

## INDIVIDUAL TRANSPORTATION ACHIEVEMENT AWARD – DAVID HURWITZ

### Nominee:

#### David S. Hurwitz, Ph.D., (F) ITE

Professor / Oregon State University [School of Civil and Construction Engineering](#)

Director / [Kiewit Center for Infrastructure and Transportation Research](#)

Director / Oregon State University [Driving and Bicycling Simulator Laboratory](#)

### Narrative:

David Hurwitz Ph.D., (F) ITE, has built a research group at Oregon State University (OSU) that engages with students and professionals, facilitating the sharing of knowledge between the university and industry. 2024 was a banner year for David's lab based on pillars of success including:

- **Practice Ready Research** from the OSU Driving & Bicycling Simulator Laboratory and new OSU Traffic Signal Controller Hardware-in-the-Loop Simulation Laboratory.
- **Industry Engagement** connecting OSU students and researchers with industry professionals across Oregon and the Western District, including many OSU alumni.
- **Leadership of ITE OSU Student Chapter** creating an engaged body of students interested in Transportation as a profession and ITE as a professional development organization.

### Practice Ready Research

In 2024, David Hurwitz executed a \$400K improvement to the OSU Driving and Bicycling Simulator Laboratory. This included a brand-new, state-of-the-art simulation software and 10 new laboratory servers. This created a worldclass multi-modal sim lab which supports the Hurwitz's Research Group's studies and has become a showcase for tours of the OSU campus.

Significant efforts in 2024 include:

- Working with the Oregon Department of Transportation (ODOT) to evaluate edge cases of Leading Pedestrian Interval (LPI) implementation.
- Using field observations, microsimulation modeling, and heavy vehicle simulator experiments, evaluating how large trucks interact with roundabouts for ODOT's 2024 revision to their Analysis Procedures Manual (APM).
- Completing an NCHRP evaluation of lane widths, shoulders, centerline rumble strips, and shoulder rumble strips on rural arterial roadways to promote safer bike-ped interactions.
- Collaborating with Realtime Technologies Inc., to support the development of the newest version of the lab's driving simulator software (SimCreator 4.0).
- Published findings of a first-in-the-United-States networked driving and bicycling simulator experimental to evaluate if bicycle rolling stop laws (a.k.a. Idaho stop laws, a.k.a stop as yield laws) are safe and can be adopted across the US.

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Figure 1: Development Driving Simulator (Desktop)



Figure 3: Full Scale Bicycling Simulator Cave



Figure 2: Full Cab Passenger Car Driving Simulator



Figure 4: Quarter Cab Heavy Vehicle Driving Simulator

In 2024, David also established a hardware-in-the-loop traffic signal controller simulation laboratory. In 2024, the first technical reports from this simulation were drafted and will be published in 2025.

*Dr. Hurwitz and team developed a unique hardware-in-the-loop solution to help us better evaluate alternate timing strategies that simulation couldn't capture alone. We look forward to using this approach in evaluating the impacts of adaptive signal timing strategies and making more informed decisions on appropriate sites to do so. His depth of expertise, boundless positivity, and humility make him an approachable and cherished partner in research.*

**- Chris Primm**

State Traffic Operations Engineer, Oregon Department of Transportation

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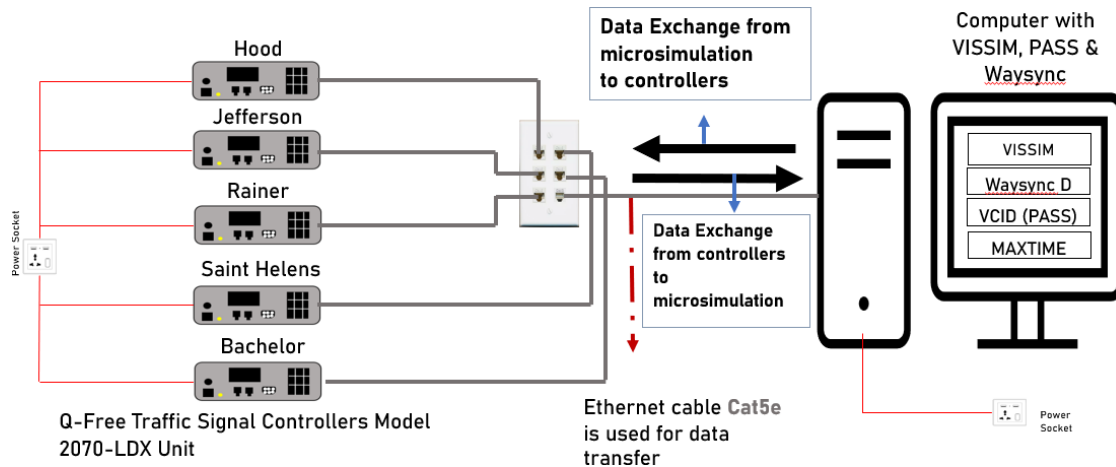


