

# NATHAN P. BELZ, Ph.D.

Department of Civil, Geological, and Environmental Engineering, University of Alaska Fairbanks  
1764 Tanana Loop, 128 JUB, Fairbanks, AK 99775  
Phone: 907.474.5765 | email: npbelz@alaska.edu | web: www.nathanpbelz.com

<b>Publications</b>	<b>Citations</b>	<b>h-index</b>	<b>Active Publication Years</b>	<b>Research Funding to Date</b> <i>directly as PI or co-PI</i>	<b>Funding to Date</b> <i>Total (including centers)</i>
41	119	5.0	2008 - 2023	\$3.51 million	\$12.67 million

## RESEARCH INTERESTS

Transportation safety; transportation in rural and isolated contexts; the overlapping area between driver behavior and traffic operations; human factors; driver behavior and gap-acceptance at roundabouts; transportation applications of Geographic Information Systems (GIS).

## EDUCATION

Ph.D. Civil Engineering | Transportation Engineering | University of Vermont, *August 2013*  
M.S. Civil Engineering | Transportation & Geotechnical Engineering | University of Maine, *May 2008*  
B.S. Civil & Environmental Engineering | University of Maine, *May 2006*

## PROFESSIONAL EXPERIENCE

Center for Safety Equity in Transportation Tier 1 University Transportation Center, FAST Act <i>Assistant Director</i> (2016 – present), <i>Acting Director</i> (2018 – 2019)	Fairbanks, AK 64.856N, 147.818W
University of Alaska Fairbanks (UAF) <i>Department Chair, CGEE</i> (July 2023 – present) <i>Associate Professor</i> (July 2019 – present) <i>Assistant Professor</i> (August 2013 – June 2019)	Fairbanks, AK 64.856N, 147.818W
Alaska Region Tribal Technical Assistance Program Center <i>Assistant Director</i> (August 2022 – present)	Fairbanks, AK 64.856N, 147.818W
Sunlight Farms AK <i>Owner and CEO</i> (February 2018 – present)	Fairbanks, AK 64.933N, 147.999W
University of Vermont (UVM) Transportation Research Center <i>Graduate Research Assistant</i> (September 2008 – July 2013)	Burlington, VT 44.483N, 73.1935W
Maine Department of Transportation <i>Assistant Engineer</i> (May 2008 – September 2008)	Augusta, ME 44.307N, 69.777W
University of Maine (UMaine) Civil and Environmental Engineering <i>Graduate Research Assistant</i> (September 2006 - May 2008)	Orono, ME 44.902N, 68.669W
UMaine Advanced Engineering Wood Composites Lab <i>Research Intern</i> (September 2003 - May 2004)	Orono, ME 44.901N, 68.666W

## PEER-REVIEWED JOURNAL PUBLICATIONS

*Published or In-Press*

Richards, E., Stuefer, S., Maio, C., Daanen, R. **Belz, N.P.**, Rangel, R.C., (2023). *An evaluation of GPR monitoring methods on varying river ice conditions: A case study in Alaska*, Cold Regions Science and Technology, Vol. 210, June 2023, 103819 <https://doi.org/10.1016/j.coldregions.2023.103819>

**Belz, N.P.**, Yang, A. (2018). *Utilization of Gaps at Single-Lane Roundabouts*, Transportation Research Record, Journal of the Transportation Research Board, of the National Academies, Washington, D.C.  
DOI: [10.1177/0361198118770174](https://doi.org/10.1177/0361198118770174)

**Belz, N.P.** (2016). *Investigating the Role of Turn Indicator Usage by Exiting Vehicles in Gap Acceptance at Single-Lane Roundabouts*, Frontiers of Structural and Civil Engineering, Vol. 11. No. 1, pp 8–16.  
DOI: [10.1007/s11709-016-0365-7](https://doi.org/10.1007/s11709-016-0365-7)

**Belz, N.P.**, Aultman-Hall, L., Montague, J. (2016). *Influence of Priority Taking and Abstaining at Single-Lane Roundabouts using Cellular Automata*, Transportation Research Part C: Emerging Technologies, Vol. 69, pp. 134-149. DOI: [10.1016/j.trc.2016.05.021](https://doi.org/10.1016/j.trc.2016.05.021)

**Belz, N.P.**, Aultman-Hall, L., Troy, A. (2016). *Roundabouts in Northern New England: 1990-2010*, Transportation Research Record No. 2585, Journal of the Transportation Research Board of the National Academies, Washington, D.C. DOI: [10.3141/2585-01](https://doi.org/10.3141/2585-01)

**Belz, N.P.**, Aultman-Hall, L., Lee, B.H.Y., Gårder, P.E. (2014). *An Event-Based Framework for Non-Compliant Driver Behavior at Single-Lane Roundabouts*, Transportation Research Record No. 2402, Journal of the Transportation Research Board of the National Academies, Washington D.C. DOI: [10.3141/2402-05](https://doi.org/10.3141/2402-05)

**Belz, N.P.**, Lee, B.H.Y. (2012). *Composition of Vehicle Occupancy for Journey-to-Work Trips: Evidence of Ridesharing from the 2009 National Household Travel Survey Vermont Add-on Sample*, Transportation Research Record No. 2322, Transportation Research Board of the National Academies, Washington D.C. DOI: [10.3141/2322-01](https://doi.org/10.3141/2322-01)

**Belz, N.P.**, Aultman-Hall, L. (2011). *Analyzing the Effect of Driver Age on Operating Speed and Acceleration Noise Using On-board Second-by-Second Driving Data*, Transportation Research Record No. 2265, Transportation Research Board of the National Academies, Washington D.C. DOI: [10.3141/2265-21](https://doi.org/10.3141/2265-21)

**Belz, N.P.** and Gårder, Per E. (2009). *Maine Statewide Deployment and Integration of Advanced Traveler Information Systems*, Transportation Research Record No. 2129, Transportation Research Board of the National Academies, Washington D.C. DOI: [10.3141/2129-03](https://doi.org/10.3141/2129-03)

## JOURNAL PAPERS and SCHOLARLY MATERIAL in PREPARATION/REVISION

Mohamed, M., **Belz, N.P.**, (in revision). *Safety Impacts of Road Weather Information System Implementation in Alaska*, Journal of Accident Analysis and Prevention

**Belz, N.P.**, Chang, K., Hansen, R. (in revision). *Using Field and Simulation Data to Assess Passing Zone Behavior on Rural Two-Lane Highways*. Transportation Research Record - Journal of the Transportation Research Board, of the National Academies, Washington, D.C.

Kadir, A., **Belz, N.P.**, Aggarwal, S. (in revision). *Mobile Monitoring of Winter-Time On-Roadway PM2.5 in Fairbanks, Alaska: Case Study of a Non-Attainment Region*.

