

CURRICULUM VITA - NANCY NIHAN

General Biographical Information

NANCY LUCILLE NIHAN
Professor, Dept. of Civil & Environmental Engineering
Director, Transportation Northwest Regional UTC
University of Washington
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Academic background

Ph.D.	Department of Civil Engineering, June, 1970 Northwestern University
M.S.E.	Department of Civil Engineering, August, 1967 Northwestern University
B.S.I.E.	Department of Industrial Engineering, June, 1964 Northwestern University

Professional history

University Positions:

Director, Transportation Northwest (TransNow), USDOT Regional University Transportation Center (UTC), University of Washington, September 1988 - present.

Professor, Department of Civil & Environmental Engineering (Formerly Civil Engineering), University of Washington, September 1986 - present.

Adjunct Professor, Department of Industrial Engineering, April 2003 – present.

Director, Northern Plains – Pacific Northwest (NORPAC) Freight Mobility Center, University of Washington Branch, August 2005 – July 2007. (Pilot study completed in 2007, currently in hiatus until new funding can be obtained.)

Head, Transportation and Construction Division, Department of Civil & Environmental Engineering (Formerly Civil Engineering), University of Washington, 2003 - 2006.

Director, Transportation, Surveying and Construction Engineering Program, Dept. of Civil Engineering, University of Washington, September 1987 - November 1988.

Visiting Scholar, Transport Studies Group, University College London, London, England, September 1984 - March, 1985 and September, 1985 - January, 1986.

Associate Professor, Dept. of Civil Engineering, University of Washington, January 1974 - September, 1986

Assistant Professor, Systems Engineering Department, University of Illinois Chicago Circle, March 1969 - January 1974.

Faculty Associate, Center for Urban Studies, University of Illinois Chicago Circle, March 1969 - September 1971.

Research Project Coordinator, Systems Engineering Department, University of Illinois Chicago Circle, September 1970 - August 1971.

Research Engineer, Transportation Center, Northwestern University, Evanston, IL, September 1967 - March 1969.

Business or Professional Positions:

Expert Witness, State of Washington, Personal Injury & Wrongful Death Suit, Kogita vs. State, \$19,000,000 (Defendant prevailed), 1986-1987.

Consultant, Alaska Highway Data Program, State of Alaska, Spring 1982 - Spring 1983.

Consultant, Illinois Institute for Social Policy, Summer 1970.

Consultant, Transportation Center, Northwestern University, Spring/Summer 1969.

Transportation Planner, Office of High Speed Ground Transportation U.S. Department of Commerce, Washington, D.C., Summer 1966.

Awards and Honors

S. S. Steinberg Award., “recognizes an individual who has made remarkable contributions to transportation education.”, American Road & Transportation Builders Association (ARTBA). Research and Education Division.” January 2008 .

Provisional Patent: USPTO Application #: 20070030171: Mobile System and Method for Traffic Detector Simulations, filed on Aug. 6, 2006.

Temporary Patent Awarded for Advanced Loop Event Data Analyzer (ALEDA) system. Spring 2005.

Best Session Paper, *Proceedings of the 8th World Multi-Conference on Systemics, Cybernetics and Informatics*, Award for paper with Yinhai Wang “Dynamic Estimation of Freeway Speed Using Single-Loop Measurements.”, July 2004.

Best paper of 2003, *ASCE Journal of Transportation*, Award for paper with Yinhai Wang “Can Single-Loop Detectors Do the Work of Dual-Loop Detectors?” Spring 2004.

ITE Wayne T. Van Wagoner Award for paper with Karl Westby “Predicting the 24-Hour Delay at Signalized Intersections”, March 1997.

Certificate of Appreciation for Outstanding Contribution to Scholarship, Washington State Institute of Transportation Engineers (ITE), 1991-1992.

Society of Sigma Xi

Marquis Who’s Who in Science and Engineering

Who's Who of American Women

The World Who's Who of Women in Education

Refereed Journal Publications

Working:

Nguyen, Luan, and Nancy L. Nihan, "Impacts of HOT lanes on Freeway Congestion and HOV Trips" in progress, October 2009.

Pham, Chuong, and Nancy L. Nihan, "Impacts of Freeway Incident Delays on Section Travel Times" in progress, October 2009.

Submitted for Publication:

Masek, Chris and Nancy L. Nihan, "Can Small-Scale Investments Provide Significant Relief to City Congestion? A Synchro Analysis of Downtown Bellevue, Washington." submitted to *Transportation Research Record*, August 2009.

Tang, Yu Q., Analysis of Pedestrian-Vehicle Collisions and Intersection Characteristics, submitted to *Transportation Research Record*, August 2009.

Published:

Cheevarunothai, Patikhom, Yinhai Wang and Nancy L. Nihan, "Development of a Loop Detector Simulator (LOOPSIM) for In-Laboratory Traffic Research and Training", *Computer Applications in Engineering Education*, Vol. 16, Issue 1, Feb. 2008.

Chang, Kevin, Matthew Nolan and Nancy L. Nihan, "Developing Design Standards for Speed Cushions," *Transportation Research, Record No. 2030*, 2007.

Avery, Ryan P., Guohui Zhang, Yinhai Wang, and Nancy L. Nihan. "An Investigation into Shadow Removal from Traffic Images." *Transportation Research Record No. 2000*. 2007.

Cheevarunothai, Patikhom, Yinhai Wang, and Nancy Nihan. "Using Dual-Loop Event Data to Enhance the Accuracy of Truck Data." *Transportation Research Record No. 1993*. 2007.

Zheng, Jianyang, Yinhai Wang, Nancy L. Nihan and Mark Hallenbeck, "Extracting Roadway Background Image: a Mode-Based Approach" *Transportation Research, Record No. 1944*, 2006.

Zheng, Jianyang, Yinhai Wang, Nancy L. Nihan, and Mark Hallenbeck, "Detecting Cycle Failures at Signalized Intersections Using Video Image Processing," *Journal of Computer-Aided Civil and Infrastructure Engineering*, Vol. 21 No. 6, 2006.

- Cheeverunothai, Patikhom, Yinhai Wang and Nancy L. Nihan “Identification and Correction of Dual-Loop Sensitivity Problems,” *Transportation Research Record No. 1945*, 2006.
- Chang, Kevin, Matthew Nolan and Nancy Nihan , “ Measurement of Neighborhood Traffic Safety Benefits Using Real-Time Driver Feedback Technology, *Transportation Research Record No.1922*, pp 44-51, 2005.
- Zhang, Xiaoping, Nancy L. Nihan, and Yinhai Wang, “Improved Dual Loop Detection System for Collecting Real-Time Truck Data”, *Transportation Research Record No. 1917*, pp. 108-115, 2005
- Zhang, Xiaoping, Yinhai Wang, Nancy L. Nihan, and Hu Dong, “Monitoring a Freeway Network in Real-Time Using Single-Loop Detectors: System Design and Implementation”, *International Journal of Vehicle Information and Communication Systems*, Vol. 1, Nos. 1/2, pp.119–130, 2005.
- Wang, Yinhai and Nancy L. Nihan, “Dynamic Estimation of Freeway Large Truck Volumes Based on Single Loop Measurements,” *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, Vol. 8, No. 3, pp. 133-141, July-September 2004.
- Wang, Yinhai and Nancy L. Nihan, “Estimating the Risk of Collisions Between Bicycles and Automobiles at Signalized Intersections”, *Accident Analysis and Prevention*, Vol 36, No. 3, pp. 313-321, May 2004
- Zhang, Xiaoping, Yinhai Wang, Nancy L. Nihan, and Mark Hallenbeck. “Development of a System to Collect Loop Detector Event Data for Individual Vehicles.” *Transportation Research Record No. 1855*, pp. 168-175, 2003.
- Wang, Yinhai, and Nancy L. Nihan. “Can Single-Loop Detectors Do the Work of Dual-Loop Detectors?” *ASCE Journal of Transportation Engineering*, Volume 129, Issue 2, pp 169-176, March/April 2003.
- Westby, Karl A. and Nancy L. Nihan, “A Systems Analysis Approach to Freight Mobility Investment”, *International Journal of Transportation, Privatization and Public Policy*, Spring, 2002.
- Wang, Yinhai and Nancy L. Nihan, “Dynamic Estimation of Freeway Traffic Speeds with Single Loop Measurements,” submitted to *Journal of Advanced Transportation*, October 2001.
- Chang, Kevin and Nancy L. Nihan, “Evaluating Commuter Opinion of Congestion Pricing in Metropolitan Seattle, “*Journal of Advanced Transportation*, Volume 35, Number 1, Winter, 2001.
- Wang, Yinhai and Nancy L. Nihan, “Freeway Speed Estimation Using Single Loop Outputs”, *Transportation Research Record 1727*, pp 120-126, 2000.

- Nihan, Nancy L., "Evaluation of Forced Flows on Freeways", *Journal of Advanced Transportation*, vol. 34, no. 2, Summer 2000.
- Chang, Kevin N. and Nancy L. Nihan, "Drayage: Freight's Premier Bench Player", *Transportation Quarterly*, Vol. 53, No. 3, Summer 1999.
- Washburn, Scott and Nancy Nihan, "Estimating Link Travel Time with a Video Image Tracking System", *ASCE Journal of Transportation Engineering*, Vol. 125, No. 1, January/February 1999.
- Washburn, Scott S., and Nancy L. Nihan, "Estimating Link Travel Time with a Video Image Tracking System", *ASCE Journal of Transportation Engineering*, Vol.125, No. 1, January/February 1999.
- Newman, Bruce, Scott S. Washburn and Nancy L. Nihan, "Motorist Behavior and Options Toward High-Occupancy Vehicle Lanes at Ramp Meters", *Transportation Research Record 1634*, Transportation Research Board, 1998.
- Washburn, Scott S., and Nancy L. Nihan, "Using Voice Recognition to Collect License Plate Data", *Transportation Research Record 1593*, 1997.
- Nihan, Nancy L., "Aid to Determining Freeway Metering Rates and Detecting Loop Errors," *ASCE Journal of Transportation Engineering*, Vol. 123, No. 6, Nov./Dec. 1997
- Westby, Karl and Nancy Nihan, "A Methodology to Predict 24 Hour Delay at Signalized Intersections," *ITE Journal*, Vol. 66, No. 9, September 1996.
- Hamed, Mohammad and Nancy L. Nihan, "Estimating Intersection O-D Matrices from Observed Time-Series of Traffic Counts: The Zellner Estimator," *Journal of Advanced Transportation*, Vol. 30, No. 2, 1996.
- Nihan, Nancy L. and Mohammad Hamed, "Interactions Between Driver Information, Route Choice, and Optimal Signal Timing on a Simple Network," *Journal of Advanced Transportation*, Vol. 29, No. 2, Summer, 1995.
- Davis, Gary A. and Nancy L. Nihan, "Large Population Approximations for a General Stochastic Traffic Assignment Model," *Journal of Operations Research*, Vol. 41, No. 1, Jan-Feb 1993, pp. 169-178.
- Gabel, Mark, and Nancy L. Nihan, "Analysis of Effectiveness and Demand for Passenger-Only Ferry Service in the Puget Sound Region," *Transportation Research Record 1383*, 1993, pp. 1-8.
- Nihan, Nancy L., and Mohammad M. Hamed, "A Fixed Point Approach to Estimating Freeway O-D Matrices and the Effect of Erroneous Data on Estimate Precision," *Transportation Research Record 1357*, 1992, pp. 18-28.
- Berg, David B. and Nancy L. Nihan, "Impacts of a Simple Bottleneck-Forecasting and Ramp Metering Algorithm on Freeway Flow," *ITE Journal*, June, 1992.

