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Dept. Civil and Environmental Engineering
University of California, Davis
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EDUCATION

University of Washington, Seattle, WA

Ph.D., Civil and Environmental Engineering, 1994, Minor: Statistics

University of Maine, Orono, ME

M.S., Civil Engineering, 1991, Minor: Geographic Information Systems

University of Texas, Austin, TX

B.S., Civil Engineering, 1982

EMPLOYMENT

University of California, Davis, CA, Civil & Environmental Engineering

Jul 2002-Present *Professor*
Jul 1998-Present *Director, UC Davis-Caltrans Air Quality Project*
Jul 2005-Jul 2009 *Director, John Muir Institute on the Environment*
Associate Vice Chancellor, Office of Research
Jul 2001-July 2004 *Department Chair*
Jul 1999-Jul 2001 *Vice-Chair*
Jul 1998-Jul 2002 *Associate Professor*
Jan 2000-Sept 2001 *Faculty Assistant to the Provost*
Jul 1994-Jul 1998 *Assistant Professor*

1991-1994 **University of Washington, Seattle, Civil & Environmental Engineering,** *Research Assistant*
1987-1990 **T.Y. Lin International, Falmouth ME,** *Transportation Project Manager*
1985-1987 **City of San Marcos, San Marcos, TX,** *Traffic Engineer*
1978-1987 **Texas Department of Highways, Austin, TX,** *Engineer*

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
Transportation Research Board
Association for Environmental Engineers
American Association for the Advancement of Science
Women in Engineering Leadership Institute
Member, UC Davis Graduate Faculty: Elect. & Computer Engrg,
Computer Science, Atm. Science, Ecology, Geography

HONORS

Aldo Leopold Leadership Award, 2005
Chancellor's Fellow, 2000-2005
National Science Foundation, CAREER Award, 1997
Outstanding Mentor Award, UC Davis Consortium for Res. for Women, 1997
Outstanding Faculty Advisor, UC Davis, College of Engineering, 1995
ENO Foundation, Fellow, 1993

PROFESSIONAL

Texas: Professional Engineer

REGISTRATION/TRAINING

Campus Mediator

EDITORIALSHIPS

Editor-in-Chief, Transportation Research, Part A, 2007-Present
Editorial Advisory Board, Transportation Research, Part B, 2003-Present
Editorial Advisory Board, Journal of Air and Waste Management, 2001-2004

PATENTS

A Microfabricated Ionizer Structure Based on Unipolar Corona Discharge, (*Pending, Tien, Chua, Niemeier, Wexler*)
A Unipolar Corona Discharge Microfabricated Ionizer for Gases at Atmospheric Pressure and Composition
(*Provisional Patent Filed, Tien, Chua, Niemeier, Wexler*)

