SPECIALTY AREA:
TRANSPORTATION ENGINEERING

RESEARCH TOPICS

Traffic Operations
Transportation Data Science
Connected Autonomous
    Vehicle Impacts
Smart Cities and
    Transportation
Sustainable Transportation
Road User Safety
Freight and Logistics
Transit and Shared Mobility
Transportation Network
    Analysis

DEGREE PROGRAMS

Master's Programs:
 • Research-intensive
   academic track
 • Coursework-only
   professional track
Online Master's Programs:
 • Supply Chain
   Transportation and Logistics
 • Sustainable Transportation
Ph.D. Program

OVERVIEW //

From mobility to safety, UW CEE transportation engineering researchers develop solutions to pressing challenges in the field. Research in this area is booming, driving rapid improvements in transportation systems worldwide. Recent developments include $14 million in research funding from the U.S. Department of Transportation to support the Pacific Northwest Transportation Consortium's (PacTrans) research on urban and rural mobility.

UW CEE's transportation engineering program is internationally recognized for its quality in research and education. Faculty have well-established connections with universities and transportation research institutes in China, Japan and many European countries.

CAREERS //

Careers for those with advanced degrees in transportation engineering include traffic engineer, transportation analyst, data scientist and more. Graduates also pursue management positions in large companies, agencies and nonprofit organizations.

Graduates have gone on to careers with employers as diverse as the Federal Highway Administration, Washington State Department of Transportation, Gray & Osborne, Clark Dietz, Concord Engineering, Cascades East Transit, Amazon, the World Bank, Google, INRIX and many more. Ph.D. graduates pursuing careers in academia have gone on to work at major universities in the United States, Europe and Asia.

Best Graduate Schools

UW CEE received the following rankings from *U.S. News & World Report* for 2018:

#12 best graduate school in environmental engineering

#16 best graduate school in civil engineering

FACULTY

Jeff Ban   Anne Goodchild   Ed McCormack
Linda Ng Boyle   Don MacKenzie   Yinhai Wang
Cynthia Chen

CENTERS

The transportation research area is flourishing, with numerous UW CEE faculty-led centers fostering the next generation of transportation solutions. The centers headquarter research on specific themes and act as hubs connecting faculty and students with resources to support research, education and outreach activities. Researchers are involved in the following transportation centers:

- Pacific Northwest Transportation Consortium (PacTrans)
- Washington State Transportation Center
- Supply Chain Transportation and Logistics Center (SCTL)
- Four USDOT-funded Tier 1 University Transportation Centers

RESEARCH FUNDING

Research is funded by a variety of sources, including international, federal and state transportation agencies, National Science Foundation, Transportation Research Board and private companies.

STUDENT RESEARCH

Improving Safety at Highway-Rail-Trail Crossings

The U.S. relies on an expansive rail network, which often crosses highways at-grade along the way. In recent years, placing trails next to railroads has increased bicycle infrastructure, but complicates crossings. To better understand the intersections, particularly how their safety can be improved, a team of researchers from the SCTL Center, including graduate students Anna Alligood and Polina Butrina, worked with the Oregon Department of Transportation. The researchers visited sites across the state to collect data and observations. The project produced a guidebook for use by public agencies to increase safety at highway-rail-trail crossings.
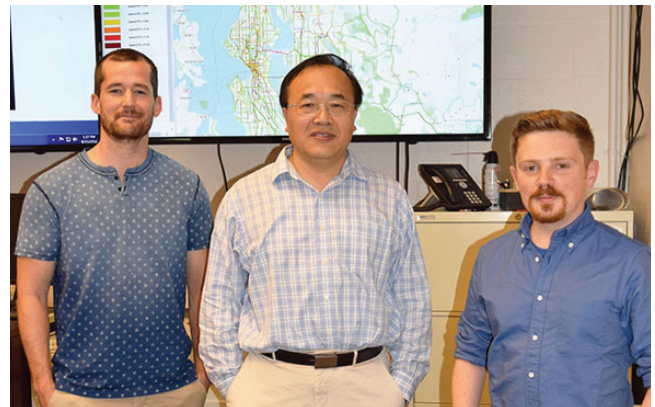
Using Mobile Sensing to Improve Bus Service

It has historically been difficult and expensive to collect passenger travel data in order to improve transit service. However, thanks to new technology developed by UW CEE researchers, it is now easier and less expensive to learn about travel patterns. The technology detects the unique Media Access Control address of mobile devices and gathers data such as where bus riders board and disembark and how much time passes before they catch another bus. The research team includes Ph.D. student Kristian Henrickson, alumni Yegor Malinovskiy and Matthew Dunlap, research associate Zhibin Li and professor Yinhai Wang.

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