PacTrans presents

# Professor
# Elise Miller-Hooks

PACIFIC NW TRANSPORTATION CONSORTIUM
**PACTRANS**
REGION 10

**Dr. Elise Miller-Hooks** holds the Bill and Eleanor Hazel Endowed Chair in Infrastructure Engineering at George Mason University, is an advisor to the World Bank Group, and the founding Editor-in-Chief of Elsevier's Sustainability Analytics and Modeling journal.. Prior to this, Dr. Miller-Hooks served as a program director at the U.S. National Science Foundation and on the faculties of the University of Maryland, Pennsylvania State University and Duke University. Dr. Miller-Hooks received her Ph.D. (1997) and M.S. (1994) degrees in Civil Engineering from the University of Texas – Austin and B.S. in Civil Engineering from Lafayette College (1992). She has expertise in: disruption planning and response; multi-hazard civil infrastructure resilience quantification and protection; stochastic and dynamic network algorithms; transportation systems engineering; intermodal passenger and freight transport; real-time routing and fleet management, including paratransit, ridesharing, bikeways and delivery; hospital capacity planning for surge; and collaborative and multi-objective decision-making.

**REGIONAL TRANSPORTATION SEMINAR**

## Optimization and Machine Learning in Urban Transportation Under a Sharing Economy

Live Stream Link: https://www.youtube.com/watch?v=S-N7oYVvJMQM

## Thursday, October 6 | 4:00 p.m. | UW HUB 340

As our cities grow, competition for staff (workers), stuff (equipment, such as cars) and space (location) grows, and greater efficiencies in resource (staff and stuff) and space utilitization in the context of transportation services are required to support vibrant local economies. On-line, optimization and machine learning can aid in the creation of new transportation markets and services, as well as new service mechanisms for existing services (e.g. equitable microtransit services), and, off-line, can inform urban transportation planning and policy. This talk will describe mathematical, algorithmic, and machine learning methods for designing and operating such urban transportation services in dense, competitve urban environments. Applications specific to bicycle and carsharing, ridesharing, parking, and delivery will be described.

All events are free and open to the public. Reception to follow and all are welcome.

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