DISSEMINATION OF RESEARCH

A. PEER-REVIEWED PUBLICATIONS ^G *Graduate Student/PostDoc*

1. D.Niemeier, Gregory Gould, Alex Karner, Mark Hixson, Brooke Bachmann, Carrie Okma, Ziv Lang, David Heres Del Valle (2008) Rethinking downstream regulation: California's opportunity to engage households in reducing greenhouse gases, *Energy Policy*, 38: 3436-3447
2. Gao, H.O. and D.A. Niemeier (2008) Using functional data analysis of diurnal ozone and NOx cycles to inform transportation emissions control, *Transportation Research Part D*, **13**(4): p. 221-238
3. Lin, Chen, Niemeier (2008) An Analysis on Long-Term Emission Benefits of a Government Vehicle Fleet Replacement Plan in Northern Illinois, *Transportation*, 35(2): 1572-9435
4. Chua, B., Wexler, A.S., Tien, N.C., Niemeier, D.A., Holmen, B.A. (2008) Design, Fabrication, and Testing of a Microfabricated Corona Ionizer, *Journal of Microelectromechanical Systems*, 17(1):115 – 123
5. Kear, T. D. Eisenger, Niemeier, D. Brady, M. (2008) US vehicle emissions: Creating a common currency to avoid model comparison problems, *Transportation Research Part D*, **13**(3): p. 168-176
6. ^GKhorashadi, A., **D. Niemeier**, V. Shankar, F. Mannering (2005) Differences in rural and urban driver-injury severities in accidents involving large-trucks, *Journal of Accident Analysis and Prevention*, 37(5): 910-921
7. ^GHendren, P., **D. Niemeier** (2008) Identifying Peer States for Transportation System and Policy Analysis, *Transportation*, 35:445-465
8. Niemeier, D. and Mannering, F. (2007) Bridging research and practice: A synthesis of best practices in travel demand modeling, *Special Issue (eds), Transportation Research, Part*, 41: 365-366
9. ^GShafizadeh, K., **D. A. Niemeier**, P. L. Mokhtarian, I. Salomon (2007) The Costs and Benefits of Home-Based Telecommuting: A Monte Carlo Simulation Model Incorporating Telecommuter, Employer, and Public Sector Perspectives, *Journal of Infrastructure Systems ASCE*, **13**(1):12-25
10. ^GBai, S., Y.C. Chiu, and D.A. Niemeier (2007) A comparative analysis of using trip-based versus link-based traffic data for regional mobile source emissions estimation, *Atmospheric Environment*, **41**(35): p. 7512-7523
11. Montañez, I., Tabor, N., D. Niemeier, W.A. DiMichele, T.D. Frank, C.R. Fielding, J.L. Isbell, L. P. Birgenheier, and M. C. Rygel (2007) CO₂-Forced Climate and Vegetation Instability During Late Paleozoic Deglaciation, *Science*, 315: 87-91
12. ^GGao, O., **D. Niemeier** (2007) The impact of rush hour traffic and mix on the ozone weekend effect in southern California, *Transportation Research, Part D*, 12: 83-98
13. ^GBai, S., ^GNie, Y., D. Niemeier (2007) The impact of speed post-processing methods on regional mobile emissions estimation, *Transportation Research, Part D*, 12: 307-324
14. ^GYura, E.A., T. Kear, and D. Niemeier (2007) Using CALINE dispersion to assess vehicular PM 2.5 emissions, *Atmospheric Environment*, **41**(38): p. 8747-8757
15. ^GChoo, S., K. Shafizadeh, K., D. Niemeier (2007) The development of a prescreening model to identify failed and gross polluting vehicles, *Transportation Research, Part D*, 12: 208-218
16. Eisinger, D., **D. Niemeier**, T. Stoeckenius, T. Kear, M. Brady, A. Pollack, J. Long (2006) Collecting driving data to support mobile source emissions estimation, *ASCE Transport.Engineering*, 132(11):845-854
17. Gkritza, K., **D. Niemeier**, F. Mannering (2006) Airport Security Screening and Changing Passenger Satisfaction: An Exploratory Assessment, *Journal of Air Transport Management*, **12**(5):213-219
18. Kear, T., **D. Niemeier** (2006), On-Road Heavy-Duty Diesel Particulate Mass Emissions Modeled Using Chassis Dynamometer Data, *Environ. Sci. Technol.* 40:7828-7833
19. ^GHendren, P., **D. Niemeier** (2006) Evaluating the effectiveness of state department of transportation investment decisions: linking performance measures to resource allocation, *Journal of Infrastructure Systems ASCE*, **12**(4): 216-229
20. Lee, A. ^G, D. Niemeier (*In-press*) Environmental Justice and Transportation, *Transport Dictionary*, Button and Nijkamp (*eds*), Pergamon
21. Gao, O. ^G, D. Niemeier (*In-press*) Mobile Emissions, *Transport Dictionary*, Button and Nijkamp (*eds*), Pergamon
22. ^GKear, T., **D. Niemeier** (2005) Assessing air quality progress using on-road emissions inventories updates, *Environmental Science and Technology*, 39(22), pp. 8571-8577
23. ^GT. Limanond, **D. Niemeier**, P. Mokhtarian (2005) Specification of a tour-based shopping model for well-

