of Idaho</i>
3:20 PM - 3:40 PM	Predicting Permafrost Thaw Settlement for Transportation Infrastructure Using Machine Learning and Geotechnical Parameters — <i>Utsav Dutta, University of Alaska Anchorage</i>

Session 2C - Community Mobility & Workforce | EIB 217

Moderator: *Michelle Duncan, Alaska DOT&PF*

TIME	PRESENTATION
2:20 PM - 2:40 PM	Electric Vehicles in the Arctic — <i>Michelle Wilber, UAF Alaska Center for Energy and Power</i>
2:40 PM - 3:00 PM	Planning and Environmental Linkages on the North Slope: Building Consensus on the Purpose and Need for Transportation Investment — <i>Renee Whitesell, DOWL, Brett Nelson (Alaska DOT&PF) & Inuuteq Stotts (ASRC)</i>
3:00 PM - 3:20 PM	Understanding Transportation Infrastructure Workforce Gaps Through a Multi-Theoretical Lens — <i>Mehrdad Nasri, University of Washington</i>
3:20 PM - 3:40 PM	Workforce Development in Alaska — <i>Matthew Calhoun, University of Alaska Anchorage</i>

SESSION DETAILS

CONCURRENT SESSIONS III | 3:50 PM - 5:05 PM

Session 3A - Emerging Applications & Industry Innovation EIB 211 Moderator: <i>Xuegang Ban, University of Washington</i>	
PRESENTATION	PRESENTER/ORGANIZATION
Introducing Derq: AI-Powered Video Analytics for Safer and Smarter Intersections	Shane Burbridge <i>Sierra Transportation Technologies</i>
From Detection to Decision-Making	Craig Moore <i>CTNW</i>
CRoNeTS: Corruption-Robust Online Learning for Safe, Adaptive, and Connected Transportation Systems	Xutong Liu <i>University of Washington</i>
Examining Transportation Safety Feedback Using AI-Generated Data	Kevin Chang <i>University of Idaho</i>
Characterizing Industrial-Residential-Commercial Interfaces Across Washington State...	Srijan Budhathoki <i>Washington State University</i>
Session 3B - Materials, Cold Regions & Major Facilities EIB 215 Moderator: <i>Dr. Haifeng Wang, Washington State University</i>	
Connecting Alaska to the World	Kim Swenson <i>Alaska International Airport System / Ted Stevens Anchorage International Airport</i>
Multi-DOT Specification Compatibility Framework for Rapid-Setting Concrete Repair	Daniel Akerele <i>University of Washington</i>
Changes of a Natural Silt Soil Cyclic Behavior and Properties with Plasticity Index	Diane Moug <i>Portland State University</i>
Supporting Deep Learning Based Autonomous Driving Applications in Rural Areas	Xinghui Zhang <i>Washington State University</i>
Session 3C - Active Transportation, Walkability & Community Health EIB 217 Moderator: <i>Matthew Calhoun, University of Alaska Anchorage</i>	
Vulnerable Road User Crashes Involving Risk-Tolerant Behaviors - A Case Study of Anchorage, Alaska	Dr. Nathan Belz and Santosh Adhikari <i>University of Alaska Fairbanks</i>
Active Transportation Projects in Tribal Alaska	Hillary Strayer <i>Alaska Native Tribal Health Consortium</i>
The Power of Partnerships in the Wild Wild North (West)	Olivia Lunsford <i>FAST Planning</i>
Connecting Transportation and Public Health in Alaska	Jess Doherty <i>State of Alaska Department of Health</i> Julius Adolfsson , <i>Alaska DOT & PF</i>
The Power of Partnerships - Panel: Hillary Strayer <i>Alaska Native Tribal Health Consortium</i> Olivia Lunsford <i>FAST Planning</i> Jess Doherty <i>State of Alaska Department of Health</i> Julius Adolfsson , <i>Alaska DOT & PF</i>	

POSTERS | LIGHTNING PITCHES

EIB CORRIDOR/ATRIUM | 1:55 PM - 2:15 PM

TRACK 1 - Systems, Safety & Operations

CrashDiffuser: Structured Collision-Intent Guided Diffusion for Fine-Grained Safety-Critical Traffic Scenario Generation *Schucheng Zhang, University of Washington*

Privacy-Preserving Federated Learning for Corridor-Level Traffic Safety Prediction Using Multi-Intersection Trajectory Data from US-97 *Mehrdad Nasri, University of Washington*

Progressive On-Site Sensing and Monitoring for Truck Parking Availability Forecasting *Kehua Chen, University of Washington*

Physics-Embedded Gaussian Process for Traffic State Estimation *Kehua Chen, University of Washington*

Beyond Crash Counts: Severity and Systemic Risk Findings from Tribal Transportation Corridors in Washington State *Sruangsaeng Chaikasetin, STAR Lab, CEE, University of Washington*

Assessment of Intertidal Mudflat Trafficability in the High-Altitude Environment *Ivy Zhao, University of Alaska Anchorage*

Does Proximity to DC Fast Chargers Drive BEV Adoption? Causal Evidence from Washington State Census Tracts *A S M Mirajul Islam, Washington State University*

Privacy-Preserving Federated and Mixture-of-Experts Fine-Tuning of a Reasoning Vision-Language-Action Model for Safe, Adaptive Autonomous Driving *Bingzhang Wang, University of Washington/NVIDIA*

Assessing Transit User Experience Across Facility Types Using Crowdsourced Reviews, Ridership-Adjusted Models, and Street-View Imagery in Four U.S. Cities *Zeyu Wang, University of Washington*

Diffusion²: Dual Diffusion Model with Uncertainty-Aware Adaptive Noise for Momentary Trajectory Prediction *Yuang Zhang, University of Washington*

TRACK 2 - Infrastructure & Resilience

How Transportation PMs Are Using M365 Copilot Right Now *Shelly Thomas, Building Beta*

Powering Through the Long Winter – Research into Heavy-Duty Electric Vehicle Performance and Economics in Cold Climates *Cameron Dolan Alaska Center for Energy and Power, University of Alaska Fairbanks*

An Empirical Evaluation of AI Operating Systems Versus Traditional Operating System Paradigms *Kamran Siddique University of Alaska Anchorage*

Advanced Imaging of Concrete Structures: Ensuring Mobility and Infrastructure Resilience *Narges (Mahsa) Pahnabi, Portland State University*

Scalable Generation of Urban Maps from DashCam Video for Transportation Asset Monitoring and Management *Zhi-Qi Cheng, University of Washington Tacoma*

Analysis and Prediction of Electric Vehicle Charging Behavior in Extreme Cold Climates *Nazmun Nahar Maria, University of Alaska Anchorage*

TRACK 3 - Mobility & Workforce

Alaska Community Connectivity Action Plan (ACCAP) *Michelle Duncan, Alaska Department of Transportation & Public Facilities*

Video-based Road Curb Detection and Color Identification by VLMs *Juhua Hu, University of Washington; Presented by: Yexuan Gao*

Diffuse and Bound *Kehua Chen, University of Washington*

Finding Alaska's Waysides: Mapping the Data Desert *Grace Richards DOWL*

iOSPointMapper: Community-Directed Mobile AI for Operational Pedestrian Data *Himanshu Naidu, Taskar Center for Accessible Technology, University of Washington*



Thank You

For Participating!