**Belz, N.P.**, Sayre, T. (in preparation). *Safety Analysis of Off-Highway Vehicles Use Within Public Rights-Of-Way in Alaska*, Journal of Accident Analysis and Prevention

**CONFERENCE PROCEEDINGS with FULL REFEREE**

Mohamed, M., **Belz, N.P.**, (January 2023). *Safety Impacts of Road Weather Information System Implementation in Alaska*, Session 2081 - Road Weather Management Solutions for Improved Safety and Operations, 2023 102<sup>nd</sup> Annual Meeting of the Transportation Research Board of the National Academies, Washington, D.C.

**Belz, N.P.**, (January 2021). *A Comparison of Traditional and Non-Standard Sources of Accident Reporting and Safety Data in Alaska (P21-21383)*, Session 1230 - Native American Transportation, 100<sup>th</sup> Annual Meeting Transportation Research Board, Washington, D.C.

**Belz, N.P.**, Chang, K., Hansen, R. (January 2019). *Using Field and Simulation Data to Assess Passing Zone Behavior on Rural Two-Lane Highways*, 98<sup>th</sup> Annual Meeting Transportation Research Board, Washington, D.C.

**Belz, N.P.**, Yang, A. (January 2018). *Utilization of Gaps at Single-Lane Roundabouts*, 97<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, D.C.

**Belz, N.P.**, Yang, A. (May 2017). *Utilization Distribution of Usable Gaps at Single-Lane Roundabouts*, 5<sup>th</sup> International Conference on Roundabouts, Transportation Research Board, Green Bay, WI.

**Belz, N.P.**, Aultman-Hall, L., Troy, A. (January 2016). *Roundabouts in Northern New England: 1990-2010*, 95<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, D.C.

**Belz, N.P.**, Aultman-Hall, L., Troy, A. (June 2014). *Factors Affecting Roundabout Implementation in Northern New England*, World Symposium on Transportation and Land Use Research, Delft, Netherlands.

**Belz, N.P.**, Aultman-Hall, L., Lee, B.H.Y., Garder, P.E. (January 2014). *An Event-Based Framework for Non-Compliant Driver Behavior at Single-Lane Roundabouts*, 92<sup>nd</sup> Annual Meeting of the Transportation Research Board of the National Academies, Session 7786 - Roundabout Perception and Reality: Speed, Pedestrians, Capacity, Paper# 14-1456, Washington D.C.

**Belz, N.P.**, Lee, B.H.Y. (January 2012). *Composition of Vehicle Occupancy for Journey-to-Work Trips: Evidence of Ridesharing from the 2009 National Household Travel Survey Vermont Add-on Sample*. 91<sup>st</sup> Annual Meeting of the Transportation Research Board of the National Academies, Session 711 – Innovations in Activity and Travel Behavior, Paper #12-0489, Washington D.C.

**Belz, N.P.**, Aultman-Hall, L. (January 2011). *Analyzing the Effect of Driver Age on Operating Speed and Acceleration Noise Using On-board Second-by-Second Driving Data*, 90<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies, Session 471 – Safe Mobility of Older Persons Research, Paper #11-3551, Washington D.C.

Sullivan, J., Aultman-Hall, L., **Belz, N.P.** (January 2011), *Spatial Evaluation of a Statewide Rural Transit Network Spanning Multiple Service Areas*, 90<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies, Session 721 – Advances in Rural Public and Intercity Bus Transportation, Paper #11-1981, Washington D.C.

**Belz, N.P.**, Aultman-Hall, L., Patil, G. (January 2010). *Spatial Models for the Statewide Evaluation of Transit-Supportive Zones*, 89<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies, Session 497 – Rural Transportation Research, Paper #10-2118, Washington D.C.

**Belz, N.P.**, Gårder, P.E. (January 2009). *Maine Statewide Deployment and Integration of Advanced Traveler Information Systems*, 88<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies, Session 598 – ITS Deployment: System Integration and Maintenance, Paper #09-1565, Washington D.C.

**CONFERENCE PROCEEDINGS with ABSTRACT REVIEW**

Chen, C., Wang, W., Hurwitz, D., **Belz, N.P.**, Chand, C. (June 2022). *Micro-Mobility Promises and Challenges in the Pacific Northwest*, ASCE International Conference on Transportation and Development, Seattle, WA.

**Belz, N.P.** (May 2022). *Monitoring Road Surface Condition in Roundabouts using Mobile Road Weather Information Systems (MRWIS) - A Case Study in Fairbanks, AK*, 6th International Roundabout Conference, Transportation Research Board of the National Academies, Monterey, CA.

**Belz, N.P.** (October 2021). *An Assessment of Transportation Safety Equity using Linked Crash and Trauma Registry Records: A Case Study in Alaska*, 2021 Conference on Advancing Transportation Equity - Safety Equity Issues in Rural, Tribal, Indigenous, and Isolated Communities, Transportation Research Board of the National Academies, Virtual Event.

**Belz, N.P.**, Fulton, G. (postponed due to COVID-19). *The Use of Spectrometry for Non-Invasive Measurement of Anti-Icing and Deicing Chemicals*, 2020 International Conference on Winter Maintenance and Surface Transportation Weather and Winter Maintenance National Peer Exchange, Atlanta, GA.

Zellhuber, J., Morris, M., **Belz, N.P.** (October 2019). *A recipe for [Explaining] Disaster: 3D Printed Models of Road Damage and Preservation for STEM Engagement*, Pacific Northwest Transportation Consortium and Center for Safety Equity in Transportation, Seattle, WA.

**Belz, N.P.**, Fulton, G. (November 2019). *The Potential of Spectrometry for Quantifying In-Situ Anti-Icing and Deicing Chemicals*, 2019 Annual Meeting of the Intelligent Transportation Society of Alaska, Anchorage, AK.

Fulton, G., **Belz, N.P.**, Meyer, F. (October 2018). *Laboratory-Based Spectral Signatures of Roadway Anti-Icing and Deicing Chemicals*, 2018 Region 10 Transportation Conference, Pacific Northwest Transportation Consortium and Center for Safety Equity in Transportation, Fairbanks, AK.

**Belz, N.P.**, Sayre, T. (October 2018). *Quantifying Unlawful Use of Off-Highway Vehicles on Public Facilities in Alaska*, 2018 Region 10 Transportation Conference, Pacific Northwest Transportation Consortium and Center for Safety Equity in Transportation, Fairbanks, AK.

**Belz, N.P.** (October 2018). *Transportation Accessibility in Rural and Isolated Environments*, 2018 Region 10 Transportation Conference, Pacific Northwest Transportation Consortium and Center for Safety Equity in Transportation, Fairbanks, AK.

Perkins, R., **Belz, N.P.**, Bennett, L. (October 2018). *Assessing Feasibility and Use of Non-Standard Accident Reporting and Safety Data*, 2018 Region 10 Transportation Conference, Pacific Northwest Transportation Consortium and Center for Safety Equity in Transportation, Fairbanks, AK.

**Belz, N.P.**, Sorensen, C. (July 2018). *Use of Non-Motorized and "Off-Highway" Transportation Modes in Alaska*, 15th International Conference on Travel Behavior Research, Santa Barbara, CA.