- mixed neighborhoods, *Transportation* 32(2): 545-571
24. ^GZhang, M.K., A.S. Wexler, **D.A. Niemeier**, Y.F. Zhu, W.C. Hinds, C. Sioutas (2005) Evolution of particle Number Distributions Near Roadways, Part III: Traffic Analysis and On-road Size Resolved Particulate Emission Factors, *Atmospheric Environment*, 39:4155-4166
 25. **D. Niemeier**, V. Smith (2005), Building Careers, Transforming Institutions: Underrepresented Women and Minorities, Leadership Opportunities, and Inter-institutional Networking, *Journal of Women and Minorities in Science and Engineering*, Vol 11(2)
 26. ^GLam, T., **D. Niemeier** (2005) An exploratory study of the impact of common land use policies on air quality, *Transportation Research Part D*, 10:365-383
 27. ^GGao, O., B. Holmén, **D. Niemeier** (2005) Nonparametric Factorial Analysis of Daily Weigh-in-Motion Traffic: Implications for the Ozone Weekend Effect in Southern California, *Atmospheric Environment*, 39:1662-1689
 28. Chen, C. and **D. Niemeier** (2005) A mass point vehicle scrappage model, *Transportation Research Part B*, 39: 401-415.
 29. **Niemeier, D.** (2004) Book Review: Statistical and Econometric Methods for Transportation Data Analysis, *Journal of Transportation Statistics*, 7(2):4
 30. **D. Niemeier** and Y. Zheng^G (2004) Improving the spatial distribution of vehicle emissions inventories using finer grid cell resolution, *Environmental Science and Technology*, 38(7): 2133-2141
 31. B.L. Chua, Z. Li, D.T. McCormick, W.P. Shih, N.C. Tien, A.S. Wexler, **D.A. Niemeier**, B. Holmen (2004) A Unipolar Corona Discharge Microfabricated Ionizer Structure for Gases at Atmospheric Pressure and Composition, Technical Digest of 17th IEEE International Conference on Micro Electromechanical Systems, Maastricht, Netherlands, Jan: pp 261-264 (Acceptance Rate 34%)
 32. Eisinger, D., **D. Niemeier** (2004) Transportation Control Measures (TCMs): Federal requirements and SIP development considerations, *Transportation Research Record No. 1880*, TRB, National Research Council, Washington DC: 59-70
 33. ^GZheng, Y., ^GWang, B., H.M. Zhang, **D. Niemeier** (2004) A new gridding method for zonal travel activity and emissions using bicubic spline interpolation, *Transportation Research Part B*, 38: 751-766.
 34. ^GMorey, J., **Niemeier, D.** ^GT. Limanond (2004) Statistical framework using GIS to unpaved road VMT for PM10 mobile emissions inventories, *ASCE Journal of Urban Planning and Development*, 130(23): 83-93
 35. ^GT. Limanond, **D. Niemeier** (2004) Effects of land use on decisions of shopping tour generation: A case study of three traditional neighborhoods in WA, *Transportation*, 31(2): 153-181.
 36. **D. Niemeier**, C. Gonzalez (2004) Breaking into the Guild Masters Club: Women Department Chairs in the AAU's, *National Women's Studies Association Journal*, 16(1): 157-171
 37. **D. Niemeier** (2003) The impact of incorporating spatial and temporal variability on running stabilized mobile emission inventories, *Atmospheric Environment*, 37(2): 27-37
 38. ^GT. Held, D. Chang, **D. Niemeier** (2003) UCD 2001: an improve model to simulate pollutant dispersion from roadways, *Atmospheric Environment* 37: 5325-5336.
 39. ^GKear, T, **D. Niemeier** (2003) Sensitivity of Composite Exhaust Emissions Rates to Vehicle Population and Mileage Accrual Assumptions, *Transportation Research Record 1842*, Transportation Research Board, Washington DC: 73-82
 40. ^GLin, J. and **D. Niemeier** (2003) Estimating Regional Air Quality Vehicle Emission Inventories: Constructing Robust Driving Cycles, *Transportation Science*, 37(3): 330-346
 41. **D. Niemeier**, ^GY. Zheng, ^GT. Kear (2003) UCDrive: A new gridded mobile source emission inventory model, *Atmospheric Environment*, 38(2): 305-319.
 42. ^GLin, J., **D. Niemeier**, Developing regional driving cycles using regional driving characteristics, *Transportation Research D*, 8: 361-381.
 43. ^GForesman, E.L., Kleeman, ^GM.J., Kear, T.P., **D. Niemeier** (2003) PM10 Transportation Conformity Determinations: The Equivalent Emissions Method, *Transportation Research D*, 8:97-112.
 44. ^GT. Limanond, **D. Niemeier** (2003) Accessibility and mode-destination choices: Exploring travel in three well-mixed neighborhoods in Puget Sound, WA, *Environment and Planning A*, 30: 219-238.
 45. C. Gonzalez, **D. Niemeier**, A. Navrotsky (2003) The new generation of American scholars and the structure of the university, *Academe*, Jul-Aug:56-60.