- Davis, Gary A. and Nancy L. Nihan, "A Stochastic Process Approach to the Estimation of Origin-Destination Parameters from Time-Series of Traffic Counts," *Transportation Research Record*, Number 1328, 1991, pp. 36-42.
- Nihan, Nancy L., John E. Davis, and Leslie N. Jacobson, "High-Occupancy Vehicle Improvements on Signalized Arterials," *ITE Journal*, Vol. 61, No. 3, March 1991, pp. 15-20.
- Davis, Gary A. and Nancy L. Nihan, "Nonparametric Regression and Short Term Freeway Traffic Forecasting," *ASCE Journal of Transportation Engineering*, Vol. 117, No. 2, Mar/Apr. 1991, pp. 178-188.
- Davis, Gary A., Nancy L. Nihan, Mohammad Hamed, and Leslie N. Jacobson, "Adaptive Forecasting of Freeway Traffic Congestion," *Transportation Research Record 1287*, 1990, pp. 29-33.
- Jacobson, Leslie N., Nancy L. Nihan, and Jeffrey D. Bender, "Detecting Erroneous Loop Detector Data in Freeway Traffic Management Systems," *Transportation Research Record 1287*, 1990, pp. 151-166.
- Nihan, Nancy L., "Telecommunications Link: Seattle Freeway Flow System and University of Washington," *ITE Journal*, September 1989.
- Nihan, Nancy L., and Gary A. Davis, "Application of Prediction-Error Minimization and Maximum Likelihood to Estimate Intersection O-D Matrices from Traffic Counts," *Transportation Science*, Vol. 23, No. 2, ORSA, May 1989, pp. 77-90.
- Kirkemo, Gordon, Nancy L. Nihan, and Fred L. Mannering, "The Feasibility of Using Local Access Cable TV as a Driver Information Tool," *ITE Journal*, March 1989.
- Nihan, Nancy L., "Impacts of TSM Improvements on SR 520," *Transportation Research Record 1173*, 1988, pp. 39-45.
- Nihan, Nancy L., and Gary Davis, "Recursive Estimation of OD Matrices Using Inflow/Outflow Counts", *Transportation Research*, Vol.21B, No. 2, pp. 149-163, 1987.
- Davis, Gary and Nancy L., Nihan, "Use of Time-Series Designs to Estimate Changes in Freeway Level of Service Despite Missing Data," *Transportation Research*, 18A, No. 5/6, pp. 431-438, 1984.
- Nihan, Nancy L., and Gary Davis, "Estimating the Impact of Ramp Control Programs," *Transportation Research Record 957*, 1984.
- Nihan, Nancy L., "A Procedure for Estimating Freeway Trip Tables Using Ramp Volume Data," *Transportation Research Record 895*, 1982.

- Nihan, Nancy L., "Subarea Focusing with the UTPS Distribution-Split Model," *ASCE Transportation Engineering Journal*, November, 1981.
- Nihan, Nancy L., and Holmesland, Kjell O., "Use of Box and Jenkins Time Series Analysis to Isolate the Impact of a Pavement Improvement Policy," *Transportation Research Record 819*, 1981.
- Nihan, Nancy L., and Holmesland, Kjell O. "Use of Box and Jenkins Time Series Technique in Traffic Forecasting," *Transportation*, Vol. 9, 1980, pp. 125-143.
- Norris, Gary A. and Nihan, Nancy L., "Subarea Transportation Planning: A Case Study," *Traffic Quarterly*, Vol. 33, No. 4, October 1979, pp. 589-606.
- Nihan, Nancy L., and Sullivan, Michael C., "Energy Conservation Through Aerodynamic Drag Reduction of Intercity Buses," *Journal of Advanced Transportation*, Vol. 13, No. 3, Fall 1979, pp. 17-23.
- Miller, Donald G. and Nihan, Nancy L., "Development and Demonstration of the Subarea Focusing Concept for Trip Distribution in the Puget Sound Area," *Transportation Research Record 610*, 1977.
- Nihan, Nancy L., and Morlok, Edward K., "A Planning Model for Multiple Mode Transportation System Operation," *Transportation Planning and Technology*, Gordon and Breach Science Publishers, Ltd., Great Britain, Vol. 3, 1976, pp. 59-73.
- Nihan, Nancy L., and O'Neill, William D., "Regional Role of Engineering Education: Data and Preliminary Models," *Technology, The University and the Community: A Study of the Regional Role of Engineering Colleges*, G. Bugliarello, et al., Pergamon press, 1976.
- Nihan, Nancy L., and Lassabliere, Jacques, "Sensitivity of Trip Distribution to Subarea Focusing," *ASCE Transportation Engineering Journal*, August, 1976, pp. 555-569.

Fully-Refereed Conference Proceedings

Submitted:

Published:

Avery, Ryan P, Guohui Zhang, Yinhai Wang and Nancy L. Nihan. "An Investigation into Shadow Removal from Traffic Images." *Preprint CD-ROM, the 86th Annual Meeting of the Transportation Research Board*, January 2007.

Cheeverunothai, Patikhom, Yinhai Wang, and "Using Dual-Loop Event Data to Enhance the Accuracy of Truck Data." *Preprint CD-ROM, the 86th Annual Meeting of the Transportation Research Board*, January 2007.

Cheeverunothai, Patikhom, Yinhai Wang, and Nancy L. Nihan. "Identification and Correction of Dual-Loop Sensitivity Problems." *Preprint CD-ROM, the 85th Annual Meeting of the Transportation Research Board*, January 2006.

Zheng, Jianyang, Yinhai Wang, Nancy L. Nihan, and Mark Hallenbeck. "Extracting Roadway Background Image: a Mode-Based Approach." *Preprint CD-ROM, the 85th Annual Meeting of the Transportation Research Board*, January 2006.

Cheeverunothai, Patikhom, Yinhai Wang, and Nancy L. Nihan. "Development of Advanced Loop Event Data Analyzer (ALEDA) for Investigations of Dual-Loop Detector Malfunctions." *Proceedings of the 12th World Congress Of Intelligent Transportation Systems*, Paper 000662, November 2005.

Zheng, Jianyang, Yinhai Wang, and Nancy L. Nihan. "Quantitative Evaluation of GPS under Forest Canopies." *Proceedings 2005 IEEE International Conference on Networking, Sensing, and Control*, March 2005.

Avery, Ryan P., Yinhai Wang, and Nancy L. Nihan. "A Region Growing Algorithm for Estimating Freeway Traffic Speed from Single Loops." *Preprint CD-ROM, the 84th Annual Meeting of Transportation Research Board*, Paper 05-2045. January 2005.

Zhang, Xiaoping, Nancy L. Nihan, and Yinhai Wang, "Improved Dual Loop Detection System for Collecting Real-Time Truck Data", *Preprint CD-ROM, the 84th Annual Meeting of Transportation Research Board*, January 2005.

Chang, Kevin, Matthew Nolan and Nancy Nihan , " Measurement of Neighborhood Traffic Safety Benefits Using Real-Time Driver Feedback Technology, *Preprint CD-ROM, the 84th Annual Meeting of Transportation Research Board*, January 2005.

Wang, Yinhai, and Nancy L. Nihan. "Dynamic Estimation of Freeway Speed Using Single-Loop Measurements." *Proceedings of the 8th World Multi-Conference on Systemics, Cybernetics and Informatics*, Vol. VII, 396-401. July 2004.

- Wang, Yinhai, and Nancy L. Nihan. "Quantitative Analysis of Angle-Accident Risk at Signalized Intersections." *World Transport Research, Selected Proceedings of the 9th World Conference on Transport Research*. Pergamon Press. Oct. 2003. Seoul, Korea.
- Zheng, Jianyang, Yinhai Wang, and Nancy L. Nihan, "Tracking Vehicles: Is GPS a Sufficient Solution?", *Proceedings of the 13th Annual Meeting of ITS America*, Paper 169, May 2003.
- Zhang, Xiaoping, Yinhai Wang, and Nancy L. Nihan, "Investigation of Dual Loop Errors Using Video Ground Truth Data", *Proceedings of the 13th Annual Meeting of ITS America*, Paper 158, May 2003.
- Wang, Yinhai, Xiaoping Zhang, and Nancy L. Nihan, "Monitoring Freeway Congestion Using Single Loop Measurements", *Proceedings of the 12th Annual Meeting of ITS America*, May 2002.
- Wang, Yinhai and Nancy L. Nihan, "Dynamic Estimation of Freeway Speeds with Single-Loop Measurements", *Proceedings of the 11th Annual Meeting of ITS America*, June 5, 2001, Florida.
- Davis, Gary A., and Nancy L. Nihan, "HOV Improvements on Signalized Arterials," Proceedings annual ITE meeting, Orlando, FL, August 1990 (1990 Compendium of Technical Papers, ITE, pp 14-17).
- Davis, Gary A., and Nancy L. Nihan, "Impacts of a Bottleneck Forecasting and Ramp Metering Algorithm on Freeway Flow," Proceedings annual ITE meeting, Orlando, FL, August 1990 (1990 Compendium of Technical Papers, ITE, pp).
- Davis, Gary A., Nancy L. Nihan, Mohammad Hamed, and Les Jacobson, "Adaptive Forecasting of Freeway Traffic Congestion," Proceedings First International Conference on Applications of Advanced Technologies in Transportation Engineering, San Diego, California, sponsored by ASCE and Caltrans, February 5-8, 1989.

Abstract and Non-Refereed Conference Proceedings and Other Non-Journal Articles

- Nihan, Nancy L., "Enhancing Freight Mobility in an Increasingly Competitive and Dangerous World: The Role of the University-Based Centers", Pacific Northwest Freight Conference, *Moving Our Economy*, Seattle, October 5-7, 2001 (Invited).
- Nihan, Nancy L., and Joshua N. Foreman, "The Northwest's Top Ten Transportation Problems in the 1990's", Pacific Northwest Executive, University of Washington, Vol. 5, No. 4, Oct. 1989, pp. 2-5 (Invited).

Sponsored Research (University of Washington)

- **Awarded Research Grants/Contracts (Over \$26 Million brought to UW)**

Summary:

Research Dollars Brought in as Sole Principal Investigator:

USDOT	WSDOT	NSF	METRO	OTHER	TOTAL
\$23,809,124	\$991,784	\$349,920	\$50,795	\$177,104	<u>\$25,378,727</u>

Research Dollars Brought in as Co- Principal Investigator: \$890,123 from WSDOT

Total Research Dollars Brought to UW: \$ 26,268,850.

Note: TransNow matching awards for research projects that passed the required peer review process are identified in parentheses in the project information listed below. To avoid double-counting, these funds are not included in the totals shown above.

Principal Investigator, Transportation Northwest, Strategic Plan for FY09 (21st, and 22nd year of operation). Sponsored by the United States Department of Transportation, July 1 2009 - June 30 2010. \$2,085,000

Principal Investigator, Transportation Northwest: Program Plan for Twenty First Year – Increase due to Technical Corrections Bill. Sponsored by the United States Department of Transportation. July 1, 2008 - June 30, 2009. \$142,000.

Principal Investigator, Transportation Northwest: Program Plan for Twenty First Year. Sponsored by the United States Department of Transportation. July 1, 2008 - June 30, 2009. \$1,686,00.