**Belz, N.P.**, Fulton, G., Prakash, A. (October 2017). *The Application of Hyperspectral Remote Sensing to Measure Roadway Anti-Icing and Deicing Chemical Migration*, 2017 Region 10 Transportation Conference, Pacific Northwest Transportation Consortium, Seattle, WA.

Hansen, R., Chang, K., **Belz, N.P.**, (October 2017). *Driver Passing Behavior on Two-Lane Rural Highways (Phase III Update)*, 2017 Pacific Northwest Transportation Consortium Region 10 Annual Conference, Seattle, WA.

**Belz, N.P.**, Cunningham, K., Sorensen, C. (October 2017). *Safety Evaluation of Statewide Off-Highway Vehicle Use in Alaska*, 2017 Region 10 Transportation Conference, Pacific Northwest Transportation Consortium, Seattle, WA.

**Belz, N.P.** (May 2017). *Where Muscle Meets Motor: Mixed-Use in a Rural Context*. 2017 International Trails Symposium, Dayton, OH.

**Belz, N.P.** (April 2017). *Where do I Belong? Mixed-Use Transportation in Alaska*. 2017 Alaska Trails Conference, Anchorage, AK.

Sorensen, C., Schlotthauer, N., **Belz, N.P.**, Chang, K. (October 2016). *Mixed-Use Safety in a Rural Context: Perspectives from Alaska and Idaho*, 2016 Pacific Northwest Transportation Consortium Region 10 Annual Conference, Seattle, WA.

Patel, K., Chang, K., **Belz, N.P.**, (October 2016). *Driver Passing Behavior on Two-Lane Rural Highways (Phase II Update)*, 2016 Pacific Northwest Transportation Consortium Region 10 Annual Conference, Seattle, WA.

**Belz, N.P.**, Chang, K. (October 2015). *Driver Behavior and Sight Distance in Passing Zones on Rural Highways: Methodology and Project Update*, 2015 Pacific Northwest Transportation Consortium Region 10 Annual Conference, Seattle, WA.

**Belz, N.P.** (August 2015). *Investigating the Role of Turn Indicator Usage by Exiting Vehicles in Gap Acceptance at Single-Lane Roundabouts*, International Symposium on Systematic Approaches to Environmentally Sustainability in Transportation, Fairbanks, AK

Colles, J., Colles, R., **Belz, N.P.** (June 2015). *Dynamic Vehicle Lights: Proof of Concept and Market Adoption Potential*, 24<sup>th</sup> International Technical Conference on the Enhanced Safety of Vehicles, Gothenburg, Sweden.

**Belz, N.P.**, Aultman-Hall, L., Montague, J. (April 2014). *Cellular Automata and the Influence of Driver Behavior at Roundabouts*. 4<sup>th</sup> International Conference on Roundabouts – Transportation Research Board of the National Academies, Seattle, WA.

**Belz, N.P.** (May 2013). *Accessibility in a Small-Urban and Rural Context*. Northeast Arc Users Group Spring Meeting, Amherst, MA.

**Belz, N.P.** (January 2013). *Operational and Planning Models for Single-Lane Roundabouts*, 92<sup>nd</sup> Annual Meeting of the Transportation Research Board of the National Academies, Workshop 103 – Doctoral Student Session in Transportation Operations and Traffic Control, Washington D.C.

**Belz, N.P.** (November 2012). *Spatial Patterns in Attitudes, Values, and Perception of Place: Implications for Measuring Opposition to Roundabouts in Maine, New Hampshire, and Vermont*. 27<sup>th</sup> Annual Northeast Arc Users Group Conference, Rockport, ME.

**Belz, N.P.**, Sullivan, J., Aultman-Hall, L. (April 2012). *Transit Network Efficiency and Transit-Supportive Zones in Rural Areas*, 2012 National Rural Transportation Conference, Using Technology to Improve Transportation Operations, Burlington, VT.

**Belz, N.P.** (April 2012). *Transit-Supportive Zones in the State of Vermont*, NEURISA Ignite Spatial Conference Vermont 2012, Montpelier, VT.

**Belz, N.P.**, Jennings, L.A. (September 2011). *Measuring Livability in Small-Urban and Rural Communities with Disaggregate Data*, 2011 Conference on Performance Measures for Transportation and Livable Communities, Session 3: Small Urban and Rural Livable Communities, Austin, TX.

**Belz, N.P.**, Lee, B.H.Y. (June 2011). *Vehicle Occupancy Composition of Journey-to-Work Trips: Evidence from the Vermont Add-On Sample of the 2009 NHTS*, 2011 NHTS Conference – Using National Household Travel Survey Data for Transportation Decision Making: A Workshop, Washington D.C.

**Belz, N.P.**, Aultman-Hall, L. (May 2011). *Roundabout Opposition and the Built Environment*, 3<sup>rd</sup> International Conference on Roundabouts, Session 5 – Getting Your Roundabout Approved, Paper #IRC3-0034, Carmel, IN.

**Belz, N.P.**, Aultman-Hall, L. (October 2010). *Transit-Supportive Zones and Demand Potential in Vermont*, 19<sup>th</sup> National Conference on Rural Public and Intercity Bus Transportation, Special Topics – Census, Transportation Research Board of the National Academies, Burlington, VT.

## REPORTS, TECHNICAL PAPERS, and OTHER PUBLISHED MATERIAL

**Belz, N.P.**, Mohamed, M. (2023). *Road Weather Information System Contributions to Road Safety: An Assessment of Winter Crash Histories in Alaska*, Pacific Northwest Transportation Consortium, Seattle, WA. <https://rosap.ntl.bts.gov/view/dot/67573>

McCormack, E., **Belz, N.P.** (2022). *Guidelines for using Photogrammetric Tools on Unmanned Aircraft Systems to Support the Rapid Monitoring of Avalanche-prone Roadside Environments*, Pacific Northwest Transportation Consortium, Seattle, WA. <https://rosap.ntl.bts.gov/view/dot/64105>

Chen, C., Wang, W., Hurwitz, D., **Belz, N.P.**, Chand, C. (2021). *Micro-Mobility Promises and Challenges in the Pacific Northwest*, Pacific Northwest Transportation Consortium, Seattle, WA. <http://hdl.handle.net/1773/48584>

**Belz, N.P.**, Fulton, G. (2020). *Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals using In-Situ Spectral Data – Phase II*, Pacific Northwest Transportation Consortium, Seattle, WA. <http://hdl.handle.net/1773/46932>

**Belz, N.P.** (2019). *Safety Evaluation of Statewide Off-Highway Vehicle Use in Alaska*, Alaska Department of Transportation and Public Facilities, Anchorage, AK. 95 pp. <https://trid.trb.org/view/1668740>

**Belz, N.P.**, Fulton, G. (2019). *Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals using In-Situ Spectral Data – Phase I*, Pacific Northwest Transportation Consortium, Seattle, WA. <https://digital.lib.washington.edu/researchworks/handle/1773/45576>

Aggarwal, S., **Belz, N.P.**, Kadir, A. (2019). *Near-roadway Air Pollution: Evaluation of Fine Particulate Matter (PM<sub>2.5</sub>) and Ultrafine Particulate Matter (PM<sub>0.1</sub>) in Interior Alaska*, Center for Environmentally Sustainable Transportation in Cold Climates, Report 1505, 55pp.