46. ⁶Lin, J., **D. Niemeier** (2002) An exploratory analysis comparing a stochastic driving cycle to California's regulatory cycle, *Atmospheric Environment*, 36:5758-5770.
47. **Niemeier, D.** Spatial applicability of emission factors for modeling mobile emissions, (2002) *Environmental Science and Technology*, 36(4): 736-741
48. ⁶Hecht, H., **D. Niemeier**. (2002) Too Cautious? Avoiding risk in transportation project development, *Journal of Infrastructure Systems*, 8(1):1-9.
49. ⁶Sugawara, S., **D. Niemeier** (2002). Using an emissions-optimized equilibrium traffic assignment to explore reductions in vehicle emissions, *Transportation Research Record 1815*, National Research Council, Wash DC: 29-37.
50. ⁶Hecht, H., **D. Niemeier** (2002) A Post-audit review: Previous audits of project development on the California state highway system, *Transportation Research Record 1817*, National Research Council, Wash, DC: 1-10.
51. **Niemeier, D.**, J.M. Utts, ⁶L. Fay. (2002). Using cluster analysis for optimal sampling of traffic count data: Air quality example, *ASCE Journal of Transportation Engineering*, 128(1): 97-102.
52. Eisinger, D., **D. Niemeier**, and M. J. Brady, (2002). Conformity: The New Force Behind SIP Deadlines, *EM Feature Article*, Air & Waste Management Association, January 2002
53. ⁶Hecht, H., **D. Niemeier** (2002) Transportation Project Efficiencies: The California Department of Transportation & California County Sales Tax Agencies, *Transportation Policy*, 9:347-356.
54. V.J. Davidson, J.M. Vance, **D. Niemeier** (2002) Women In Engineering Leadership Institute: Academic Leadership Development Plans, 12th International Conference of Women Engineers and Scientists, July, Ottawa, Canada
55. ⁶Korve, M. and **D. Niemeier**. (2002). Addition of a bicycle phase to a major intersection: A benefit-cost analysis, *ASCE Journal of Transportation Engineering*, 128(1): 40-48.
56. ⁶Kim, S., **D. Niemeier**. (2001) A weighted autoregressive model to improve mobile emissions estimates for locations with spatial dependence, *Transportation Science*, 35(4):413-424.
57. ⁶Ito, D., **D. Niemeier**, G. Garry. (2001) Conformity: How VMT-speed distributions can affect mobile emissions inventory modeling, *Transportation, Special Issue (ed. D. Niemeier)*, 28(4): 409-425.
58. ⁶Craig, J., B. Holmen, **D. Niemeier**, R. Shumway. Non-linear regression for modeling censored one-dimensional concentration profiles of fugitive dust plumes, *Journal of Agricultural, Biological, and Environmental Statistics*, 6(1):99-117.
59. Holmen, B., **D. Niemeier**, ⁶Y. Meng (2001). Time series analysis of above-road particulate matter at the Caldecott Tunnel exit, *Journal of Air and Waste Management Association*, 51(4):601-615
60. ⁶Hicks, J., **D. Niemeier** (2001). Incorporating Spatial Effects in Mobile Emissions Inventories, *Transportation Research Part D*, 6(3):153-177.
61. ⁶Held, A.E., D. Chang, **D. Niemeier** (2001) Observations and Model Simulations of Carbon Monoxide Emission Factors from a California Highway, *Journal of Air and Waste Management Association*, 51(1):121-132
62. ⁶Hendren, T., **D. Niemeier** (2001). State transportation expenditure reporting: Questions for the 21st century, *Public Works Management and Policy*, 5(3):179-198.
63. **Niemeier, D.**, Boulanger, R., Bayley, P., Muraleetharan, K., Schmid, S., Barros, A.(2001) Integration of Engineering Education and Research: Perspectives from the NSF Civil and Mechanical Systems 1998 CAREER Workshop, *Journal of Engineering Education*, April: 199-202
64. ⁶Shaheen, S., **D. Niemeier** (2001). Linking technology and design to human factors: Minimizing vehicle constraints for the elderly, *Transportation Research, Part C*, 9(3):155-174.
65. ⁶Yee, J. and **D. Niemeier** (2000). Activity duration analysis using the Puget Sound Panel Survey, *Transportation Research, Part A*, 34(8):607-624.
66. ⁶Nanzetta, K., **D. Niemeier**, J. Utts. (2000) Changing speed-VMT distributions: The effects on emissions inventories and conformity, *Journal of Air and Waste Management Association*, 50(3):459-467.
67. Utts, J., **D. Niemeier**, ⁶L. Ring. (2000) Statistical methods for estimating speed correction factors with confidence intervals for mobile source emissions models, *Transportation Research, Part D*, 5(2):103-120
68. ⁶Meng, Y., **D. Niemeier**. (2000) A new screening measure to identify potential carbon monoxide hotspots, *Journal of Air and Waste Management Association*, 50(2):252-258