Principal Investigator, UW Module, Collaborative 4-UTC Education Grant from FHWA, Development, Deployment, and Assessment of a New Educational Paradigm for Transportation Professionals and University Students: A Collaboration of the Region X Transportation Consortium. (with Michael Kyte, UI Module & Project Leader, Rob Bertini, PSU Module, and Billy Connors, UAF Module), Sponsored by the United States Department of Transportation, September 1 2008 -August 31 2012 total grant funds - \$1,200,000 , UW portion - \$127,710, salary match & \$93,582, cash (TransNow), \$230,324 (USDOT),

Co- Principal Investigator (with Ed McCormack as PI), Truck Based Performance Measures, Sponsored by TransNow and the Washington State Department of Transportation. July 1 2007-October 31, 2009, \$192,000 (TransNow), \$448,000 WSDOT

Principal Investigator, Transportation Northwest: Program Plan for Twentieth Year. Sponsored by the United States Department of Transportation. July 1, 2007 - June 30, 2008. \$1,633,200.

- Principal Investigator, Transportation Northwest: Program Plan for Nineteenth Year. Sponsored by the United States Department of Transportation. July 1, 2006 - June 30, 2007. \$1,720,000.
- Principal Investigator, Transportation Northwest: Program Plan for Last Four Months of Eighteenth Year. Sponsored by the United States Department of Transportation. May 1, 2006 - August 31, 2006. \$115,000.
- Principal Investigator, Transportation Northwest: Program Plan for First Eight Months of Eighteenth Year. Sponsored by the United States Department of Transportation. September 1, 2005 - April 30, 2006. \$665,000.
- Principal Investigator, Development of a Strategic Plan for a Regional Freight Mobility Center, UW Campus Branch. Sponsored by the United States Department of Transportation. Received August 2005. \$150,000 (Full amount for Center, all 3 campus branches, \$500,000.)
- Principal Investigator, Transportation Northwest: Program Plan for Seventeenth Year. Sponsored by the United States Department of Transportation. September 1, 2004-August 31, 2005. \$952,000.
- Principal Investigator, Transportation Northwest: Program Plan for Sixteenth Year. Sponsored by the United States Department of Transportation. September 1, 2003-August 31, 2004. \$906,000.
- Principal Investigator (with Yinhai Wang as Co-PI), Improving Dual-Loop Truck (and Speed) Data: Quick Detection of Malfunctioning Loops and Calculation of Required Adjustments. Sponsored by TransNow and the Washington State Department of Transportation. September 1, 2003-August 31, 2005, \$73,900 (TransNow), \$90,000 WSDOT
- Co-Principal Investigator (with Yinhai Wang as PI), Developing Accurate Real-Time Vehicle-Classification Data with WSDOT Video Cameras. Sponsored by TransNow and the Washington State Department of Transportation. September 1 2003-August 31, 2005, \$73,900 (TransNow), \$90,000 WSDOT
- Principal Investigator, Transportation Northwest: Program Plan for Fifteenth Year. Sponsored by the United States Department of Transportation. September 1, 2002-August 31, 2003. \$916,300.
- Principal Investigator, Improved System for Collecting Real-Time Truck Data from Dual Loop Detectors. Sponsored by TransNow and the Washington State Department of Transportation. September 1, 2001-August 31, 2003. \$120,000 (TransNow), \$50,000 WSDOT.
- Principal Investigator, Transportation Northwest: Program Plan for Fourteenth Year. Sponsored by the United States Department of Transportation. September 1, 2001-August 31, 2002. \$870,200.
- Principal Investigator, Transportation Northwest: Program Plan for Thirteenth Year. Sponsored by the United States Department of Transportation. September 1, 2000-August 31, 2001. \$862,300.

Principal Investigator, Evaluation of Dual-Loop Errors in Measurement of Freeway Traffic Composition. Sponsored by TransNow and the Washington State Department of Transportation. September 1, 1999-August 31, 2001. \$46,672 (TransNow), \$20,000 WSDOT.

Principal Investigator, Transportation Northwest: Program Plan for Twelfth Year. Sponsored by the United States Department of Transportation. September 1, 1999-August 31, 2000. \$890,000.

Principal Investigator, Transportation Northwest: Program Plan (Remaining Plan Components) for Eleventh Year. Sponsored by the United States Department of Transportation. September 1, 1998-August 31, 1999. \$500,000.

Principal Investigator, Beyond Congestion Points: Freight Infrastructure System Investment Evaluation, Sponsored by Washington State Department of Transportation, APEC, Ports of Seattle and Tacoma, American Trucking Association. June 1998 - August 2000. \$136,067 [\$38,963, WSDOT, \$40,000, APEC, \$37,500 Kent Chamber of Commerce. (Matched by \$110,215 from TransNow)

Principal Investigator, Transportation Northwest: Program Plan (Education Component Only) for Eleventh Year. Sponsored by the United States Department of Transportation. September 1, 1998-August 31, 1999. \$500,000.

Principal Investigator, Transportation Northwest: Program Plan for Tenth Year. Sponsored by the United States Department of Transportation. September 1, 1997-August 31, 1998. \$1,000,000.

Principal Investigator, Transportation Northwest: Program Plan for Ninth Year. Sponsored by the United States Department of Transportation. September 1, 1996-August 31, 1997. \$1,000,000.

Principal Investigator, Estimating Link Travel Time with a Video Image Tracking System, Sponsored by Transportation Northwest (TransNow). September 1, 1995-August 31, 1997. (\$156,000).

Principal Investigator, Transportation Northwest: Program Plan for Eighth Year. Sponsored by the United States Department of Transportation. September 1, 1995-August 31, 1996. \$1,000,000.

Principal Investigator, Transportation Northwest: Program Plan for Seventh Year. Sponsored by the United States Department of Transportation. September 1, 1994-August 31, 1995. \$1,000,000.

Principal Investigator, Video Image Processing for Freeway Monitoring and Control: Evaluation of the Mobilizer. Sponsored by the Washington State Department of Transportation. September 1, 1993-August 31, 1995. \$100,000. (Matched by \$108,550 from TransNow)

Principal Investigator, Transportation Northwest: Program Plan for Sixth Year. Sponsored by the United States Department of Transportation. September 1, 1993-August 31, 1994. \$1,000,000.

Principal Investigator, **TR**ansportation Civil Engineering (TRAC) Careers Outreach Project, Sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and the Washington State Department of Transportation, August 1, 1993-June 30, 1995. \$35,000 [AASHTO - \$20,000, WSDOT - \$15,000]. (Matched by \$14,000 from TransNow)

Principal Investigator, , Transportation Northwest: Program Plan for Fifth Year. Sponsored by the United States Department of Transportation. September 1, 1992-August 31, 1993. \$1,000,000.

Principal Investigator, Forecasting Internal Transit Trips. Sponsored by METRO Transit, September 1, 1992-August 31, 1993. \$22,750. (Matched by \$27,650 from TransNow)

Principal Investigator, **TR**ansportation Civil Engineering (TRAC) Careers Outreach Project, Sponsored by the American Association of State Highway and Transportation Officials , September 1, 1992- August 31, 1993. \$20,000

Principal Investigator, Impact of HOV Improvements on NE Pacific Street. Sponsored by METRO Transit, January 1, 1992-December 31, 1992. \$10,000. (Matched by \$7000 from TransNow)

Principal Investigator, Transportation Northwest: Program Plan for Fourth Year. Sponsored by the United States Department of Transportation. September 1, 1991-August 31, 1992. \$1,000,000.

Principal Investigator,. Improved Error Detection and Incident Detection Using Prediction Techniques and Video Imaging. Sponsored by the Washington State Department of Transportation. September 1, 1991-August 31, 1993. \$60,000. (Matched by \$43,979 from TransNow)

Principal Investigator,. Improved Congestion Prediction Algorithm. Sponsored by the Washington State Department of Transportation. October 1, 1991-September 30, 1993. \$75,000. (Matched by \$52,500 from TransNow)

Co- Principal Investigator with Daniel Dailey and Mark Haselkorn, Improved Estimates of Travel Time from Real Time Inductance Loop Sensors, Sponsored by the Washington State Department of Transportation, September 1, 1991-August 31, 1992. \$37,802. (Matched by \$26,462 from TransNow)

Principal Investigator, HOV Improvements for Signalized Arterials. Sponsored by the Washington State Department of Transportation and METRO Transit. September 1, 1990-August 31, 1993. \$130,000 [\$111,955 - WSDOT, \$18,045 - METRO]. (Matched by \$42,025 from TransNow)

Principal Investigator, Forecasting Freeway and Ramp Data for Improved Real-Time Control and Data Analysis. Sponsored by the Washington State Department of Transportation, October 1, 1990-September 30, 1991. \$90,000.

Principal Investigator, Transportation Northwest: 3rd Year Program Plan. Sponsored by the United States Department of Transportation. September 1, 1990-August 31, 1991. \$984,000.

Co- Principal Investigator with Daniel Dailey and Mark Haselkorn, Travel Time Estimation Using Cross Correlation Techniques, Sponsored by the Washington State Department of Transportation, September 1, 1990-August 31, 1991. \$44,321. (Matched by \$28,146 from TransNow)

Principal Investigator, Predictive Algorithm Improvements for a Real-Time Ramp Control System. Sponsored by the Washington State Department of Transportation, September 1, 1989-August 31, 1990. \$28,000. (Matched by \$19,600 from TransNow)

Principal Investigator, Transportation Northwest: 2nd Year Program Plan. Sponsored by the United States Department of Transportation. September 1, 1989-August 31, 1990. \$500,000.

Principal Investigator, Department of Civil Engineering University of Washington. Freeway Data Base Storage and Loop Detector Data Validity. Sponsored by the Washington State Department of Transportation, April 1988-December 1989. \$123,500.

Principal Investigator, Department of Civil Engineering University of Washington, Transportation Northwest: A USDOT Regional Transportation Center Proposal - Program Plan for First Year. Sponsored by the United States Department of Transportation. September 30, 1988-September 30, 1989. \$500,000.

Principal Investigator, Department of Civil Engineering University of Washington. Ramp Control Volume Forecasts. Sponsored by the Washington State Department of Transportation, March 1988-January 1989. \$70,000.

Principal Investigator, Department of Civil Engineering University of Washington. Dynamic Models for the Effective Use of Automatic Traffic Counts for Estimating and Updating Trip Patterns. Sponsored by the National Science Foundation, January 1987-December 1989. \$159,920.

Principal Investigator, Department of Civil Engineering University of Washington, Local Access Cable TV as a Driver Information Tool. Sponsored by the Washington State Department of Transportation, April 1987-May 1988. \$7,513.

Principal Investigator, Department of Civil Engineering University of Washington. SR520 Surveillance and Control - Phase II. Sponsored by the Washington State Department of Transportation, September, 1985 - October, 1986. \$25,000.

Principal Investigator, Department of Civil Engineering University of Washington. Telecommunications Link Implementation. Sponsored by Washington State Department of Transportation, August, 1985 - August, 1986. \$35,000.

Principal Investigator, Department of Civil Engineering University of Washington. Impacts of Freeway Surveillance and Control on Eastbound SR 520. Sponsored by Washington State Department of Transportation, August, 1984 - September, 1985. \$35,000.

Principal Investigator, Department of Civil Engineering University of Washington. Multivariate Time Series Analysis and Forecasting of Traffic Impacts and Trip Tables. Sponsored by National Science Foundation, September 1, 1983, to February 28, 1985. \$109,000.

Principal Investigator, Department of Civil Engineering University of Washington. Telecommunication Link with the Freeway Surveillance Center. Sponsored by Washington State Department of Transportation. September 1, 1983, to June 30, 1984. \$14,000, with \$7,730 extension granted through December 31, 1984.

