

Transportation Decision Making in the Big Data World



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Agenda

Friday, Oct. 18

CONFERENCE University of Washington, **Husky Union Building (HUB), Rooms 332 and 334**

7:30am - 8:30am Coffee and pastries available; Registration Open

8:30 – 8:35 **Welcome and Opening Remarks**
Yinhai Wang, PacTrans Director

8:35 – 9:15 **Keynote Session**
Cam Gilmour – Deputy Secretary Washington State Department of Transportation
WSDOT Looks Ahead

Dr. Kumares Sinha – Purdue University
Safety and Sustainability Research in the Big Data World

9:20 – 11:30 **Plenary Session: Open Data Opportunities and Issues** (two panels)
Public agencies have a treasure trove of data. Those data are highly useful to more than the agencies themselves. The plenary session brings together representatives of the public and private sector to talk about their perspectives on open data in the transportation world. What are the opportunities they see, what are the risks, and what role do they see for universities in promoting and optimizing the use of our public data resources?

9:20 – 10:10 **Panel Discussion 1: Public Agency Perspectives**
Michael Berman – Sound Transit
Using Open Data to Provide Transportation Rider Technologies

Bill Schrier – Office of the Chief Information Officer, Washington State
Mashing the Public in Transportation Data

10:10 – 10:25 **Stretch Break**

- 10:25 – 11:25 **Panel Discussion 2: Private Sector Perspectives**
Saf Rabah – Socrata (<http://www.socrata.com/>)
Open Data: Changing the Way We Move
- Matt Ginsberg – Green Driver (<http://imagreendriver.com/>)
What the Public Agency Folks Didn't Tell You
- Ed Mantey – Toyota Collaborative Safety Research Center
Big Data Requires Collaboration; What Toyota Is Doing at Its Collaborative Safety Research Center
- 11:30 – 12:00 **Introduction to Posters**, by the PacTrans Consortium
Explore the exciting research being performed by the PacTrans Universities
- Chris Bell – Oregon State University
 Keith Cunningham – University of Alaska Fairbanks
 Karen Den Braven – University of Idaho
 Linda Boyle – University of Washington
 Haifeng Wen – Washington State University
- 12:00 – 1:30 pm **Lunch and Poster Session**
Display of UI Snowmobile and UW Electric and Gas Race Cars, HUB Lawn
(starts at 11 AM)
- 1:30 – 2:45 **Workforce Development**
In this session, PacTrans' partners will pass along their insight into the skills required to meet the changing work force needs of the transportation industry, and provide suggestions on how PacTrans can help provide needed training to the those in or looking to enter the profession.
- Bruce Haldors – Transpo Group
Characteristics of High Potential Talent/Leaders
- Kevin Chang – University of Idaho (recently with King County)
Addressing the Evolving Needs of the Workplace Employee
- Leni Oman – Washington State Department of Transportation
Managing Knowledge in a Dynamic Workforce
- Amanda Holland – Alaska Department of Transportation and Public Facilities
Working Today and Tomorrow at Alaska's Transportation Department
- 2:45 – 3:00 **Break**

3:00 – 4:15

From Research to Application: Success Stories & Lessons Learned

Presenters in this session will describe what it takes to successfully push research results out into the workplace, whether that means applying for and receiving patents, starting companies, or getting your research results adopted into agency practice.

Steve Muench (UW) – Greenroads and University of Washington
Greenroads: From Research to Company

Michael Bufalino – Oregon Department of Transportation
Intermodal Oregon - Using More of the Tool Box

Beth Ebel – Harborview Injury Prevention Research Center
Distracted Driving: Holding Back the Tide

Richard Wall – University of Idaho
Advanced Pedestrian Signals - Birth of a Smart Button

4:15 – 4:30

Conference Summary and Closing

4:30 – 6:00

Social Hour and Networking

Speaker Biographies

Cam Gilmour, Washington State Department of Transportation

Cam Gilmour currently serves as Deputy Secretary/Chief Operating Officer for the State of Washington's Department of Transportation. WSDOT is responsible for a wide range of activities related to the planning, design, construction, operation and preservation and maintenance of the 18,000 lane mile state highway system. As Chief Operating Officer, Cam leads the development and implementation of agency strategies and policies for the planning, development, construction, operation, maintenance and preservation of the state transportation system. Gilmour previously served as Director of the Department of Transportation and Development for Clackamas County, Oregon. He began his career with the Oregon Department of Transportation, and his last position there was Deputy Director of Finance and Administration with responsibility for support services, finance, human resources and information technology. He holds a Master of Science Degree in Agricultural Economics from the University of Idaho, and a Bachelor of Science Degree in Agricultural Economics from Oregon State University.