69. ⁶Meng, Y. and **D. Niemeier** (2000). U.S. double-stack rail technology: Corollaries for China, *International Journal of Services Technology and Management, Special Issue on Commercialization of Technology in Transportation*, 1(2/3):224-235.
70. ⁶Morey, J., ⁶T. Limanond, and **D. Niemeier** (2000). Validity in chase car data: Issues of variability and implications for construction of emissions cycles, *Journal of Transportation Statistics*, 3(2):1-14
71. ⁶Meng, Y., **D. Niemeier** (2000). A new statistical framework for estimating localized CO concentrations, *ASCE Journal of Transportation Engineering*, 126(5):426-434.
72. **Niemeier, D.**, ⁶Lin, K., and J. Utts. (1999) Using observed traffic volumes to improve fine-grained regional emissions estimates, *Transportation Research, Part D*, 4(5): 313-332
73. ⁶Franklin, J. and **D. Niemeier**. (1998) Discrete choice elasticities for the choice of elderly and disabled travelers between fixed-route transit and paratransit, *Transportation Research Record*, No. 1623, Transportation Research Board, Washington DC
74. ⁶Meng, Y. and **D. Niemeier** (1998) Project level carbon monoxide “hot-spots” analysis for level of service D intersections, *Transportation Research Record*, No. 1641, Transportation Research Board, Wash DC
75. ⁶Lin, K. and **D. Niemeier** (1998) Using multivariate multiple regression models to improve the link between air quality and travel demand models, *Transportation Research Part D*, 3(6): 375-387
76. Holmén, B. and **D. Niemeier**. (1998) Characterizing the effects of driver variability on real-world emissions, *Transportation Research Part D*, 3(2):117-128
77. ⁶Yee, J. and **D. Niemeier** (1997) Travel trends using the Puget Sound Panel Survey: A generalized estimating equations approach, *Transportation Research Part B*, 32(1): 21-34
78. **Niemeier, D.** Accessibility: An evaluation using consumer welfare, *Transportation*, 24(4):377-396
79. ⁶Turner, T. and **D. Niemeier** (1997) Journey to work travel patterns of men and women: New evidence, *Transportation*, 24(4): 397-419
80. Handy, S. and **D. Niemeier** (1997) Measuring accessibility: An exploration of issues and alternatives, *Environment and Planning A*, 29(7):1175-1194
81. **Niemeier, D.** (1997) Systems evaluation, Papers from NSF-ESF Workshop on Social Change and Sustainable Transportation, *Journal of Transport Geography*, 5(1):35
82. **Niemeier, D.**, J. Utts, K. Mack, A. Laub, and P. Rock (1997). Changing Missions, *Invited Paper*, 1997 Frontiers in Education Conference, Pittsburgh, PA.
83. ⁶Shafizadeh, K. and **D. Niemeier** (1997) Bicycle journey to work: Travel behavior and spatial attributes, *Transportation Research Record*, No. 1578, Transportation Research Board, Washington DC.
84. **Niemeier, D.** (1996) An engineers perspective: Comments on "Minority Women and Technology," Invited Commentary, *Technology Studies*, 3(1):127-130
85. **Niemeier, D.** (1996). “Transportation infrastructure funding: Linking women’s travel needs to local funding priorities,” *Invited Paper*, Proceedings, Second National Conference on Women’s Travel Issues, Baltimore, MD.
86. **Niemeier, D.** and J. Morita (1996). Duration of trip-making activities by men and women: A survival analysis, *Transportation*, 23(4):353-371
87. **Niemeier, D.**, ⁶T. Reed, S. Rutherford and P. Morin. (1995) Statewide programming: Implementing transportation policy objectives, *ASCE Journal of Infrastructure Systems*, 2(1):30-40
88. **Niemeier, D.** A longitudinal analysis of bicycle count variability: Results and modeling implications, *ASCE Journal of Transportation Engineering*, 122(3):200-206
89. **Niemeier, D.**, Z. Zabinsky, Z. Zeng, and S. Rutherford (1995). Optimization models for transportation project programming process, *ASCE Journal of Transportation Engineering*, 121(1):14-26
90. **Niemeier, D.** and S. Rutherford (1994). Non-motorized transportation, *NPTS: Travel Mode Special Reports*, U.S. Department of Transportation, Federal Highway Administration, Office of Highway Information Management, Washington, D.C
91. **Niemeier, D.** and K. Beard (1993). GIS and Transportation Planning: A Case Study, *Computers, Environment, and Urban Systems*, 17:31-43