Principal Investigator, Department of Civil Engineering University of Washington. Statistical Analysis of the Impacts of Traffic Interventions. Sponsored by the National Science Foundation, January 1982, to June, 1983. \$45,000.

Principal Investigator, Department of Civil Engineering University of Washington. Project to estimate freeway O-D matrices using ramp volume data. Sponsored by the National Science Foundation, April 1980 - October 1981. \$36,000.

Principal Investigator, Department of Civil Engineering University of Washington. Pilot study to test various modeling approaches for estimating freeway O-D matrices from ramp volumes. Sponsored by Washington State Department of Transportation, Summer and Fall, 1979. \$3,000.

Principal Faculty, Urban Transportation Research and Training Program at the Department of Civil Engineering University of Washington. Project to study the effects of subarea focusing on trip forecasts. Sponsored by Urban Mass Transportation Administration, U. S. Department of Transportation, 1975 to 1977.

Sponsored Research (University of Illinois and Northwestern University)

Project Coordinator, Systems Engineering Department, University of Illinois, Chicago Circle Campus. Project to develop an interactive transportation analysis system (INTRANS). Sponsored by the Urban Mass Transportation Administration, U. S. Department of Transportation, September 1970 to August 1971. (With Yehuda Gur, September 1971 - August 1972).

Major Contributor, College of Engineering, University of Illinois, Chicago Circle Campus. Project to develop a student flow model for a study on the regional role of engineering education. Sponsored by the National Science Foundation, 1971-72.

Major Contributor, Transportation Center, Northwestern University, Evanston, Illinois. Project to develop a conceptual framework of transportation planning. Sponsored by the U. S. Bureau of Public Roads, 1964-1966.

Project reports (reports to sponsors)

Note: Does not include reports that were prepared for sponsors but were not published for distribution (e.g. reports to NSF, etc.).

Wang, Yin Hai, Nancy L. Nihan, Ryan P. Avery and Guohui Zhang. (2006), Improving Truck and Speed Data using Paired Video and Single-Loop Sensors. Transportation Northwest (TransNow) Research Report TNW06-01 and WSDOT Research Report WA-RD 656.1.

- Nihan, Nancy L., Yin Hai Wang, and Patikhom Cheevarunothai. (2006), Improving Dual-Loop Truck (and Speed) Data: Quick Detection of Malfunctioning Loops and Calculation of Required Adjustments. Transportation Northwest (TransNow) Research Report TNW06-02 and WSDOT Research Report WA-RD 647.1.
- Nihan, Nancy L., Yin Hai Wang, and Xiaoping Zhang (2005), Improved Loop Detection System for Collecting Real-Time Truck Data, Transportation Northwest (TransNow), TNW05-02.
- Nihan, Nancy L., and Kevin N. Chang (2004), An Examination of Regional Freight Mobility in Washington State. TNW03-04.
- Nihan, Nancy L., Xiaoping Zhang, and Yin Hai Wang (2002), Evaluation of Dual-Loop Data Accuracy Using Video Ground Truth Data, TransNow/WSDOT Joint Report, TNW02-02, WA-RD 535.1.
- Nihan, Nancy L., Karl Westby and Robert Jaeger, (2001) TSHIPS, Transportation Shipping, Harmonization and Integration Planning Services, Transportation Northwest (TransNow), TNW01-03.
- Nihan, Nancy L. and Christa Crane (1999), Video Image Processing with the Mobilizer: An Analysis of Travel Time, Transportation Northwest, TNW99-09.
- Nihan, Nancy L. and Scott S. Washburn, (1998) Estimating Link Travel Time with a Video Image Tracking System, Transportation Northwest, TNW98-03, 85 pp.
- Nihan, Nancy L. (1995) Video Image Processing for Freeway Monitoring and Control: Evaluation of the Mobilizer, Washington State Department of Transportation and Transportation Northwest, TNW95-03, WA-RD 398.1, 170 pp.
- Nihan, Nancy L. (1995) Freeway Congestion Prediction, Washington State Department of Transportation and Transportation Northwest TNW 95-02, WA-RD 381.1, 86 pp.
- Nihan, Nancy L. and M. Wong (1995) Improved Error Detection Using Prediction Techniques and Video Imaging, Washington State Department of Transportation and Transportation Northwest TNW 95-01, WA-RD 386.1, 141p.
- Nihan, Nancy L. (1993) An Evaluation of a Recursive Microscopic Model for Forecasting Internal Transit Trips, Metro Transit and Transportation Northwest, TNW93-04, 137 pp.
- Dailey, Dan J., Mark P. Haselkorn, and Nancy L. Nihan, (1993) Improved Estimates of Travel Time from Real Time Inductance Loop Sensors, Washington State Department of Transportation, WA-RD 292.1.
- Nihan, Nancy L., J.R. Davis, L.O. Rubstello, and H.C. Chen (1993) HOV Improvements on Signalized Arterials in the Seattle Area, Washington State Transportation Center/Transportation Northwest TNW 93-10, 4 vol., WA-RD 301.1, WA-RD 301.2, WA-RD 301.3, WA-RD 301.4
- Nihan, Nancy L. (1993) Forecasting Freeway and Ramp Data for Improved Real-Time Control and Data Analysis, TNW93-11, 5 vols., WA-RD 288.1, WA-RD 288.2, WA-RD 288.3, WA-RD 288.4, WA-RD 288.4, WA-RD 288.5

- Nihan, Nancy L. (1992) A Study of the Planned NE Pacific Street HOV Facility, Metro Transit and Transportation Northwest, TNW97-11, 48 pp.
- Nihan, Nancy L. and D.B. Berg (1991) Predictive Algorithm Improvements for a Real-Time Ramp Control System, Washington State Dept. of Transportation, WA-RD 213.1, 49p.
- Dailey, F.J., M.P. Haselkorn, and Nancy L. Nihan (1991) Travel Time Estimation Using Cross Correlation Techniques, Transportation Northwest TNW 91-02, 42p.
- Nihan, Nancy L., L.N. Jacobson, J.D. Bender, and G.A. Davis(1990) Freeway Database Storage and Loop Detector Validity, Transportation Northwest and Washington State Department of Transportation, TNW 90-13, WA-RD 208.1, 77p.
- Nihan, Nancy L. and G.W. Kirkemo (1988) Driver Information Services: the Feasibility of Using Local Access Cable TV, Washington State Dept. of Transportation, WA-RD 159.1, 68p.
- Nihan, Nancy L. (1987) Telecommunications Link Implementation, Washington State Dept. of Transportation, WA-RD 109.1, 47p.
- Nihan, Nancy L. (1987) Impacts of Freeway Surveillance and Control on Eastbound SR 520, Washington State Dept. of Transportation, WA-RD 99.1, 79p.
- Nihan, Nancy L. (1984) Telecommunications Link, Washington State Dept. of Transportation, WA-RD 63.1, 65p.
- Nihan, Nancy L. (1979) Use of Volume Data to Reproduce Ramp-to-Ramp Freeway Trip Patterns: a Pilot Study, Washington State Dept. of Transportation, out of print.
- Nihan, Nancy L. (1978) Impacts of Subarea Focusing on Trip Forecasts, Urban Mass Transportation Administration, out of print.
- Nihan, Nancy L. and Edward K. Morlok (1967), A Planning Model for Multiple Mode Transportation System Operation, United States Bureau of Public Roads, out of print.
- Gur, Y. and Nancy L. Nihan (1972), INTRANS: An Interactive Transportation Analysis System, Urban Mass Transportation Administration, out of print.

Invited Lectures and Seminars

“12 Lessons Learned from 20 Years of Managing TransNow \$\$\$”, ADVANCE Junior Faculty Workshop on Budget Management, University of Washington, March 3, 2008.

Numerous presentations on TransNow and its activities to local, state, and national organizations including the 6 original consortium universities (UAF, UI, OSU, PSU, WSU, and UW), other universities, USDOT Center Director’s meetings, USDOT Administrations (RITA [formerly RSPA], FHWA, FTA [formerly UMTA]), Burlington Northern Railroad, Oregon State DOT, Washington State DOT, Idaho Department of Transportation, Puget Sound Regional Council (PSRC), and the Region X Consortium UTC and state DOT members, June, 1992 - present.

- “TransNow Regional Center, Accomplishments and Fifth Year Program Plan,” presented at USDOT Region X Center Plan Review, Seattle, May 1992.
- “The USDOT's University Transportation Centers Program, Region X Overview” presented to the Transportation Council, PSRC, Seattle, WA, February 1992.
- “Predictive Algorithms of Traffic Flow,” presented to the seminar on IVHS Research, University of Washington, Seattle, WA., February 7, 1991.
- “Detector Data Validity,” presented to the seminar on IVHS Research, University of Washington, Seattle, WA., February 7, 1991.
- “Transportation Research in the Northwest Universities’ Consortium”, presented at the University of Washington Corporate Day, 1989.
- “Estimating the Effects of Ramp Control Strategies on Freeway Travel Demand and Level of Service,” Invited paper, International Institute of Forecasters, Montreal, Canada, June 1985.
- “Traveler Response to Freeway Ramp Controls”, Invited Paper, International Institute of Forecasters, Montreal, Canada, June, 1985.
- “TransNow Regional Center, Accomplishments and Fourth-Year Program Plan,” presented at USDOT Region X Center Review, Seattle, May 1991.
- “TransNow Regional Center, Accomplishments and Third-Year Program Plan,” presented at USDOT Region X Center Review, Seattle, May 1990.
- “Detector Data Validity”, 1-day session of FAME presentations at PSCOG, Seattle, WA, 1989.
- “Bottleneck Forecasting Algorithm”, 1-day session of FAME presentations at PSCOG, Seattle, WA, 1989.
- “HOV Improvements on Signalized Arterials”, 1-day session of FAME presentations at PSCOG, Seattle, WA, 1989.
- “Forecasting Freeway and Ramp Data for Improved Real-Time Control and Data Analysis”, 1-day session of FAME presentations at PSCOG, Seattle, WA, 1989.
- “TransNow Regional Center, Accomplishments and Second-Year Program Plan,” presented at USDOT Region X Center Review, Washington D.C., July 1989.
- “Highway Advisory Radio (H.A.R.),” Washington State DOT, Olympia, WA, 1988.
- “Analysis of Large Truck Accidents in Washington,” Washington State DOT, Olympia, WA, 1988.

“TransNow Regional Center, Program Plan and Structure,” presented at USDOT Center Directors' Meeting, Washington D.C., September 1988.

“Fundamental Research on Transportation System Characteristics and Operations”, Invited Participant, NSF-Sponsored Conference on Transportation Research, Northwestern University, Evanston, IL. March, 1985. Proceedings published in special issue of Transportation Research, Vol. 19A, No. 5/6, September/November, 1985.

Presentations Given at Conferences

With Ryan P Avery, Guohui Zhang and Yinhai Wang. “An Investigation into Shadow Removal from Traffic Images.” 86th Annual Meeting of the Transportation Research Board, Washington, D.C., (paper presented by Guohui Zhang), January 2007.

With Patikhom Cheevarunothai and Yinhai Wang. “Using Dual-Loop Event Data to Enhance the Accuracy of Truck Data.” 86th Annual Meeting of the Transportation Research Board, Washington, D.C., (paper presented by Patikhom Cheevarunothai) January 2007.

With Patikhom Cheevarunothai and Yinhai Wang. "Identification and Correction of Dual-Loop Sensitivity Problems." 85th Annual Meeting of the Transportation Research Board, Washington D.C., (paper presented by Patikhom Cheevarunothai) January 2006.