Dr. Kumares Sinha, Purdue University

Dr. Kumares C. Sinha is the Edgar B. & Hedwig M. Olson Distinguished Professor of Civil Engineering at Purdue University. He has been active in teaching, research and practice for over four decades in transportation planning, engineering and management. He consults for the World Bank on transportation and infrastructure issues and he is the Editor-in-Chief Emeritus of the Journal of Transportation Engineering. He serves on the Executive Committee of the Transportation Research Board and on the Oversight and Implementation Committee of the Second Strategic Highway Research Program. He is a Member of the U.S. National Academy of Engineering.

Dr. Yinhai Wang, University of Washington

Dr. Wang is a professor in Civil and Environmental Engineering at the University of Washington. He serves as Director for the Pacific Northwest Transportation Consortium (PacTrans), USDOT's University Transportation Center for Federal Region 10. Dr. Wang's active research fields include traffic sensing, e-science of transportation, traffic operations, accident modeling, traffic system control, and traffic simulation. He has over 100 academic publications and has received one US patent and two provisional patents. He was the winner of the ASCE Journal of Transportation Engineering Best Paper Award for 2003. Dr. Wang serves as a member of three TRB committees: the Transportation Information Systems and Technology Committee (ABJ50), the Freeway Operations Committee (AHB20), and the Highway Capacity and Quality of Services Committee (AHB40.) He also chairs the research subcommittee for AHB40. Dr. Wang is an elected member of the Board of Governors for the IEEE Intelligent Transportation Systems Society and plays an associate editor's role for both the ASCE Journal of Transportation Engineering and Journal of Computing in Civil Engineering.

Michael Berman, Sound Transit

Michael Berman is the program manager for Sound Transit's Research & Technology program and is responsible for completing the agency's Research & Technology Strategic Plan. Michael was the first project manager for the San Francisco Bay Area's 511 traveler information program and has been working with transportation data (both open and closed) for nearly 20 years. He has a degree in City and Regional Planning, and is also a recovering attorney.

Bill Schrier, State of Washington Office of the Chief Information Officer

Bill Schrier is Senior Policy Advisor in the Office of the Chief Information Officer (OCIO) at the State of Washington. In this capacity he chairs the State Interoperability Executive Committee (SIEC), serves as the primary point of contact for the FirstNet effort in the State, and evangelizes open government through efforts like data.wa.gov. Schrier retired in May, 2012, after over 8 years serving as Chief Technology Officer (CTO) for the City of Seattle and director of the City's Department of Information Technology (DoIT). In this capacity he managed over 200 employees and budgets up to \$59 million in support of City government technology, and reported directly to Mayor Michael McGinn. Schrier is a retired officer with the U.S. Army Corps of Engineers. He holds a Masters in Public Administration from the University of Washington.

Saf Rabah, Socrata

Are you curious about all of the ways that open data can make the world a better place? Talk to Saf. An enthusiastic proponent of Socrata's visionary customers, Safouen (Saf) has 17 years of technology product management and marketing experience in the enterprise software, internet services and communications industries. He served most recently as Marketing Director at Canadian telecommunications company, TELUS, leading the successful market introduction of cloud-based customer experience solutions that achieved 300 percent revenue growth over two years. Prior to working at TELUS, Saf was Director of eBusiness at customer relationship management software company Pivotal, which reached \$65 million in revenue in five years and was acquired by CDC Software in 2003. Saf holds an executive MBA from Simon Fraser University. Twitter: @Safouen (<http://www.socrata.com/>)

Ed Mantey, Toyota Technical Center

Edward J. Mantey is Vice President for Engineering at Toyota Technical Center (TTC), located in Ann Arbor, Michigan. TTC, Toyota's North American R&D center, is a division of Toyota Motor Engineering and Manufacturing, North America, Inc. (TEMA). Mr. Mantey is responsible for overseeing the departments of the Product Development Office (PDO), Corporate Strategy Office (CSO), and Technical Administration (TAPO). Prior to his current assignment, Mr. Mantey was Vice President of Engineering Design – Exterior Division and Electronic Systems Division. Mr. Mantey joined TTC in 1991 with responsibility for overseeing the structural evaluations of products developed in North America. From 1996 – 2000, Mr. Mantey held the position of Executive Engineer for Development, Planning and Operations, where his responsibilities included the position of Chief Engineer for the 2000 Avalon. Prior to joining TTC, Mr. Mantey held a variety of positions during his ten years at General Motors Corporation in their Large Car Engineering division. Mr. Mantey earned a Bachelor of Science degree in Mechanical Engineering from The Ohio State University.

