

Robert L. Bertini

ASSOCIATE PROFESSOR OF CIVIL AND ENVIRONMENTAL ENGINEERING
AND URBAN STUDIES AND PLANNING
DIRECTOR, OREGON TRANSPORTATION RESEARCH AND EDUCATION CONSORTIUM



"The best parts of the Portland State experience for students are our diversity and urban setting. These advantages give students the satisfaction of making real contributions to their community. This is something most university students can only dream about."

Robert L. Bertini has a strong background in research, like many Portland State faculty. He received his Ph.D from the University of California at Berkeley in transportation engineering. His government and industry experience includes stints with the San Mateo County Department of Public Works; DeLew, Cather & Company; Parsons Brinckerhoff Quade & Douglas, Inc.; and DaimlerChrysler Research and Technology, Inc. With 20 years of experience in transportation, Bertini is the recipient of the prestigious National Science Foundation CAREER Award entitled *Mining Archived Intelligent Transportation Systems Data: A Validation Framework for Improved Performance Assessment and Modeling* (portal.its.pdx.edu).

Since joining the Portland State faculty in 2000, Bertini has developed an Intelligent Transportation Systems Lab (www.its.pdx.edu), unique in the Northwest, where he and his students and colleagues are developing ways of archiving and mining transportation data to improve the operation of our transportation system, reduce congestion and fuel consumption, and improve quality of life. In one project, transit and highway operations are being studied at a very detailed level, using sensors in the roadways and in vehicles, aimed at improving transit operations and traveler information in the corridor. The project is designed as a prototype for other cities across the nation.

Bertini works to bring a community-based learning component into the classroom. "As part of our undergraduate urban transportation systems course, my students and I have helped to redesign a signalized intersection in Beaverton; and in Portland, have helped to design permeable streetscape/curbs, analyzed the impact of street width on speeding, and developed a pedestrian rating system for intersections."

Bertini spends a lot of time with students outside of the classroom and lab. He is the advisor for the Portland State University student chapter of the Engineers Without Borders and also works with student chapters of the American Society of Civil Engineers, the Institute of Transportation Engineers, and Tau Beta Pi. As Director of the Oregon Transportation Research and Education Consortium (OTREC—www.otrec.us), he is working to implement a new statewide National University Transportation Center, created by Congress in 2005. OTREC is advancing new research, education and technology transfer initiatives throughout the state of Oregon.



Education

- Ph.D., Civil Engineering, University of California at Berkeley.
- M.S., Civil Engineering, San Jose State University.
- B.S., Civil Engineering, California Polytechnic State University, San Luis Obispo.

Professional Experience

- Transportation engineer on public works, highway, light rail and airport projects.
- Public agency/consulting firms.
- Large multidisciplinary projects—planning, design and construction.
- Research Scientist at DaimlerChrysler.

Goals at Portland State University

- Create rich classroom and laboratory environments to prepare leaders in transportation field.
- Relevant research toward more efficient, equitable, effective and sustainable transportation system.
- Develop new partnerships at Portland State, within the Oregon University System, with transportation agencies, consultants and industry.

Accomplishments

- Developed new courses and seminars.
- 202 publications (81 peer-reviewed), most with student co-authors.
- Published work cited 120 times.
- 150 invited presentations and talks.
- Generated \$8 million external research funding at Portland State—most to support students.
- Supervised or co-supervised 83 undergraduate and graduate students at Portland State.
- Distinguished Faculty Achievement Award, Portland State University Alumni Association, 2007

Oregon Transportation Research and Education Consortium (OTREC)

- National University Transportation Center—Portland State University, University of Oregon, Oregon State University and the Oregon Institute of Technology.
- \$16 million toward expanded transportation research, education and technology transfer, 2006-2011
- Multidisciplinary theme: advanced technology, integration of land use and transportation, and healthy communities
- www.otrec.us.



Intelligent Transportation Systems Lab

- PORTAL: Portland Regional Transportation Archive (portal.its.pdx.edu).
- Real-time fiber optics data and video feed from ODOT.
- Evaluating Portland Ramp Metering.
- Evaluated COMET Incident Response.
- Development of Alternative to the Motor Fuel Tax.
- Analysis of Speed Related Crashes on State Highway System.
- Evaluated Rural Incident Management Program.
- Great Cities Prototype for Advanced Public Transit Systems in Multimodal Corridors.
- Transit Signal Priority Evaluation.
- Congestion and Its Extent.
- Freeway Dynamics on German Autobahns.
- Mining Truck Data to Improve Freight Operations.
- www.its.pdx.edu.



Research Sponsors

- National Science Foundation.
- U.S. DOT, FHWA, FTA and TransNow.
- Oregon Department of Transportation.
- City of Portland, TriMet.
- BMW Group.
- Oregon Road User Fee Task Force.



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