Perkins, B., Bennett, L., **Belz, N.P.** (2019). *Non-Standard Accident Reporting and Safety Data in Remote Areas*, Pacific Northwest Transportation Consortium, Seattle, WA.

**Belz, N.P.** (2018). *A Critical Review of Statewide Off-Highway Vehicle Use on Roadways in Alaska*, Pacific Northwest Transportation Consortium, Seattle, WA. 75pp.

**Belz, N.P.**, Chang, K. (August 2018). *Mixed-Use Safety on Rural Facilities in the Pacific Northwest*, Pacific Northwest Transportation Consortium, Seattle, WA. 181pp.

**Belz, N.P.**, Chang, K. (April 2018). *Passing Zone Behavior and Sight Distance on Rural Highways: Evaluation of Crash Risk and Safety under Different Geometric Conditions*, Alaska Department of Transportation and Public Facilities, Report #2015-S-UAF-0079, 68pp.

**Belz, N.P.**, (October 2014). *Roundabout Design Training for Alaska's Engineers – Development of a Webinar Series*, Pacific Northwest Transportation Consortium, Seattle, WA, Report #2013-S-UAF-0049, 17pp.

**Belz, N.P.**, Aultman-Hall, L. (June 2014). *Implementation, Driver Behavior, and Simulation: Issues Related to Roundabouts in Northern New England*, Report #14-003, 34p, University of Vermont Transportation Research Center, Burlington, VT.

**Belz, Nathan P.** (2014). “*Appelinskrael*” - *Orange Peel Map*. In Toldbod, Love, Vive, & Jepsen, *Sig'natur 5, Nature / Technology: Student's Book* (p. 72), Copenhagen: Alinea. ISBN: 9788723502261

**Belz, Nathan P.** (2013). *Planning and Operational Models for Roundabouts*. (Doctoral dissertation), University of Vermont. Available from Library Research Annex – UVM Archives, REF#: W15 O B419n

Sullivan, J., Aultman-Hall, L., **Belz, N.P.**, Watts, R. (January 2011). *Efficient Transportation for Vermont: Optimal Statewide Transit Networks*, Report #11-002, 45p, University of Vermont Transportation Research Center, Burlington, VT.

Watts, R., **Belz, N.P.**, Fraker, J., Gandrud, L., Kenyan, J., Meece, M. (June 2010). *Increasing Carpooling in Vermont: Opportunities and Obstacles*, Report #10-010, 25p, University of Vermont Transportation Research Center, Burlington, VT.

#### **SELECT PRESENTATIONS and INVITED LECTURES**

**Belz, N.P.** (August 2023). GIS Basics Workshop, Alaska Region Tribal Technical Assistance Program, Fairbanks, AK

**Belz, N.P.** (June 2022). *Building Successful Collaborations with Tribal Colleges, Governments and Other Agencies*, Council of University Transportation Centers 2022 Summer Meeting, SESSION 1: UTC/Tribal Partnerships, Big Sky, MT

**Belz, N.P.** (April 2021). *Safety Evaluation of Off-Highway Vehicle Use on Public Roadways*, Invited Testimony to State of Alaska House Transportation Committee, Virtual.

**Belz, N. P.** (October 2020). *Broken: How we've found ourselves in the most unsafe transportation climate in over a decade*, 2020 Pacific Northwest Transportation Consortium Region 10 Annual Conference, Virtual.

**Belz, N.P.** and Connor, B.G. (November 2017). *Mission and Programmatic Overview of the Center for Safety Equity in Transportation*, 2017 Alaska Department of Transportation and Public Facilities Transportation Research Symposium, Anchorage, AK.

**Belz, N.P.** (November 2017). *Mixed-Use Transportation Safety in Alaska*, 2017 Alaska Department of Transportation and Public Facilities Transportation Research Symposium, Anchorage, AK.

**Belz, N.P.** (November 2017). *Development of a Spectral Library for In-Situ Detection of Anti-Icing/Deicing Chemicals on Roadways*, 2017 Alaska Department of Transportation and Public Facilities Transportation Research Symposium, Anchorage, AK.

**Belz, N.P.** (November 2017). *Off-Highway Vehicle Traumas and Policies in Alaska*, 2017 Alaska Department of Transportation and Public Facilities Transportation Research Symposium, Anchorage, AK.

**Belz, N.P.** (November 2017). *Driver Behavior in Two-Lane Passing Zones*, 2017 Alaska Department of Transportation and Public Facilities Transportation Research Symposium, Anchorage, AK.

**Belz, N.P.** (November 2017). *Utilization of Gaps at Single-Lane Roundabouts*, 2017 Alaska Department of Transportation and Public Facilities Transportation Research Symposium, Anchorage, AK.

**Belz, N.P.** (May 2016). *Field Measurement of Driver Behavior in Two-Lane Passing Zones on Rural Highways*, Institute of Transportation Engineers Fairbanks Chapter, Seminar Series, Fairbanks, AK.

**Belz, N.P.** (May 2014). *Non-Compliant Driver Behavior at Single-lane Roundabouts*, Institute of Transportation Engineers: Roundabout Committee, Spring Meeting / Webinar.

**Belz, N.P.** (March 2017). *Rural Transportation Safety Research Needs in Alaska*, Center for Safety Equity in Transportation – Executive Board Meeting, Fairbanks, AK.

**Belz, N.P.**, Farquhar, M. (March 2014). *Remote, Dark, and Frozen: The Challenges of Engineering in Alaska*, 2014 Chi Epsilon National Conclave, Salt Lake City, UT

**Belz, N.P.**, Aultman-Hall, L. (April 2013). *That's Not How You're Supposed to Drive through a Roundabout! Non-Compliant Behaviors at Single-Lane Roundabouts*, UVM Transportation Research Center Research Exposition, Burlington, VT.

**Belz, N.P.**, Jennings, L.A. (July 2012). *Measuring Livability in Small-Urban and Rural Communities with Disaggregate Data – A Case Study of Chittenden County Vermont*, UVM Transportation Research Center, Summer Brown Bag Seminar Series, Burlington, VT.

**Belz, N.P.**, Lee, B.H.Y. (April 2012). *Ridesharing and the Journey to Work in Vermont: Modeling Composition of Vehicle Occupancy using the 2009 National Household Travel Survey*, 2012 Student Research Conference, University of Vermont, Burlington, VT.

**Belz, N.P.** (February 2011). *Complete Streets and Traffic Calming in Sustainable Transportation Planning*, University of Vermont, Burlington, VT.

**Belz, N.P.**, Aultman-Hall, L. (April 2010). *Comparison of Second-by-Second Driving Style and Behavior of Older and Younger Drivers: Data Collection and Preliminary Findings*, 2010 Student Research Conference, University of Vermont, Burlington, VT.