With Jianyang Zheng, Yinhai Wang and Mark Hallenbeck. "Extracting Roadway Background Image: a Mode-Based Approach." 85th Annual Meeting of the Transportation Research Board. Washington D.C., (paper presented by Jianyang Zheng), January 2006.

With Xiaoping Zhang and Yinhai Wang. "A Robust Algorithm for Improved Dual-Loop Detection on Freeways." 85th Annual Meeting of the Transportation Research Board, Washington D.C, (paper presented by Xiaoping Zhang - poster session) January 2006.

With Patikhom Cheevarunothai and Yinhai Wang, "Development of Advanced Loop Event Data Analyzer (ALEDA) for Investigations of Dual-Loop Detector Malfunctions." 13th World Congress Of Intelligent Transportation Systems, San Francisco, CA, (paper presented by Patikhom Cheevarunothai) November 2005.

With Jianyang Zheng and Yinhai Wang, “Data Collection with GPS under Forest Canopies.” IEEE International Conference on Networking, Sensing, and Control. (paper presented by Yinhai Wang), March 2005.

With Kevin Chang and Matthew Nolan, “Measurement of Neighborhood Traffic Safety Benefits Using Real-Time Driver Feedback Technology”, 84th Annual Meeting of the Transportation Research Board Washington D.C., (paper presented by Kevin Chang), January 2005

With Xiaoping Zhang and Yin Hai Wang, “Improved Dual Loop Detection System for Collecting Real-Time Truck Data”, 84th Annual Meeting of Transportation Research Board, Washington D.C., (paper presented by Xiaoping Zhang), January 2005

With Patikhom Cheevarunothai and Yin Hai Wang, “Development of an Affordable Loop Detector Simulator (LOOPSIM) for In-Laboratory Traffic Research and Training”, 84th Annual Meeting of the Transportation Research Board Washington D.C., (paper presented by Patikhom Cheevarunothai – poster session), January 2005

With Ryan P. Avery and Yin Hai Wang, “A Region Growing Algorithm for Estimating Freeway Traffic Speed from Single Loops.” 84th Annual Meeting of the Transportation Research Board, Paper 05-2045. (paper presented by Ryan Avery – poster session), January 2005.

With Jianyang Zheng, Yin Hai Wang, and Mark Hallenbeck, “Detecting Cycle Failures at Signalized Intersections Using Video Image Processing,” 84th Annual Meeting of the Transportation Research Board, (paper presented by Jianyang Zheng – poster session), January 2005.

With Yin Hai Wang, “Dynamic Estimation of Freeway Speed Using Single-Loop Measurements.” 8th World Multi-Conference on Systemics, Cybernetics and Informatics, (paper presented by Yin Hai Wang), July 2004.

With Xiaoping Zhang and Yin Hai Wang, “Monitoring a Freeway Network in Real-Time Using Single-Loop Detectors: System Design and Implementation”, 83rd Annual Meeting of Transportation Research Board, Washington D.C., (paper presented by Xiaoping Zhang), January 2004

With Yin Hai Wang, “Quantitative Analysis of Angle-Accident Risk at Signalized Intersections.” 9th World Conference on Transport Research, Seoul, Korea (paper presented by Yin Hai Wang), Oct. 2003.

With Xiaoping Zhang and Yin Hai Wang, “Investigation of Dual-Loop Errors.” 13th Annual Meeting of ITS America (paper presented by Xiaoping Zhang), May 2003.

With Jianyang Zheng and Yin Hai Wang, “Tracking Vehicles: Is GPS a Sufficient Solution?” 13th Annual Meeting of ITS America (paper presented by Yin Hai Wang), May 2003.

With Kevin Chang and Paulette Norman "Radar Speed Sign Effectiveness on Neighborhood Streets", Washington State ITE Conference, Yakima WA (paper presented by Kevin Chang), June 9-10, 2003

With Yin Hai Wang, “Can Single-Loop Detectors Do the Work of Dual-Loop Detectors?”, 82nd Annual Meeting of Transportation Research Board, Washington D.C., (paper presented by Yin Hai Wang), January 2003

With Xiaoping Zhang, Yin Hai Wang and, Mark Hallenbeck, “Development of a System to Collect Loop Detector Event (Individual Vehicle) Data”, 82nd Annual Meeting of

Transportation Research Board, Washington D.C., (paper presented by Xiaoping Zhang), January 2003

With Kevin Chang, and Barbara Ivanov, "Assessing the Institutional Infrastructure of Regional Freight Mobility", Annual Meeting, Institute of Transportation Engineers, District 6, Palm Desert, CA. (paper presented by Kevin Chang), July 11-14, 2002.

With Xiaoping Zhang and Yin Hai Wang, "Monitoring Freeway Congestion Using Single Loop Measurements", the 12th Annual Meeting of ITS America, May 2002 (paper presented by Yin Hai Wang).

With Yin Hai Wang, "Quantitative Analysis on Angle-Accident Risk at Signalized Intersections ", the 9th World Conference on Transport Research, July 10, 2001, Seoul (paper presented by Yin Hai Wang).

With Yin Hai Wang, "Estimating the Risk of Collisions Between Bicycles and Automobiles at Signalized Intersections", the 81st Annual Meeting, Transportation Research Board, Washington DC, Jan. 2002. (paper presented by Yin Hai Wang)

With Yin Hai Wang, "A Robust Method of Filtering Single-Loop Data for Improved Speed Estimation", the 81st Annual Meeting, Transportation Research Board, Washington DC, Jan. 2002. (paper presented by Yin Hai Wang)

"University Research and Training: Developing the Transportation Leaders of Tomorrow and the Day After Tomorrow", Pacific Northwest Freight Conference, *Moving Our Economy*, held in Seattle, October 5-7, 2001.

With Yin Hai Wang, " Dynamic Estimation of Freeway Large Truck Volume Based on Single Loop Measurements", the 80th Annual Meeting, Transportation Research Board, Washington DC, January 2001. (paper presented by Yin Hai Wang)

With Yin Hai Wang, "Freeway Traffic Speed Estimation Using Single Loop Outputs," 79th Annual Meeting, Transportation Research Board, Washington DC, January 2000. (paper presented by Yin Hai Wang)

With Scott Washburn, "Estimating Link Travel Time with a Video Image Tracking System," 78th Annual Meeting, Transportation Research Board, Washington DC, January 1999. (paper presented by Scott Washburn)

With Scott Washburn and Bruce Newman, "Logit and Probit Analyses of Violators on HOV Freeway Ramp Bypasses," Western ITE Annual Meeting, June 1997. (paper presented by Scott Washburn)..

With Scott Washburn, "Using Voice Recognition to Collect License Plate Data", 76th Annual Meeting, Transportation Research Board, Washington DC, January 1997. (paper presented by Scott Washburn)

With Mark Gabel, "Analysis of Effectiveness and Demand for Passenger-Only Ferry Service in the Puget Sound Region," Annual Meeting Transportation Research Board, 1993. (paper presented by Mark Gabel)

"Use of Video-Imaging Systems in Freeway Surveillance, Control, and Modeling," Western ITE Annual Meeting, Semi-Ah-Moo, WA, June 1992.

"TransNow Past, Present, and Future," presented at the Fourth Annual Transportation Northwest Advisory Board Conference and Public Forum, Seattle, June 1992.

With Mohammad Hamed, "A Fixed Point Approach to Estimating Freeway O-D Matrices and the Effect of Erroneous Data on Estimate Precision," Annual Meeting, Transportation Research Board, 1992 (paper presented by Mohammad Hamed)

"Women and Diversity", USDOT Conference on University Transportation Centers, Washington, DC, 1991.

"TransNow Third Year Activities", presented at the Third Annual Transportation Northwest Advisory Board Conference, Seattle, June 1991.

With Gary Davis "A Stochastic Approach to the Estimation of Origin-Destination Parameters from Time Series of Traffic Counts," Transportation Research Board Annual Meeting, Washington DC, January 1991 (paper presented by Nancy Nihan)

"HOV Improvements on Signalized Arterials," presented at annual ITE meeting, Orlando, FL, August 1990. Appears in Proceedings (1990 Compendium of Technical Papers, ITE, pp 14-17).

"Impacts of a Bottleneck Forecasting and Ramp Metering Algorithm on Freeway Flow," presented at annual ITE meeting, Orlando, FL, August 1990. Appears in Proceedings (1990 Compendium of Technical Papers, ITE, pp).

"TransNow Second-Year Activities," presented at the Second Annual Transportation Northwest Advisory Board Conference, Seattle, June 1990.

With Leslie Jacobson and Jeffrey Bender, "Detecting Erroneous Loop Detector Data in Freeway Traffic Management Systems," Annual Meeting Transportation Research Board, 1990 ,(paper presented by Leslie Jacobson).

With Gary Davis, Mohammad Hamed, and Leslie Jacobson, "Adaptive Forecasting of Freeway Traffic Congestion," Annual Meeting , Transportation Research Board, 1990, (paper presented by Gary Davis).

"TransNow First Year Activities," presented at the First Annual Transportation Northwest Advisory Board Conference, Seattle, June 1989.

With Gary Davis., Mohammad Hamed, and Les Jacobson, "Adaptive Forecasting of Freeway Traffic Congestion," Appears in Proceedings First International Conference

on Applications of Advanced Technologies in Transportation Engineering, San Diego, California, sponsored by ASCE and Caltrans, February 5-8, 1989, (paper presented by Gary Davis).

“Impacts of TSM Improvements on Eastbound SR-520,” paper presented at the 67th Annual Meeting of the Transportation Research Board, Washington D.C., January 1988.

“Knowledge-Based Expert Systems in Transportation Planning and Research: An Initial Assessment,” with Yeh, Che-I, Stephen G. Ritchie, and Jerry B. Schneider, Annual Meeting of the Transportation Research Board, Washington D.C., January 1987. (Paper presented by Ritchie.)

“Estimating the Effects of Ramp Control Strategies on Freeway Travel Demand and Level of Service,” Invited paper, International Institute of Forecasters, Montreal, Canada, June 1985.

“Traveler Response to Freeway Ramp Controls”, Invited Paper, International Institute of Forecasters, Montreal, Canada, June, 1985.

With Gary Davis, “Impacts of Freeway Ramp Controls”, Transportation Research Board Annual Meeting, Washington D.C., January, 1984 (paper presented by Nancy Nihan)

“A Gravity-Based Freeway Trip Model,” Transportation Research Board Annual Meeting, Washington D.C., January 1982.

With Kjell Holmesland, “Use of Box-Jenkins Technique for Impact Analysis,” Transportation Research Board, Washington D.C., January 1981 (paper presented by Nancy Nihan)

“Demonstration of Subarea Focusing,” Transportation Research Board Annual Meeting, Washington, D.C., January 1977.

“Trip Distribution and Subarea Focusing,” ASCE Meeting, Denver, November 1975.

Professional Society Membership

American Society of Civil Engineers (ASCE)

American Road & Transportation Builders Association (ARTBA)

Council of University Transportation Centers (CUTC)

Intelligent Transportation Systems of America (ITSA)

International Institute of Transportation Engineers (ITE)

Transportation Research Board (TRB)

Women’s Transportation Seminar (WTS)

Professional Society and Other Service

Member, Board of Advisors (BOA), Oregon Transportation Research and Education Consortium (OTREC), October 2007 - present

Member, Board of Directors, American Road & Transportation Builders Association (ARTBA) September 2005 – present.

Member, Research and Education Division, American Road & Transportation Builders Association, May 2002 – present.

Member, Advanced Traffic Management Systems (ATMS) Committee, ITS America (formerly IVHS America), 1992 - present.