Matt Ginsberg, Green Driver, Inc.

Matthew L. Ginsberg received his doctorate in mathematics from Oxford in 1980 at the age of 24. He remained on the faculty in Oxford until 1983, doing research in mathematical physics and computer science; during this period, he wrote a program that was used successfully to trade stock and stock options on Wall Street. Ginsberg's continuing interest in artificial intelligence brought him to Stanford in late 1983, where he remained for nine years. He then went on to found CIRL, the computational intelligence research laboratory at the University of Oregon, which he directed until 1996. He remained at CIRL until 1998, when CIRL spun off On Time Systems, a commercial entity focusing on scheduling and routing technology. Ginsberg has been the CEO of the company since its formation and is currently its chairman as well. Ginsberg is also the chairman and CEO of Green Driver, Inc., a sister company to On Time Systems that focuses on using real-time traffic and signal information to improve driver safety, fuel efficiency, and the driving experience generally. Ginsberg's present research interests focus on constraint satisfaction. He is the author of numerous publications in this area, the editor of "Readings in Nonmonotonic Reasoning," and the author of "Essentials of Artificial Intelligence," both published by Morgan Kaufmann. He is also the author of the bridge-playing program GIB, which made international news by finishing 12th in the world bridge championships in Lille, France, and the author of Dr.Fill, a crossword-solving program that made national news by participating in the American Crossword Puzzle Tournament in March of 2012 *Green Driver* (<http://imageendriver.com/>).

Bruce Haldors, Transpo Group

Bruce Haldors is the CEO of Transpo Group, a 100 person multi-modal transportation technology consulting firm headquartered in Kirkland with offices in San Francisco and Abu Dhabi in the UAE and Riyadh Saudi Arabia. As CEO of Transpo, Bruce takes a strategic approach in not only leading the firm, but also in solving transportation challenges. By forming strong relationships with clients that span multiple projects, Bruce's passions for people, technology, and innovation have helped countless public agencies and private owners create and implement unique transportation solutions. Bruce has over 25 years of experience on transportation projects throughout the Pacific Northwest and recently in the UAE. He holds a MSCE from University of California at Berkeley and he has led Transpo to achieve the honor as judged by Zweig-White as the "Best Firm to Work For" (in the A/E industry) in the United States. Within Transpo, he championed the creation of the Intelligent Transportation Systems (ITS) Lab and ViaCity connectivity planning software. Bruce's range of expertise, from ITS technologies, multimodal transportation planning, to hands-on traffic simulation software applications, helps him work hand-in-hand with both technical staff and policy makers.

Kevin Chang, University of Idaho

Kevin Chang, Ph.D., P.E., is an Assistant Professor in the Department of Civil Engineering and Center for Secure and Dependable Systems at the University of Idaho. Kevin obtained his undergraduate and graduate degrees in Civil Engineering, with an emphasis in transportation, from the University of Washington. His research areas include traffic safety and operations, cybersecurity, livable communities and transportation education. He previously served as an Affiliate Assistant Professor at the University of Washington and as a supervisor in the Traffic Engineering Section for the King County Department of Transportation in Seattle. He is licensed as a Professional Engineer in Washington and California.

Leni Oman, Washington State Department of Transportation

Leni Oman is the Director of the Office of Research and Library Services with the Washington State Department of Transportation. Leni Oman has been employed by the State of Washington for 24 year and with the Washington State Department of Transportation for 16 years. She holds a Master of Veterinary Science degree from the University of Idaho and B.A. in Liberal Arts from Goddard College. She is also the Executive Director of the Washington State Transportation Center (TRAC), and a member of the Pacific Northwest Transportation Consortium (PacTrans) External Advisory Board and the Board of Advisors for the National Institute for Transportation and Communities. She is also the Chair for the AASHTO Research Advisory Committee Task Force on Transportation Knowledge Networks, and a member of the AASHTO Standing Committee on Research; RAC Region 4, the RAC Task Group on Collaboration and Coordination, and the RAC-CUTC Liaison Group. Leni's career includes a diverse mix of fish health management, information management, as well as water quality, spill response, watershed and flood management. Prior to WSDOT, she was employed by: the Northwest Indian Fisheries Commission; the Washington Department of Wildlife; the Washington Department of Fish & Wildlife.