**Belz, N.P.** (March 2010). *Living with the Automobile: Examining the Role of Complete Streets and Traffic Calming* in Transportation Planning, University of Vermont, Burlington, VT.

**Belz, N.P.** (February 2010). *Identifying Additional Bus Routes in Chittenden County: A Transportation Application of GIS* in Transportation Planning, University of Vermont, Burlington, VT.

**Belz, N.P.** (January 2007). *Applications of Intelligent Transportation Systems in Urban Transportation Planning (CE 241)*, University of Maine, Orono, ME.



## SELECT RESEARCH PROPOSALS and FUNDING

### *Research Centers and Programs*

PI: Connor, B., **Co-PI: Belz, N.P.** – Alaska Region Tribal Technical Assistance Program Center, USDOT, \$1,525,000 (7/1/2022 – 6/30/2025 + 2yr extension option)

PI: Connor, B.; **Co-PI: Belz, N.P.** - Center for Safety Equity in Transportation, USDOT, \$8,468,200 (2016-2024)

**PI: Belz, N.P.** – Career Pathways Internship Program, Alaska Department of Transportation and Public Facilities, \$528,000 (2024-2025)

### *Research Projects*

**PI: Belz, N.P.** – Implicit Safety Benefits of Safety Improvement Projects for Vulnerable Road Users, Alaska DOT&PF, \$140,000 (7/1/2023 – 6/30/2025)

PI: **Belz, N.P.**, Co-I: Vasudevan, V. - Crashes and Injuries on Rural Roads in Alaska - Towards a Better Understanding of Rural Safety Issues Through Linked Data and Environmental Factors, Center for Safety Equity in Transportation and Alaska Department of Health, \$207,000 (8/2022 – 6/2024)

PI: **Belz, N.P.** - Road Safety Nuggets: *Current Transportation Safety Issues Explored through the Lens of a Local Alaskan Artist*, Center for Safety Equity in Transportation, \$30,000 (9/2020 – 8/2021)

PI: Philip Wight; Co-PI: **Belz, N.P.** - *Access, Equity, and Safety in Rural Road Development: Historical Evidence from the Dalton Highway*, Center for Safety Equity in Transportation, \$74,999 (7/2020 – 6/2021)

PI: **Belz, N.P.** - *Integration of Mobile Road Weather Information Systems into Winter Maintenance Operations in Fairbanks, Alaska*, PacTrans, \$70,000 (9/2020 – 8/2021)

PI: **Belz, N.P.** - Investigating the Effect of Subsistence Opportunities on Crash Frequency, Type, and Severity in Alaska, Center for Safety Equity in Transportation, \$61,750 (9/2020 – 8/2021)

PI: **Belz, N.P.** - *Developing a Low-Cost Open-Source Traffic Counter for Rural Areas (CTRA)*, Center for Safety Equity in Transportation, \$52,000 (9/2019 – 9/2020)

PI: **Belz, N.P.** - *Development of Guidelines for Roads in Remote/Isolated Communities with Mixed Non-Conventional Vehicle Types – Phase I*, Center for Safety Equity in Transportation, \$56,500 (9/2019 – 9/2020)

PI: Wang, H.; Co-I: Hurwitz, D.; Co-PI: **Belz, N.P.** - *Micro-Mobility Promises and Challenges in the Pacific Northwest*, PacTrans, \$150,000 (\$35,000 to UAF) (9/2019 – 8/2021)

PI: McCormack, E.; Co-PI: **Belz, N.P.** - *Guidelines for Using Photogrammetric Tools on Unmanned Aircraft Systems to Support Rapid Monitoring of Snow Avalanches Above Roads*. PacTrans, \$150,000 (\$130,000 to UAF) (9/2019 – 8/2021)

PI: **Belz, N.P.**; Co-PI: Connor, B. – *Developing a Safe and Sustainable Transportation System in Mertarvik – Phase II Outreach and Partnership with the Newtok Relocation Project*, Center for Safety Equity in Transportation, \$60,000 (9/2018 – 8/2019)

PI: **Belz, N.P.** - *Measuring Dispersal and Tracking of Anti-Icing/Deicing Chemicals using In-Situ Hyperspectral Data – Phase II*, PacTrans, \$67,500 (9/2018 – 8/2019)

PI: **Belz, N.P.**; Co-PI: Connor, B. – *Rural Transportation Safety Outreach and Baseline Data Collection in Alaska*, Center for Safety Equity in Transportation, \$111,000 (9/2017 – 9/2018)

PI: **Belz, N.P.** - *Measuring Dispersal and Tracking of Anti-Icing/Deicing Chemicals using In-Situ Hyperspectral Data – Phase I*, PacTrans, \$60,000 (10/2017 – 9/2018)

PI: **Belz, N.P.**; Co-I: Cunningham, K. - *Safety Evaluation of Statewide Off-Highway Vehicle Use in Alaska*, PacTrans/AKDOT, \$150,000 (5/2017 – 9/2018)

PI: Hurwitz, D.; Co-PI: **Belz, N.P.** - *Mitigation of Lane Departure Crashes through Coordinated Outreach – Phase II*, PacTrans, \$31,000 (1/2017 – 12/2017)

PI: Perkins, R.; Co-PI: **Belz, N.P.** – *Safety Data Management and Analysis: Addressing the Continuing Education Needs for the Pacific Northwest – Phase II*, PacTrans, \$25,000 (12/2016 – 9/2017)

PI: Hurwitz, D.; Co-PI: **Belz, N.P.** - *Mitigation of Lane Departure Crashes through Coordinated Outreach – Phase I*, PacTrans, \$32,500 (10/2015 – 9/2016)

PI: Perkins, R.; Co-PI: **Belz, N.P.** – *Safety Data Management and Analysis: Addressing the Continuing Education Needs for the Pacific Northwest – Phase I*, PacTrans, \$25,000 (12/2015 – 9/2016)

PI: Aggarwal, S.; Co-PI: **Belz, N.P.** - *Near-roadway Air Pollution: Evaluation of Fine Particulate Matter (PM<sub>2.5</sub>) and Ultrafine Particulate Matter (PM<sub>0.1</sub>) in Interior Alaska*, CESTiCC, \$63,539 (5/2015 – 12/2016)

PI: **Belz, N.P.**; Co-PI: Chang, K. - *Mixed-Use Safety on Rural Facilities in the Pacific Northwest*, PacTrans, \$190,000 (12/2014 – 12/2015)

PI: **Belz, N.P.**; Co-PI: Chang, K. - *Passing Zone Behavior and Sight Distance on Rural Highways*, PacTrans / AKDOT, \$345,000 (2/2015 – 6/2017)

PI: **Belz, N.P.** - *Roundabout Design Training for Alaska's Engineers*, PacTrans, \$25,000 (7/2013 – 11/2014)