Member, Subcommittee on Education and Training, ITS America (Formerly IVHS America), 1992 - present.

Member, Council of University Transportation Centers (CUTC), 1990 – present.

Member, Curriculum Committee, National Transportation Certificate Program, Sponsored by FHWA, Regional UTCs, and Other Regional and National Transportation Organizations, April 2008 – present.

Chair, Task Force on Research and Education Policy, American Road & Transportation Builders Association, April 2006 – September 2007.

Treasurer, Council of University Transportation Centers (CUTC), November 2005– November 2006.

Chair, Finance Committee, Council of University Transportation Centers (CUTC), November 2005– November 2006.

President, Research and Education Division, American Road & Transportation Builders Association (ARTBA), September 2005 – September 2006.

Member, Executive Committee, American Road & Transportation Builders Association (ARTBA), September 2005 – September 2006.

Vice President, Research and Education Division, American Road & Transportation Builders Association (ARTBA), September 2004 – September 2005.

Member, Board of Directors, Research and Education Division, American Road & Transportation Builders Association (ARTBA), September 2003 – September 2006

Member, Board of the Research, Education and Training Reauthorization Coalition (RETRC), September 2002 – March 2006.

Board Member, Board of Directors, Council of University Transportation Centers (CUTC), June 2004 – November 2005.

Member, Investment/Spending Task Force, Council of University Transportation Centers (CUTC), January 2005 – September 2005.

Vice President, Research and Education Division, American Road & Transportation Builders Association (ARTBA), September 2004 – August 2005.

Member, Committee on Transportation Education and Training, Transportation Research Board, January 1999 – January 2005.

Member, Societal, Institutional and Environmental Issues (SIE) Committee, ITS America (formerly IVHS America), 1997 – 2005.

Member, Editorial Advisory Board, *Journal of Advanced Transportation*, July 1990 – 2004.

Member, ITS Council (formerly IVHS Council), International Institute of Transportation Engineers (ITE), 1992 – 2000.

Member, Transportation Education Council, ITE, 1989 – 1999.

Chair, Research Subcommittee, Committee on Freeway Operations, Transportation Research Board, May 1991 – July 1998.

Member, Institutional Issues Committee, ITS America, 1992 - 1997.

Member, Editorial Advisory Board, *Transportation Research*, May 1991 - September 1996.

Chair, Student Chapter Committee, International Institute of Transportation Engineers (ITE), September 1991 - September 1995.

Member, Publications Subcommittee, Committee on Freeway Operations, Transportation Research Board, September 1987 - May 1991.

University Liaison, Institute of Transportation Engineers, Washington Chapter, 1984 - 1991.

Member, Steering Committee, National Transportation Round Table, USDOT, July 1989 - May 1990.

Host and Panel Moderator, USDOT Seminar on National Transportation Policy, Seattle, Washington, August 1989.

Member of NSF review team for University Research Initiation Grants (URI), February, 1982.

Chair of review team for NSF Local Instruction (LOCI) programs - 1979 and 1980.

Member of other review teams for NSF LOCI programs - 1979 and 1980.

Member of review teams for NSF (ISEP) programs - 1979 and 1980.

Reviews Made

Papers reviewed for *Transportation Research Record*, *Transportation Research*, *ASCE Journal of Transportation*, *Transportation Quarterly*, *Transportation Science (ORSA)*, *Journal of Advanced Transportation* and the *Scientific Committee for the Fourth International Conference on Civil Engineering*. Over 200 papers reviewed.

Proposals reviewed for the National Science Foundation (ISEP, LOCI, and URI Programs), the University Transportation Centers Program, the Washington State Department of Transportation, and the University of Washington. Over 320 proposals reviewed.

Applications reviewed for WSDOT/TransNow Fellowships. Finalist applicants interviewed and rated in a daylong selection process each year of the program. Over 100 applications reviewed.

Teaching (courses taught and courses financed at the University of Washington)

Notes:

1. **Half-Time Required Teaching Load Since 1988.** From September 1988-present, I have had a 50% course load to allow a 50% time commitment to my responsibilities as TransNow Director. Currently, a 50% teaching load is an average of 1½ courses per year. This was reduced to 1 course per year during the period that I also served as division head.
2. **Normal Load Taught Prior to Becoming UTC Director.** From September 1982 - September 1988 I taught the normal departmental load of 5 courses per academic year. From January 1974 - September 1982, I taught 5 or 6 courses per academic year.

Courses Financed

Since the establishment of TransNow's Advanced Institute in September, 1991, I have provided funds each year to cover instruction in several courses in our transportation program including: CEE 410/599, CEE 416/599, CEE 500, CEE 581, CEE 582, CEE 590, CEE591, and . In addition to my own courses, I have financed the instruction of 3-5 additional courses per year for the CEE transportation program.

Additionally, I provided funding for course development of the original core courses in the Global Trade, Transportation, and Logistics Certificate Program.

The table below gives an example summary of courses I have taught and have paid instructors to teach over the past 5-years.

Courses Taught and Additional Course-Instruction Covered - Last 5 Years.

2009-10		
2008-09	CEE410 CEE 500 CEE 416/580 CEE 582 CEE 591	During AY 2007/2008, I was allowed to hire outside instructors for my own courses to free preparation time for expected and significant Center transitions. Consequently, in addition to paying and working with instructors to cover my personal teaching load (CEE 410 [28 students] and CEE 500 [26 students]), I paid for instructors to teach CEE 416/580, CEE 582, and CEE 591
2007-08	CEE 410 CEE 500 CEE 416/580 CEE 591 CEE582	In 2007/2008, I taught CEE 410 (39 students) and CEE 500 (30 students). I also paid instructor salaries, benefits, and overhead to cover the teaching of CEE 416/580, CEE 581, CEE 582 and CEE 591.
2006-07 <u>Sabbatical</u> <u>Year</u>	CEE 410 CEE 591 CEE 582	On Sabbatical Leave. Although I was on sabbatical leave during the 2006/2007 academic year, I still funded instruction (salaries, benefits, and overhead) for three transportation courses (CEE 591, CEE 410, CEE582).
2005-06	CEE 410 CEE 416/580 CEE500 CEE582 CEE591	In 2005/2006 I taught CEE 410 (44 students) and CEE 500 (19 students) and paid instructors for CEE 591, CEE 416/580, and CEE 582. That year I also funded a portion of Professor Turkiyyah's sabbatical to allow him to develop a new course for the Transportation/Construction program.

2004-05	CEE 410 CEE 416/580 CEE 500 CEE582 CEE591	During the 2004-/2005 AY, I personally supervised and financed the instruction of CEE 410 by Ryan Avery, a PhD student in the transportation program and paid for half of the instruction for CEE 500. I also paid instructors to teach CEE 416/580, CEE582, and CEE 591.
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Courses Taught – January 1974 – May 2009.

The table below describes the courses I have taught at the UW with corresponding enrollment numbers and student course evaluations (averages of questions, 1-4, on the standard UW course evaluation forms). Not all of the data were available for earlier years.

Course	Quarter	No. of Students	Course Title	Average of Items 1-4
CEE 410	W10		Traffic Engineering Fundamentals	
CEE 410	W09	28	Traffic Engineering Fundamentals (Provided all class materials and supervised former student, Dustin Rasmussen, to teach course)	3.8
CEE 410	W08	39	Traffic Engineering Fundamentals	3.9
CEE 500	W08	30	Traffic Seminar	NA
Acad. yr	06/07		On Sabbatical	
CEE 410	W06	44	Traffic Engineering Fundamentals	3.85
CEE 500	W06	19	Transportation Seminar	NA
CEE 410	W05	39	Traffic Engineering Fundamentals (Supervised and funded PhD student, Kevin Chang, to teach course)	NA
CEE 500	W05	18	Transportation Seminar	NA
CEE 410/599	W04	30	Traffic Engineering Fundamentals & Surveys	3.93
CEE 500	W04	17	Transportation Seminar	NA
CEE 410/599	A02	19	Traffic Engineering Fundamentals & Surveys	3.90
CETS 590	W02	19	Traffic Systems Operations	3.96
CEE 410	A01	32	Traffic Engineering Fundamentals & Surveys	3.34
CEE 410	A00	25	Traffic Engineering Fundamentals & Surveys	3.45
CETS 511	W00	18	Traffic Systems Operations	3.58
CIVE 410	A99	32	Traffic Engineering Fundamentals & Surveys	3.88
Acad. yr	98/99		On Sabbatical	
CETS 511	W97	8	Traffic Systems Operations	3.17
CIVE 410	A96	32	Traffic Engineering Fundamentals & Surveys	3.60
CETS 511	W96	19	Traffic Systems Operations	3.70

CIVE 410	A95	28	Traffic Engineering Fundamentals & Surveys	3.80
CETS 511	S95	6	Traffic Systems Operations	4.25
CIVE 410	W95	23	Traffic Engineering Fundamentals & Surveys	3.69
CETS 511	W94	15	Traffic Systems Operations	
CIVE 410	A93	33	Traffic Engineering Fundamentals & Surveys	3.65
CETS 511	W93	11	Traffic Systems Operations	4.10
CETS 520	A92	10	TSCE Seminar	NA
CETS 571	A92	8	Analytical Methods in Transportation	3.75
Acad. yr	91/92		On Sabbatical	
CETS 511	W91	21	Traffic Systems Operations	3.94
CIVE 410	A90	30	Traffic Engineering Fundamentals & Surveys	3.84
CETS 520	A90	19	TSCE Seminar	NA
CETS 511	S90	7	Traffic Systems Operations	
CIVE 410	A89	26	Traffic Engineering Fundamentals & Surveys	3.70
CETS 520	A89	16	TSCE Seminar	NA
CETS 511	S89	7	Traffic Systems Operations	4.14
CETS 571	W89	10	Analytical Methods in Transportation	
CIVE 410	A88	30	Traffic Engineering Fundamentals & Surveys	
CIVE 390	S88	51	Civil Engineering Systems	
CETS 571	W88	11	Analytical Methods in Transportation	
CETS 511	W88	7	Traffic Systems Operations	
CIVE 470	A87	27	Urban Transportation Planning and Design	
CIVE 410	A87	21	Traffic Engineering Fundamentals & Surveys	4.06
CETS 511	S87	9	Traffic Systems Operations	
CIVE 471	S87	13	Urban Transportation Demand Forecasting	
CIVE 410	W87		Traffic Engineering Fundamentals & Surveys	
CETS 571	A86		Analytical Methods in Transportation	3.69
CIVE 470	A86		Urban Transportation Planning and Design	3.85
CIVE 471	S86		Urban Transportation Demand Forecasting	
CIVE 412	S86		Traffic Flow Theory	
CETS 571	W86		Analytical Methods in Transportation	
CETS 511	W86		Traffic Systems Operations	
	A85		Sabbatical Leave	
CETS 571	S85		Analytical Methods in Transportation	