Amanda Holland, Alaska Department of Transportation and Public Facilities

Amanda Holland functions as the Deputy Director for Administrative Services for the Alaska Department of Transportation and Public Facilities (DOT&PF). She currently leads three statewide strategic initiatives: the DOT&PF Workforce Planning program; the department's Engineering Automation and Geospatial continuous improvement team; and the State of Alaska enterprise system replacement project for DOT&PF, which encompasses financial, procurement, and human resource functionality. Amanda holds a Bachelor's Degree in Industrial/Organizational Psychology, related to Business Administration and presently is working on her Master of Science in Organizational Leadership at Quinnipiac University. She has been a national presenter for the Transportation Research Board; National Transportation Workforce Summit; AASHTO; National Association of Government Communicators; National Society of Professional Engineers; and the Society for Human Resource Management.

Steve Muench, University of Washington

Steve Muench has been a faculty member at the University of Washington since 2004. Steve has research interests in the transportation infrastructure realm with special emphasis on sustainability. Current sustainability efforts include Greenroads, a sustainability performance metric for roadway design and construction. Other interests include construction, pavements and online training. In one prior life Steve was a nuclear submarine officer in the US Navy - serving 3 years on USS WILLIAM H. BATES (SSN 680) out of Pearl Harbor, HI and another 2 years teaching submarine tactics at the Naval Submarine Training Center Pacific. In another prior life Steve worked for a local consultant company, Perteet, Inc., as a transportation design engineer.

Michael Bufalino, Oregon Department of Transportation

Mr. Bufalino serves as the Oregon Department of Transportation's research program manager and leads ODOT's research efforts, focusing on producing original research that supports the department's mission of providing a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians. He has worked for ODOT since 2007. His work at ODOT has included managing the development of the state's first statewide freight plan and overseeing the ConnectOregon program. In this capacity, he supervises the Research Section including the Technology Transfer Center ODOT Library, and agency research projects. Through the ODOT Technology Transfer Center, Mr. Bufalino looks forward to helping tie training, technical assistance and technology transfer to current research. Prior to Joining ODOT Mr. Bufalino has worked as a planning consultant, university lab coordinator, college instructor, GIS professional and cartographer, and as a mate and deckhand on cargo ships.

Beth Ebel, Harborview Injury Prevention & Research Center

Beth Ebel is an associate professor of pediatrics at the University of Washington, and director of the Harborview Injury Prevention & Research Center. Her research interests include injury prevention, health behaviors, disparities in injury, and global injury prevention and control. She has been principal investigator in recent studies to encourage booster seat use for young passengers, child passenger safety for Latino families, and improving the quality of trauma care. Ebel received a master's in science in development economics from Oxford University in 1989, her medical degree from Harvard Medical School and the MIT Health Sciences and Technology Program in 1996, and a master's in public health from the University of Washington in 2001.

Richard Wall, University of Idaho

Dr. Wall is a Professor of Electrical Engineering and Computer Engineering who currently teaches courses in embedded processing, distributed control, and digital signal processing. His research interests focus on areas of traffic signals controls and autonomous vehicles. Richard worked for Idaho Power Company in Boise, Idaho for 18 years before joining the University of Idaho in 1990. While with Idaho Power, he worked in communications, protective relaying and power plant automation R&D. His present research interests are in the area of plug and play distributed sensor networks. Although he was born and raised in western Pennsylvania, earning his BSEE from Penn State, he has lived in Idaho since 1970 and now calls it home.

Mark Hallenbeck, University of Washington

Mark Hallenbeck is the Director of the Washington State Transportation Center (TRAC) office at the University of Washington (UW.) He is also the Associate Director for Outreach at for the Region 10 University Transportation Center (PacTrans.) Mark has been with TRAC for 28 years. Much of Mark's research at TRAC involves the collection, use, summarization, and reporting of data that describe transportation system performance, and then using that information to work with the public and decision makers as they make major transportation and land use investment decisions.