PI: **Belz, N.P.** - *Traffic Analysis Software & In-Vehicle GPS Instrumentation*, UAF Technology Advisory Board, \$19,182 (11/2013 – 6/2014)

## **GRADUATE STUDENTS, COMMITTEES, and ADVISING**

### ***Graduate Committee Chair***

Santosh Adhikari, M.S. Civil Engineering | Fall 2023 – present

*Thesis: Implicit Safety Benefits of HSIP Projects for Vulnerable Road Users*

Mohammed Mohammed, Ph.D. Civil Engineering | Fall 2021 – Summer 2022

*Dissertation: Design Considerations for Very Low Volume Rural Roads with Non-Conventional Traffic*

Tristan Sayre, M.S. Civil Engineering | June 2019 – August 2020

*Thesis: Development of Counting Method for On-Road Off-Highway Vehicle Use in Alaska*

Gabriel Fulton, M.S. Civil Engineering | May 2017 – July 2019

*Thesis: Measuring Dispersal and Tracking of Anti-Icing and Deicing Chemicals using Hyperspectral Data*

Carrie Sorensen, M.S. Interdisciplinary Studies | May 2015 – December 2017

*Thesis: Connecting Alaskans – Mixed-Use Safety and Accessibility Challenges in a Rural Environment*

### ***Graduate Committee Memberships***

Elizabeth Richards, M.S. Civil Engineering | September 2018 – March 2021

*Thesis: Rapid Detection of Ice Thickness for Safety in Rural Transportation Environments*

Abdul Kadir, M.S. Civil Engineering | Completed September 2018

*Thesis: Evaluation of Near-Roadway Particulate Matter during Winter in Fairbanks North Star Borough*

Alyson McPhetres, M.S. Civil Engineering | Completed May 2018

*Thesis: Estimating Surface PM<sub>2.5</sub> Concentrations using MODIS Aqua and Terra Satellite Imagery*

Gerald Pehrson, M.S. Science Management | Completed in May 2016

*Thesis: Alternative Project Delivery in Rural Alaska: Experiences, Quality and Claims*

Elizabeth Johnston, M.S. Engineering Management | Completed in May 2015

*Thesis: Improved Design Approaches to Roadway Lighting in Alaska*

### ***Undergraduate Research Advising***

Monroe Morris (2019). *3D Printed Models of the Mechanisms that Cause Road Damage*, funded by the Center for Safety Equity in Transportation.

Jordan Zellhuber (2019). *3D Printed Models of the Mechanisms that Cause Road Damage*, funded by the Center for Safety Equity in Transportation.

Zakariyah Karim (2018). *Development of a “RegoCell” for roadway stabilization on the Lunar surface*, funded by Alaska Space Grant Program Fellowship, Co-Advisor with Dr. Il-Sang Ahn and Dr. Orion Lawlor

Tristan Sayre (2018). *Using Day-Night Motion Activated Cameras to Count Off-Highway Vehicle Use on Highways in Alaska*, funded by Pacific Northwest Transportation Consortium and Alaska Department of Transportation and Public Facilities

Dylan Baffrey (2018). *Comparing the Alaska Trauma Registry and News Records to the DMV crash database*, funded by Pacific Northwest Transportation Consortium

Michael Galusha Jr. (2018). *Media Discourse Analysis of Online News Regarding Off-Highway Vehicle Safety Issues*, funded by Pacific Northwest Transportation Consortium

Gabriel Fulton (2016). *Compilation of National, State, and Local Policies on All-Terrain Vehicle Use*, funded by Pacific Northwest Transportation Consortium

N.P. Belz, CV

James Colles and Robert Colles (2014). *Dynamic Vehicle Lights: Prototype Development and Market Adoption Survey*, funded by Enhanced Safety of Vehicles Conference Student Safety Technology Design Competition

**TEACHING EXPERIENCE - University of Alaska Fairbanks**

(Sole instructor responsible for course design, content, and execution)

**CE302 / Fundamentals of Transportation Engineering (3.0cr)** Introduction to multimodal transportation systems and factors that influence the planning, design and operation of transportation systems.

Semester	Enrollment (max = 30)	Average Rating (max = 5.0)
Spring 2014	27	3.1*
Fall 2014	15	4.6*
Spring 2016	39	3.9
Spring 2017	28	4.3
Spring 2018	21	4.2
Spring 2019	27	4.2
Spring 2020	23	4.5
Spring 2021	17	3.6 <sup>LR</sup>
Spring 2022	9	NR

**CE406 / Traffic Engineering (3.0cr)** Operation and control of transportation systems with emphasis on traffic on highways and streets: traffic control devices, data collection, capacity and level of service, signalization, traffic impact analysis, accident analysis.

Semester	Enrollment (max = 30)	Average Rating (max = 5.0)
Spring 2014	3	4.0*
Spring 2016	6	4.9 <sup>+</sup>
<i>Removed from catalog 2019</i>		

**CE607 / GIS Applications in Civil Engineering (3.0cr)** Theories and advanced methods of Geographic Information Systems for civil engineering practice. Students apply and execute concepts related to data integration, analysis, and management in the ArcGIS suite during labs.

Semester	Enrollment (max = 30)	Average Rating (max = 5.0)
Fall 2016	9	4.4*
Fall 2018	6	4.6
Fall 2019	2	5.0
Fall 2020	8	3.9 <sup>LR</sup>
Fall 2021	5	4.6 <sup>LR</sup>
Fall 2023	7	5.0

**CE405 / Highway Engineering (3.0cr)** Design of geometric elements of streets and highways with emphasis on safety and efficiency: functional classification, design controls, vertical and horizontal alignments, cross sections, and intersections.

Semester	Enrollment (max = 30)	Average Rating (max = 5.0)
Fall 2013	15	4.2*
Fall 2015	11	4.6
Fall 2016	12	4.8
Fall 2017	11	4.5
Fall 2018	cancelled, low enrollment	
Fall 2019	13	4.2
Fall 2020	8	3.9 <sup>LR</sup>

**ESM422/622 / Engineering Decisions (3.0cr)** Risk and uncertainty in engineering decisions. Basic applied probability and statistics, data analysis, regression analysis and time series. Engineering judgment and uncertainty. Public safety and ethics.

Semester	Enrollment (max = 30)	Average Rating (max = 5.0)
Spring 2015	18	3.5*
Spring 2017	30	4.4 <sup>+</sup>
Spring 2018	22	4.1
Spring 2019	27	4.3
Spring 2021	23	3.8 <sup>LR</sup>
<i>Removed from Catalog 2021</i>		

**CE408 / Transportation Safety Analysis (3.0cr)** Analysis of roads with an emphasis on safety. Crash probabilities; statistical models for safety analysis; crash data collection, database management; safety improvement programs; before-after studies.