CIVE 471	S85		Urban Transportation Demand Forecasting	
	W85, A84		Sabbatical Leave	
CETS 526	S84		Transportation Studies	
CIVE 390	W84		Civil Engineering Systems	
CETS 522	A83		Methodology of Transportation Systems Analysis	
CETS 498	A83		Special Topics: Traffic Simulation & Flow Theory	
CETS 405	A83		Critical Path Methods of Project Scheduling	
CETS 526	S83		Transportation Studies	
ENGR 210	S83		Engineering Statics	
CETS 420	W83		Transportation Modes	
CETS 405	W83		Critical Path Methods of Project Scheduling	
CETS 522	A82		Methodology of Transportation Systems Analysis	
CETC 526	S82		Transportation Studies	
CIVE 390	S82		Civil Engineering Systems	
ENGR 141	S82		Computer Applications to Engineering Problems	
CETC 522	W82		Methodology of Transportation Systems Analysis	
CETC 420	W82		Transportation Modes	
CETC 498	A81		Special Topics: Applied CE Statistics	
CIVE 390	A81		Civil Engineering Systems	
CIVE 526	S81		Transportation Studies	
CIVE 390	S81		Civil Engineering Systems	
ENGR 141	S81		Computer Applications to Engineering Problems	
CETC 522	W81		Methodology of Transportation Systems Analysis	
CETC 498	A80		Special Topics: Applied CE Statistics	
CIVE 390	A80		Civil Engineering Systems	
CETC 526	S80		Transportation Studies	
CETC 405	S80		Critical Path Methods of Project Scheduling	
ENGR 141	S80		Computer Applications to Engineering Problems	
CETC 522	W80		Methodology of Transportation Systems Analysis	
CETC 498	W80		Special Topics	
ENGR 141	A79		Computer Applications to Engineering Problems	
CIVE 390	Su79		Civil Engineering Systems	
CETC 526	S79		Transportation Studies	

CIVE 390	S79		Civil Engineering Systems	
ENGR 141	S79		Computer Applications to Engineering Problems	
CETC 522	W79		Methodology of Transportation Systems Analysis	
CETC 405	W79		Critical Path Methods of Project Scheduling	
	A78		NO TIME SCHEDULE	
CIVE 390	Su78		Civil Engineering Systems	
CETC 526	S78		Transportation Studies	
ENGR 141	S78		Computer Applications to Engineering Problems	
CETC 522	W78		Methodology of Transportation Systems Analysis	
ENGR 141	W78		Computer Applications to Engineering Problems	
CIVE 390	A77		Systems Planning	
CIVE 390	Su77		Systems Planning	
CIVE 526	S77		Transportation Studies	
CIVE 390	S77		Systems Planning	
ENGR 141	S77		Computer Applications to Engineering Problems	
CETC 405	W77		Critical Path Methods of Project Scheduling	
ENGR 141	W77		Computer Applications to Engineering Problems	
	A76		NO TIME SCHEDULE	
CIVE 390	S76		Systems Planning	
CETC 526	S76		Transportation Studies	
	W76		NO TIME SCHEDULE	
	A75		NO TIME SCHEDULE	
CIVE 390	S75		Systems Planning	
CETC 526	S75		Transportation Studies	
	W75		NO TIME SCHEDULE	
	S74		NO TIME SCHEDULE	
	W74		NO TIME SCHEDULE	

Chaired Doctoral Degrees

Jianyang Zheng, PhD, March 2008 (Co-chaired with Yinhai Wang)
 Kaori Fujisawa, until August 2006, (Transferred to Anne Goodchild)
 Patikhom Cheevarunothai, (Co-chaired with Yinhai Wang until August 2006)
 Kevin Chang, August 2005
 Xiaopang Zhang, December 2004
 Karl Westby, March 2004
 Kenneth Johnson, PhC, (on leave)
 Christopher Hunter, August 2000
 Scott Washburn, June 1999
 Morgan Wong, PhC, June 1998
 Mohammed Hamed, PhC, (completed PhD with Mannering)
 Ho Chuan Chen, Mar. 1992
 Gary Davis, December 1989
 Kjell Holmesland, December 1981

Chaired Master Degrees (Thesis)

	Degree	Mo. Year
Steven Cooper	MSCE	Expected Aug. 2010
Hanzhi Ding (co-chaired with Anne Goodchild)	MSCE	Aug. 2006
Naveen Juvva	MSCE	Mar. 2003
Jianyang Zheng	MSCE	Dec. 2003
Janet Hall	MSE	June 2001
Xiaoping Zhang	MSE	Mar. 2001
Christa Crane	MSCE	Dec. 1998
Dawn McIntosh	MSCE	Aug. 1998
Kevin Chang	MSCE	June 1997
Bruce Newman	MSCE	June 1997
Mian Rice	MS	Dec. 1996
Karl Westby	MS	Aug. 1995
Yuen Wong	MSCE	June. 1995
Mark Leth	MSCE	Mar. 1995
Dick Adams	MSE	Dec. 1993
Mark Bandy	MSCE	Aug. 1993
David Oberg	MSCE	Aug. 1993

Jinxiang Ren	MS	Aug. 1993
Chris Hunter	MS	Aug. 1993
Scott Washburn	MSCE	Mar. 1993
Theodore Trepanier	MSCE	Mar. 1992
Iris Cabrera	MSCE	Dec. 1991
Lester Rubstello	MSCE	Dec. 1991
Ken Knutson	MSCE	Aug. 1991
Mark Gabel	MSCE	Aug. 1991
Manish Babla	MSCE	Aug. 1990
Joju Michel	MSCE	Aug. 1990
Jin-De Zhu	MSCE	Aug. 1990
John Davis	MS	Aug. 1990
Venkataraman Shankar	MSCE	Mar. 1990
Jeff Bender	MS	Dec. 1989
Dave Berg	MSCE	Dec. 1989
Ron Lewis	MS	Mar. 1989
Ben Yazici	MSCE	Mar. 1988
Gordon Kirkemo	MS	Dec. 1987
Zorah Zandi	MS	Mar. 1987
Brian Patton	MSCE	Dec. 1985
Saad Al-Mubaiyedh	MSCE	Dec. 1984
Gary Davis	MS	Aug. 1984
Thomas Ashbrook	MS	Dec. 1983
Man-Shek Chung	MSCE	Mar. 1981
Jahangir Baghdanian	MSCE	Mar. 1981
Thomas Hamstra	MSE	June 1981
Terrence Paananen	MSCE	Aug. 1980
Mark Hallenbeck	MSCE	June 1980
Kjell Holmesland	MSCE	June 1978
Gary Norris	MSCE	Dec. 1977
Jacques Lassabliere	MSE	Aug. 1976
Donald Miller	MSCE	Aug. 1975
William Cyders	MS	Aug. 1975
Niva Oghigian	MSE	June 1974
Robert Kochevar	MSE	June 1973

Chaired Master Degrees (Non-Thesis)

	Degree	Mo. Year
Ariel Davis	MS	Expected June 2010
Chuck Meade	MSCE	Expected June 2010
Elizabeth Thomas	MSCE	Expected June 2010
Luan Kunh Nguyen	MSCE	Expected Dec 2009
Yu Q Tang	MSCE	Aug 2009
Chuong Pham	MSCE	Aug 2009
Andrew Natzel	MSCE	June 2009
Chris Mazek	MSCE	Aug 2008
Dustin Rasmussen	MSCE	Aug 2008
Tsit Lam	MSCE	June 2008
Massoud Kayanda	MSCE	June 2008
Philip Corbett	MSCE	June 2005
Justin Hughes	MS	June 2005
Ted Bailey	MSCE	June 2004
Crystal Benjamin	MS	On leave
Brant Lyerla	MS	Aug 2003
Brian Dearing	MSCE	June 2003
Karen Hill	MSCE	June 2003
Kristin Pedersen	MSCE	Aug 2002
Monica Reyes	MSCE	June 2002
Jon Pascal	MS	June 2001
Kurt Watanabe	MSCE	June 2001
Lewis Venard	MSCE	June 2000
Lawrence Frostad	MSCE	June 1999
Brian Dobbins	MSCE	June 1999
Casey Liles	MSCE	June 1999
Sielen Namdar	MSCE	Aug 1999
Robert Terpilowski	MSCE	June 1999

Other Student Supervision (service on graduate degree committees)

University of Washington

Ph.D. Committees

Ryan Avery (Mar. 2008), Jennifer Barnes (Dec. 1996), Rhonda Young (June 2002), Gudmundur Ulfarsson (June 2001), Linda Boyle (Aug. 1998), Li-Yen Chang (Dec. 1997), Doohee Nam (Jun. 1997), Soon-Gwan Kim (Aug. 1994), Jau-Been Chang (Mar. 1992), Soonman Hong (Mar. 1992), Yeongji Kim (Dec. 1990), Shiahn-Wern Shyue (Jun. 1989), Shue-Hsiung Teng (Dec. 1988), Babtunde Oshinowo (Aug. 1988), Natarajan Janarthana (Dec. 1987), David Newcomb (Dec. 1986), Shieng-I Tung (Aug. 1986), Che Yeh (Mar. 1986), Allen Saarinen, (June 1986), Anis Abdulrahman (Mar. 1982), Michael Sullivan (Dec. 1981), James Diekmann (Dec. 1979), Herbert Drosdat (Aug. 1977), James Clark (Dec. 1976), Thomas Kuehn (Jun. 1976), John Malinka (Dec. - 1975), Claus Gehner (Aug. 1974)

M.S. Committees

Yegor Malinovskiy (MSE – Mar. 2009), Joon-Ki Kim (MSCE - Dec. 2004), Gudmundur Ulfarsson (MS - Dec. 1997), Donald Billen (MS - June 1997), Jennifer Barnes (MSCE - Dec. 1996), Haichen Xu (MSEE - Aug. 1994), Ralph Wessels (August 1994), Philip Fordyce (MSCE - Dec. 1994), Duke Do (MSCE - Dec. 1994), Brian Bombardier (MSCE - June 1993), George Brockman (MS - Aug. 1993), David Dye (MSCE - Aug. 1993), Edward Koltonowski (MSE - Aug. 1993), Janette Ollivier, (MS - Aug. 1993), Jessie Strauss (MSE - Mar. 1993), Theodore Paselk (MS - Dec. 1991), Donald Nelson (MSCE - Dec. 1991), Jun Ma (MSE - Mar. 1991), Xiaofang Lin (MSE - Dec. 1990), Ronald Mar (MSCE - Dec. 1990), Brad Sebranke (MSCE - Mar. 1990), Daniel Garrison (MSE - Dec. 1989), Toby Rickman (MSCE - Mar. 1989), Chi-Kin Ng (MSCE - Dec. 1988), Abdolhossein Barahimi (Aug. 1988), Audur Arnadottir (MSCE - June 1988), Margaret Blau (MS - Jun. 1988), Jau-Been Chang (Dec. - 1987), Edwin Lagergren (MSCE - Mar. 1987), Dennis Hamblet (MSCE - Mar. 1987), Richard Malm (Dec. 1986), John Stewart (MSCE - Mar. 1986), Edward McCormack (MS - Mar 1986), David Crippen (MSCE - Dec. 1985), Ray Deardorf (MSCE - Aug. 1985), Peter Smith (MS - June 85), Chris Wellander (MSCE - Jun. 1985), Audrey Rolfe (Aug. 1984), Frederick Liang (Aug. 1984), Norma Pennock (MSCE - Jun. 1984), Larry Toedtli (MSCE - Dec. 1983), Ardeshir Faghri (Dec. 1983), Paul Olszewski (MSCE - Aug. 1983), Akio Ueno (MSE - Mar. 1983), George Hilsinger (MSCE - Aug. 1982), Vincent Kientz (MSCE - Aug. 1981), Douglas Johnson (MS - Dec. 1981), David Davis (MSCE - Jun. 1981), Noel Schoneman (MSCE - Dec. 1980), Ahmed Abghari (MSCE - Aug. 1980), Irene Ng (MS - Aug. 1980), Thomas Wolch (MSCE - Jun. 1980), Faisal Almoajil (MSCE - Mar. 1979), Mineo Maruyama (MSCE - Aug. 1978), Miguel Gavino (MSCE - Dec. 1978), John Baker (MSCE - Aug. 1978), Lynn Guttman (MS - Aug. 1978), Kenneth Oswell (MSCE - Jun. 1978), Richard Voyer (MSCE - Dec. 1977), Surender Dewan (MSCE - Mar. 1978), Roger Bruett (MS - Mar. 1978), Einer Handeland (MSCE - Jun. 1977), Satoshi Inoue (MSE - Jun. 1977), Ronald Cameron (MSCE - Jun. 1977), Jeffrey Wright (MSE - Jun. 1977), Roger Sanchez Del Rio (MS - Dec. 1976), Tomoki Noguchi (MSCE - Aug. 1976), Darrell Wilburn (Aug. 1976), Robert Walton (MSE - Dec. 1976), Chantal Eidel (MSCE - Aug. 1976), Kay Sari (MS - Aug. 1976), Michael Mariano (MSCE - Jun. 1976), Thomas Ballard (MSCE - Jun. 1976), Robert Theisen (MSE - Jun. 1976), Thomas Nesbitt (MSE - Jun. 1976), Dennis Ingham (MSCE - Jun. 1975), James Gaylord (MS - Aug. 1974), Larry Nelson (MS - Aug. 1974),

University of Illinois at Chicago Circle

Ph.D. Committees

none

M.S. Committees

seven

Departmental Service (University of Washington)

Provider of free professional webinars for CEE faculty and students using the TransNow Communications site and grant funds to cover site licenses. January 2009 – present.