Figure 5: OSU Hardware In the Loop Simulation Logic Model

### Industry Engagement

David's practice ready research is easily engaged with by practitioners and often includes support for and support by industry professionals. For example, in 2024:

- David's team worked with Peter Koonce, Engineering Manager for City of Portland Traffic Signals & Intelligent Transportation Systems, to evaluate bicycle signal countdown timers. Results were published in the ITE Journal. Peter is an OSU Alumni, and ITE Western District International Director.
- David was invited to present to the ODOT Analysis Procedures Manual User Group about Truck Access into Roundabouts.
- David's paper "Characterizations of Expert and Public Perception of Bicycle Rolling Stop Laws: Public Hazard or Practical Convenience?" was published in Transportation Research Record and recognized as the Best Paper Submitted to TRR the ACH20 committee.
- David's team worked with researchers University of Nevada Reno (UNR) and Q-Free, a leading traffic signal and ITS software vendor, to create a hardware-in-the-loop simulation lab. The lab was used to pilot a variety of signal timing plans in Scappoose, OR for ODOT. The project engaged Patrick Marnell, Q-Free's Director of Product Management and ITE Western District 2025 President.



Figure 6: OSU Hardware In the Loop Simulation Laboratory

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- David has also created a pipeline of students going from OSU to employers in Oregon and across the Western District

*“David Hurwitz’s passion for developing people and caring about the transportation industry is unmatched. His positive attitude is an inspiration to me and the students he touches. This all reflects back on the many students we have hired that have been influenced by David and I see it in how they represent themselves and our company.”*

**- Peter Coffey**

President, DKS Associates

### Leadership for Students

David has been the Student Advisor for the ITE Oregon State University Student Chapter since 2012. Under his leadership the chapter has grown to be one of the strongest student chapters in the Western District. Specifically, in 2024:

- David managed a research laboratory with 25 members including 1 research assistant professor, 1 lab manager, 1 post-doc student, 4 PhD students, 4MS students, 1 MEng student, 3 honors college students, and 10 Undergraduate research assistants. All were members of ITE.
- Of the 9 ITE OSU Chapter Officers in 2024, 6 were members of David’s lab:
  - Matt Prak, ITE OSU President
  - Emilio Calderon, ITE OSU Vice President
  - Aiden Gray, ITE OSU Secretary
  - Wyatt Brown, ITE OSU Treasurer
  - Keith Kobayashi, ITE OSU Community Service Co-Chair
  - Jennifer Miwa, ITE OSU Social Media Chair.
- ITE OSU increased membership by 20% in 2024, reaching the chapters’ largest size ever. General meetings regularly have 25 attendees on average with as many as 40 at some meetings.
- David’s lab sent 11 students to the 2024 ITE Western District Meeting in Sacramento, CA where:
  - MS student Jane Weber won best student paper.
  - BS student Matt Prak won the outstanding undergraduate award.
- ITE OSU sent 17 students to the 2024 ITE Oregon Bill Kloos Traffic Bowl in Portland, OR. The ITE OSU team also won the event.
- ITE OSU hosted an ITE OSU Alumni BBQ in Spring of 2024 providing an opportunity for professionals and students to interact in an informal setting creating lasting ties within the Oregon transportation engineering community.

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ITE OSU 2024 Alumni BBQ

*Dr. Hurwitz's impact on the OSU ITE Student Chapter cannot be understated. He has mentored and grown numerous leaders for ITE, with 6 of his mentees receiving the District's outstanding undergraduate or graduate student award since 2018. His consistent guidance of the OSU ITE student chapter has culminated in OSU ITE winning the Outstanding Student Chapter Award three out of the last seven years, in a District that has some of the strongest student chapters in ITE.*

**- Kayla Fleskes-Lane**

Student Funding & Initiatives Chair, ITE Western District

### Closing:

By any measure David Hurwitz has had an outside positive impact on transportation engineering in Oregon, the Western District, and beyond. In 2024 he completed a significant upgrade of the OSU Driving & Bicycling Simulator Laboratory and established a new OSU Traffic Signal Controller Hardware-in-the-Loop Simulation Laboratory. His ongoing efforts towards industry engagement have created long-term connections with agencies including City of Portland and ODOT, consultants like DKS and HDR, and industrial partners like Q-Free and Realtime Technologies Inc. These relationships have yielded tangible projects in 2024 including practice ready, and practitioner relevant research projects for ODOT and City of Portland. Further, his leadership of the ITE OSU Student Chapter has helped the student chapter become one of the strongest in the Western District. This has created a pipeline of high-quality students entering the transportation engineering industry in Oregon and beyond.