Semester	Enrollment (max = 30)	Average Rating (max = 5.0)
Fall 2021	5	4.6
Fall 2023	2	5.0

Notes: \*Indicates scores prior to Blue online course evaluations; <sup>+</sup>Indicates average rating of stacked course; <sup>LR</sup> Indicates response rate ≤ 50%; NR Indicates response rate ≤ 10% (not reported);

**TEACHING EXPERIENCE - University of Vermont**

*CE241 | Traffic Operations and Design* | 3.0cr Spring 2011 & Spring 2013  
(Sole instructor responsible for course design, content, and execution)

Advanced concepts relating to traffic engineering and capacity analysis; highway and intersection capacity; traffic analysis and simulation software; design and application of controls; parking lot design; roundabouts and traffic calming.

*Transportation Intern Supervisor* May 2011 - September 2011

Supervised summer undergraduate students who conducted field data collection and developed microsimulation traffic models for the UVM Transportation Research Center

*CE Senior Design Projects* Spring 2011 & Spring 2013

Advised senior design groups on roundabout design, highway design, and traffic analysis for their senior capstone community service learning projects

*Fundamentals of Engineering Exam Transportation Review Session* April 2009 & April 2010

Lecture material relating to geometric design of highways, traffic signal timing, and traffic flow theory.

**TEACHING EXPERIENCE – Teaching and Laboratory Assistantships**

*CDAE 295 – Transportation Planning*, University of Vermont (Spring 2009)

*CIE 111 – Materials Laboratory*, University of Maine (2005 and 2006)

*CIE 101 – Civil Engineering Graphics*, University of Maine (2004 to 2006)

*CIE 115 – Computers in Civil Engineering*, University of Maine (2003 to 2006)

**ACHIEVEMENTS and AWARDS**

2018 Researcher of the Year Award, Pacific Northwest Transportation Consortium

2018 Transportation Research Board of the National Academies Fred Burggraf Best Paper Award  
Belz, N.P., Yang, A. (2018). *Utilization of Gaps at Single-Lane Roundabouts*

2018 UAF Chancellor’s Award for Excellence in Research

2017 UAF Office of Sustainability Green Carpet Award

2017 Alaska Trails + Safe Routes to School Active Transportation Photo Competition – 1<sup>st</sup> Place

2017 NSF Alaska EPSCoR Visualize THIS! – Honorable Mention for “*Orange Peel Continental World Map*”

2014 Best Paper Award, Transportation Research Board Roundabouts Committee

Belz, N.P., Aultman-Hall, L., Lee, B.H.Y., Garder, P.E. (2014). *An Event-Based Framework for Non-Compliant Driver Behavior at Single-Lane Roundabouts*.

2013 Transportation Research Board of the National Academies Fred Burggraf Paper Award

Belz, N.P., Lee, B.H.Y. (2012). *Composition of Vehicle Occupancy for Journey-to-Work Trips: Evidence of Ridesharing from the 2009 National Household Travel Survey Vermont Add-on Sample*.

2010 UVM University Transportation Center Student of the Year

19<sup>th</sup> National Rural Public and Intercity Bus Transportation Conference – Best Student Paper Award

Belz, N.P., Aultman-Hall, L. (2010). *Transit-Supportive Zones and Demand Potential in Vermont*.

## **SERVICE and PROFESSIONAL DEVELOPMENT**

### ***Professional, Research, and Honor Societies***

Transportation Research Board Committee on Native American Transportation Issues  
*Member (May 2019 – present)*

Transportation Research Board Committee on Rural Public and Intercity Bus Transportation  
*Member (January 2011 – January 2019)*  
*Co-chair of Subcommittee on Research (January 2014 – August 2018)*

Transportation Research Board Committee on Roundabouts  
*Committee Research Coordinator (January 2019 – present)*  
*Member of Subcommittee on Semi-Automated Roundabout Inventory (April 2014 – June 2016)*  
*Member of Subcommittee on Public Relations (January 2016 – January 2021)*

American Society of Civil Engineers, *Associate Member (2006 – 2020)*

Chi Epsilon (National Civil Engineering Honor Society), *Member*

Francis Crowe Society of Engineers, *Member*

National Society of Collegiate Scholars, *Member*

### ***Journal Paper Reviewer***

Transportation Research Record, Journal of the Transportation Research Board of the National Academies  
*Rural Public and Intercity Bus Transportation (AP055), Annually*  
*Committee on Roundabouts (ANB75), Annually*  
*Bicycle Transportation (ANF20), September 2011 & 2012*

Transportation Letters (*June 2013 – present, quarterly*)

Accident Analysis and Prevention (*November 2013 – present, quarterly*)

Journal of Traffic and Transportation Engineering (*as needed*)

Journal of Economic Behavior & Organization (*as needed*)

### ***University Service – University of Alaska Fairbanks***

CGEE Department Chair (*AY23/24*)

CGEE Undergraduate Student Handbook (*AY21/22 – present*)

CE Student Scholarships | Coordinator (*AY22/23*)

CGEE Duckering Revitalization Committee | Member (*Fall 2019 – Spring 2022*)

CEM Strategic Enrollment Planning Retention Subcommittee (*Spring 2021*)

CGEE Duckering 2<sup>nd</sup> Floor Revitalization Subcommittee (*Summer 2020 – present*)

CEM Strategic Enrollment Planning Co-Curricular Activities Subcommittee (*Fall 2020*)

SSS/TRiO FirstGenAK Mentor (*2020 – 2022*)

CE Strengths, Weaknesses, Opportunities, and Threats Analysis Subcommittee (*Fall 2019*)

Honors Advisory Council | Member (*Summer 2019 – present*)

Undergraduate Research and Scholarly Activity | Research Proposal Reviewer (*Fall 2018 – present*)

Faculty Development, Assessment and Improvement Committee | Co-Chair (*Fall 2018 – Summer 2019*)

Faculty Development, Assessment and Improvement Committee | Member (*Fall 2017 – Fall 2019*)

STEM First Generation Panel | Member (*Fall 2019*)

Student Support Services Emerging Scholars Academy Faculty Panel | Member (*Fall 2017, 2018, 2019*)

CE Faculty Search Committee (Pavement and Concrete Materials) | Chair (*Spring 2018 – present*)

Douglas P. Daniels Transportation Scholarship Program | Coordinator (*2017 – present*)

Master Planning Committee | Faculty Representative (*2016 – 2022*), Vice Chair (*2019 – 2022*)

Landscape Subcommittee | Liaison to Master Planning Committee (*2016 – present*)

Campus Community Garden | Faculty Advisor (*2015 – 2020*)

Green Bikes Program | Steering Committee Chair (*2014 – present*)

Inside Out – Transitioning to College Panel | Member (*2018 & 2019*)

Access Alaska Lecture Series – UAF Office of Admissions and Registrar | Lecturer (*2017 & 2018*)

First Lego League Robotics Day | Volunteer (*April 2018*)

Chi Epsilon (National Civil Engineering Honor Society) | Faculty Advisor (*2013 – 2017*)

CEE Subcommittee on Field Experience Elective Development (*AY 2015/2016*)

CEE ABET Outcomes Assessment (*Fall 2014*)

New Faculty Social Events Coordinator, Office of Faculty Development (*AY 2014/2015 & 2015/2016*)