Worked with the ARTBA Young Executives and Professors Joe Mahoney and Steve Muench to support development of 4 webcasts advertising exciting new research and education activities here at the UW. The webcasts were widely circulated nationally among ARTBA's 5000 members. April 2008.

Co-Sponsor with CEE, Open House, Transportation Exhibits, Spring 2004 – Spring 2008..

Chair, Transportation Research Faculty Search Committee, Autumn 2006 – June 2006.

Head, Transportation and Construction Division, September 2003 – August 2006.

Co-Sponsor with CEE, Hospitality Room TRB, 1997- 2007.

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Member, CEE Promotion and Tenure Committee, December 2002 – August 2006.

Chair, Construction Faculty Search Committee, February 2004 – May 2004.

Member, ad hoc Committee to Review CEE 440 Grades, Winter 2004

Member, Transportation and Construction Program Committee, September 2002 – August 2003.

Open House, Transportation Exhibits, Spring 1988 – Spring 2004

Hospitality Breakfast Meeting, TRB, January 1988 – January 2002 and January 2002 – January 2004.

Member, Peer Evaluation of Teaching Committee, Venky Shankar, Feb., 2002 – August 2002.

Member, Mentor Committee for Gregory A. MacRae, March 1995 – December 1999.

Member, Department Curriculum Committee for CIVE 320, October 1996 - December 1996

Chair, Teaching Review Committee for Joe Mahoney, Spring 1997.

Chair, Peer Review of Teaching Committee for review of Professors Rutherford, Kramer, Janssen, and Jahren, September 1992-August 1994.

Director, Outreach program to recruit CE students from MESA high schools, September 1991 - August 1994.

Program Director for TSCE Division, September 1987 - August 1988.

Chair, Mentor Committee for Joe Mahoney, September 1987 - August 1988.

Chair, Mentor Committee for Fred Mannering, September 1987 - August 1988.

Member, Mentor Committee for Mark Benjamin, September 1987 - August 1988.

Member, CE Executive Committee, September 1987 - August 1988.

Member, Search Committee for Construction Faculty position, January 1986 - June 1987.

Member, Planning Committee for CE Graduation Reception, Spring 1986 and 1987.

Participant, Olympus Program, September 1985 - June 1987.

Member, Search Committee for Transportation Faculty position, September 1985 - June 1986.

Member, Committee for Policy on Teaching Evaluation, September 1985 - June, 1986.

Member, Search Committee for Transportation Faculty Position, November 1982 - July 1983.

Member, Search Committee for Construction Management Faculty Position, April 1980 - March (?) 1981.

Member, CE Executive Committee (Transportation Program Representative), dates unknown - late 1970s - early 1980s.

Member, Undergraduate Education Committee, September 1977 - June 1980 (?)

Member, Undergraduate Admissions Committee, September 1975 - June 1980 (?)

Member Student Affairs Committee, September 1975 (?) - June 1980.

Member, Systems Group, January 1974 - June 1977.

Other Department Committees (Most committee records from 1974-1985 are not available.)

College Service (University of Washington)

Member, Center Directors Committee, Autumn 2005 – Autumn 2007/ (It no longer exists.)

Member, Women in Engineering Faculty Association, September, 1996 -present.

Member, COE Executive Committee Plus, Spring 2000 – Autumn 2005.

Member, Women in Engineering Corporate Advisory Board (formerly WIE Initiative Faculty Advisory Board), September 1991 - 2004.

Member, Technical Communications (TC) Extended Review Committee (reviews promotion materials for faculty in TC and makes recommendations to P&T Committee), September 1995 -December 1999.

Chair, Research Policy Committee, September 1988 - June 1990.

Member, Research Policy Committee, September 1986 - June 1988.

Member, Engineering Faculty Council, September 1988 - June 1990.

Major Contributor to Transportation Demos and Displays for Engineering Open House, January 1974 - present.

Member, Affirmative Action Committee, January 1974 - June 1978.

Other College Committees (Most committee records from 1974-1985 are not available.)

University Service (University of Washington)

Member, Faculty Senate, September 2008 – present.

Developer of New TransNow STAR Lab and New TransNow Offices. (August 2006 - present)

- In August, 2006, I obtained funding commitments to develop space for an Integrated Advanced Transportation Lab and nearby office space for TransNow staff. The funds were to come from 1) \$75,000 of my personal RCR funds plus an additional CEE match of \$75,000 from TransNow-generated RCR funds, and 2) matching amounts of \$150,000 from COE and the Vice Provost of Research, respectively, for a total of \$450,000.
- In January 2007, I submitted a proposal for space in the UW Tower which included a plan for a 5000 sq. ft. transportation lab. The proposal was accepted, but the space did not turn out to be suitable for the lab computing requirements. Later, the plan was scaled down so that the lab and offices could be housed in 101 More Hall after an extensive remodel.
- The lab remodeling project is now underway and it is expected that the \$450,000 will cover the remodeling costs and, possibly some of the lab equipment costs. The majority of new lab equipment costs will be charged to the TransNow grant and other funding sources that we can generate.
- The new lab will be available to CEE transportation researchers and to all TransNow researchers across the UW campus.

Developer of Recently Opened TransNow Communications Center. August 2006 - November 2008

- In August, 2006, I obtained funding commitments for the development of a distance-learning/video-conferencing facility.
- I oversaw development of this communications facility, which was completed in November, 2008 and is housed in the space formerly occupied by the TransNow computer lab (room 110) in More Hall.
- The remodel costs for the new TransNow Communications Center (TCC) were financed with \$25,000 of my RCR funds with matching amounts of \$32,500 from the CEE department and \$25,000 from the College of Engineering. The \$62,500 from CEE and me came from TransNow-generated RCR funds.
- The equipment for the teleconference room was financed with an additional \$80,000+ from the TransNow federal grant.
- The TCC is available for use by all UW faculty and professional staff at a rate of \$120/hr. TransNow researchers and other CEE faculty will have priority use.

Adjunct Professor for Department of Industrial Engineering, April 2003 – present.

Member, Board of Directors, Global Trade, Transportation, and Logistics Center GTTL),, September 2000 – 2005.

Member, Interdisciplinary Committee on Global Trade, Transportation, and Logistics Center (February 1994 – 2000, and March 2001 - 2005).

Chair, University Transportation Committee, August 1994 - April 1997.

Member, Graduate School Academic Grievance Standing Committee, September 1995 - June 1996.

Member, Committee on the Deanship of the College of Architecture and Urban Planning, February 1994 - February 1995.

Member, University Transportation Research Working Group, September 1991 - January 1994.

Member, University Transportation Committee, September 1990 - August 1994.

Member, Faculty Senate Executive Committee, September 1987 - June 1988.

Member, Faculty Senate, September 1986 - June 1988.

Member, Academic Grievance Committee, September 1986 - June 1987.

Member, Dissertation Awards Committee, September 1985 - June 1987.

Member, Deanship Search Committee, College of Engineering, January 1975 - April 1976.

Other University Committees (Most committee records from 1974-1985 are not available.)

Student Service (University of Washington)

TransNow Student Service Administrator, September 1988 – present. (Includes administration of scholarships & fellowships, classroom and research equipment & supplies, library materials, student prizes and awards, new course development & instructor hires, student travel support to conferences, and general support provided by TransNow to the students in our transportation program.)

Faculty Advisor, Student Chapter of the Institute of Transportation Engineers, September 1982 - June 1990. (Note: Scott Rutherford served in this position while I was on sabbatical during Autumn and Winter of 1984 and Autumn of 1985.)

Faculty Advisor, Student Chapter of the Society of Women Engineers, January 1974 - June 1976.

Community Service (University of Washington)

Co-Leader (with Bruce Agnew, Cascadia), Task force to develop partnerships and collaborative ITS/freight projects with West Coast University Transportation Centers (UTCs) and the West Coast Corridor Coalition (WCCC), February 2006 -January 2007. We hosted workshops at the UW and at the Microsoft Conference Center to

identify collaborative research projects with federal, state, and local transportation agencies, trucking associations, ports, shippers, and West Coast UTCs with the goal of developing harmonized West Coast ITS technology to improve freight mobility and security on interstate trucking corridors and ports from Baja, California to Alaska.

Member, Steering Committee for Pacific Northwest Freight Conference, *Moving Our Economy*, February 2001 – October 2001. Conference Sponsors: FHWA, FMSIB, WSDOT, Ports of Seattle, Tacoma, and Everett, PSRC, Whatcom COG, Discovery Institute, and TransNow.

Co-Leader, Ballard High School Building Linkages pilot project, (One of nine pilot projects chosen nationwide by the USDOT and USDOE for Building Linkages Initiative.), June 2000 – present. See National Service.

High school outreach (Ballard High School), proposal preparation for above program, March 2000 – May 2000. See National Service.

Member of King County Transportation Modeling Advisory Committee (TMAC), 1975 and 1976.

National Service

Contributed time and \$10,000 in RCR funds to the Distance Learning Graduate Education Certificate program being developed by the Regional UTCs that represent federal regions 1 thru 10. The program's goal is to provide a national graduate transportation certificate based on courses offered online from the universities belonging to the regional UTC consortiums. The certificate program was awarded an FHWA grant in April, 2008 to support its continued development.

Member, SAFETEA-LU Reauthorization Task Force, ARTBA, January 2006 – present.

Worked with the 4 state DOTs (AKDOT, ITD, ODOT, WSDOT) and the other 3 UTCs (AUTC, OTREC, and NIATT) in Federal Region X to develop a Memorandum of Understanding that established the new Region X Consortium to create collaborative research and education projects among out regional partners. The MOU was signed Spring 2008.

Co-Sponsored with Region 10 UTCs (AUTC, OTREC, and NIATT), Hospitality Room at the 86th Annual Meeting of the Transportation Research Board, January 2008

Prepared for and participated in high-school transportation outreach activities associated with the Building Linkages Initiative for Transportation, Distribution and Logistics careers, co-sponsored by the U. S. Department of Education and the U.S. Department of Transportation, April 2000 – 2004.

Member, Morgan Education Roundtable, Garrett A. Morgan Transportation and Technology Futures Program, United States Department of Transportation, 1998 – 2003.