College of Engineering and Mines E-Week | Volunteer (*2014 – present*)

CEE Subcommittee on B.S. in Science transfer to M.S. in CE Criteria (*Fall 2013*)

### ***University Service – University of Vermont***

Traffic Board of Appeals (*2012 – 2013*)

UTC Student of the Year Selection Committee (*2011 – 2013*)

### ***Professional Service***

Alaska Coalition on Active Transportation | Organizing Committee and Member (*September 2022 – present*)

AKDOT&PF 2023-2027 Strategic Highway Safety Plan (SHSP) Steering Committee (*2022-2023*)

#### *SHSP Vulnerable Road User Focus Area*

- Action Item 2.1 – Bike/Ped Policy Development | Workgroup Member (*October 2023 – present*)
- Action Item 2.2 – Bike/Ped Education Campaign | Workgroup Member (*October 2023 – present*)

#### *SHSP Motorcycle, All-Purpose Vehicle (APV), and Snowmachine Focus Area*

- Action Item 1.1 – APV Licensing and Registration | Workgroup Member (*October 2023 – present*)
- Action Item 1.3 – State and Municipal APV Policies | Lead (*October 2023 – present*)
- Action Item 1.4 – APV Public Outreach | Workgroup Member (*October 2023 – present*)
- Action Item 1.5 – APV Counts and Data Collection | Lead (*October 2023 – present*)
- Action Item 4.1 – APV Education and Training | Lead (*October 2023 – present*)

Fairbanks North Star Borough Comprehensive Roads Plan Steering Committee (*May 2021 – present*)



26<sup>th</sup> Annual National Transportation in Indian Country Conference (2023), Sharing Tools for Gathering and Managing Safety Data – Anchorage, AK | Presiding Officer

AKDOT&PF Urban Work Zone User Impacts Project Advisory Council (*September 2021 – July 2022*)

TRB AKD80 (Roundabouts and Other Intersection Control Strategies) Business Plan Subcommittee (*Fall 2020*)

2022 International Symposium on Highway Geometric Design – Amsterdam | Member, Planning Committee

2020 Washington State University Small Projects Proposal Reviewer, Pacific Northwest Transportation Consortium

2019 PacTrans Region 10 / CSET Transportation Conference – Seattle, WA | Member, Planning Committee

98<sup>th</sup> Annual Meeting of the Transportation Research Board (2019), Advancing Aspects of Roundabout Design through Research Session – Washington, DC | Presiding Officer

2018 PacTrans Region 10 / CSET Transportation Conference – Fairbanks, AK | Chair, Planning Committee

2018 Washington State University and University of Idaho Small Projects Proposal Reviewer, Pacific Northwest Transportation Consortium

97<sup>th</sup> Annual Meeting of the Transportation Research Board (2018), Special Topics in Rural and Small Urban Public Transportation Session – Washington, DC | Presiding Officer

2017 PacTrans Region 10 Transportation Conference - Seattle, WA | Technology Transfer Session Moderator

2017 PacTrans Region 10 Transportation Conference - Seattle, WA | Member, Planning Committee

2016 PacTrans Region 10 Transportation Conference - Seattle, WA | Technology Transfer Session Moderator

2016 PacTrans Region 10 Transportation Conference - Seattle, WA | Member, Planning Committee

95<sup>th</sup> Annual Meeting of the Transportation Research Board, Special Topics in Rural and Small Urban Public Transportation Session – Washington, DC | Presiding Officer

2015 International Symposium on Systematic Approaches to Environmentally Sustainability in Transportation - Fairbanks, AK | Presiding Officer

2015 PacTrans Region 10 Transportation Conference - Seattle, WA | Planning Committee

94<sup>th</sup> Annual Meeting of the Transportation Research Board, Special Topics in Rural and Small Urban Public Transportation Session – Washington, DC | Presiding Officer

2014 PacTrans Region 10 Transportation Conference - Seattle, WA | Planning Committee

2014 Institute of Transportation Engineers Annual Meeting | Roundabout Forum Session Coordinator

Roess, Prassas, & McShane (2011). Traffic Engineering 4<sup>th</sup> Ed., Pearson Higher Ed | Textbook Reviewer (*2014*)

2013 Spring NEArc Conference and Meeting, Rockland, ME | Presiding Officer

**Public Service**

FAST Planning Bicycle and Pedestrian Advisory Committee, Chair (*April 2021 – present*)

FAST Planning Bicycle and Pedestrian Advisory Committee (*September 2017 – present*)

Wood River Elementary School Science Fair, Judge (*March 2018*)

Annual Fairbanks Cycle Club Bike Swap, Volunteer (*May 2016 – present, annually*)

*Tied* (July 2019). First Friday Art Exhibit, Fairbanks, AK.

*The Hatcher Diaries* (May 2017). First Friday Art Exhibit, Fairbanks, AK.

Fairbanks North Star Borough Transportation Advisory Commission, Member (*January 2015 – May 2019*)

International Arctic Winter Games Volunteer | Photographer and Media Liaison (*February 2014*)

CarShare Vermont Outreach Committee | Member (*2010*) and Volunteer (*2010-2013*)

Local Motion | Volunteer (*2012-2013*)

### ***Professional Development***

National Local Technical Assistance Program Association Conference, July 17<sup>th</sup>-20<sup>th</sup>, 2023 | Columbus, OH

2021 PacTrans Region 10 Transportation Conference, October 2021 | Virtual Event

2021 National Off-Highway Vehicle Conservation Council Conference, October 2021 | Virtual Event

FHWA Every Day Counts-6 Crowdsourcing Workshop, August 2021 | Virtual Event

100<sup>th</sup> Annual Meeting of the Transportation Research Board, January 2021 | Washington, D.C.

Alaska Federation of Natives Convention (*2018, 2019*)

Alaska Statewide Trails Conference (*2017 – 2020, 2023*)

NOHVCC Grant Writing Webinar, October 2021 | Virtual Event

Alaska Outdoor Alliance Lunch and Learn Webinar Series, *Bikes Belong* (*October 2020*)

Annual Meeting of the Intelligent Transportation Society of Alaska (*November 2019*)

Alaska Forum on Autonomous Vehicles, ITE Alaska Section (*May 2018*)

Promotion and Tenure Workshop, UAF Society on the Status of Women (*Spring 2016*)

iTeach Workshop, UAF eLearning and Distance Education (*Spring 2015*)

UAF Faculty Learning Community: Strategies for Early Career Faculty Success (*2014 – 2015*)

UAF Faculty Learning Community: Teaching Strategies for Early Career Faculty (*2013 – 2014*)

Dealing with Stress, UAF Office of Faculty Development (*Spring 2014*)

History at UAF, UAF Office of Faculty Development (*Fall 2013*)

Syllabus Writing Workshop, UAF Office of Faculty Development (*Fall 2013*)

Blackboard Training for New Faculty, UAF Office of Faculty Development (*Fall 2013*)

Teaching Differently Abled Students, UAF Office of Faculty Development (*Fall 2013*)