B. CONFERENCE PROCEEDINGS (REVIEWED)

92. Silvia, J., D. Niemeier, R. D’Souza (2006) Social Networks and Travel Behavior: Report from an Integrated

- Travel Diary, *The expanding sphere of travel behavior research*, 11th International Conference on Travel Behavioral Research, Kyoto, Japan, August 2006.
93. B.L. Chua, Z. Li, D.T. McCormick, W.P. Shih, N.C. Tien, A.S. Wexler, **D.A. Niemeier**, B. Holmen (*In-press*) A configuration for high flow rate, high efficiency, and low pressure loss micro-machined active air filtration element for airborne micro-nanoscale particles separation and removal, Technical Digest of 18th IEEE International Conference on Micro Electromechanical Systems, Miami Beach, FL, Jan 2005, (Acceptance Rate 30%)
 94. B.L. Chua, Z. Li, D.T. McCormick, W.P. Shih, N.C. Tien, A.S. Wexler, **D.A. Niemeier**, B. Holmen (Oct 2004) "Collection of Non-Gas Phase Nanoparticles by Microfabricated Electrostatic Precipitator", Accepted for CANEUS 2004 Conference on Micro-Nano-Technologies for Aerospace Applications, Monterey CA, Oct 31st – Nov 5th, 2004.
 95. Kear, T^G., **D. Niemeier** (2004), Diesel particulate matter: Risk management strategies for the transportation planning process, Conference Proceedings, 10th International Conference on Urban Transport and the Environment, Dresden Germany
 96. Shafizadeh^G, K., **D. Niemeier** (2004), Analysis of gross polluter cutpoints based on in-use vehicle inspection and maintenance test data in California, Conference Proceedings, 10th International Conference on Urban Transport and the Environment, Dresden Germany
 97. Eisinger, D., M.K. Nanzetta^G, T. Kear^G, **D. Niemeier**, R.M. O'Loughlin, M.J. Brady (2003), Particulate Matter and Transportation Projects: An PM10 Analysis Protocol, Paper 70067, *Conference Proceedings*, Energy, Economic, and Global Challenges: Environment in the Balance, 96th Annual Meeting, Air & Waste Management Association, San Diego
 98. ^GGao, O., **D. Niemeier** (2001) Changes in the California Motor Vehicle Emissions Inventory Models: EMFAC7g to EMFAC2000, Conference Proceedings, Air and Waste Management Association, 2001 Annual Conference, Orlando, FL.
 99. ^GLin, J., **D. Niemeier** (2001) Development of new driving cycles: Assessing regional driving characteristics, N400, Conference Proceedings, Air and Waste Management Association, 2001 Annual Conference, Orlando, FL.
 100. **Niemeier, D.**, Nanzetta, K. (2000). Experimental evaluation of mobile emissions estimates: Do speed correction factors account for regional differences in emissions? Conference Proceedings, Air and Waste Management Association, Annual Conference, Salt Lake City, UT
 101. **Niemeier, D. et al** (1999) Vehicle ownership patterns using the 1990 NPTS, *Invited Paper*, Conference Proceedings, Conference on Personal Travel: The long and the short of it, Washington, DC.
 102. Zabinsky, Z. and **D. Niemeier** (1997). Linear programming approach to the capital rationing problem in transportation, *Invited Paper*, Conference Proceedings, INFORMS, Dallas, TX.

C. BOOK AND BOOK CHAPTERS

103. **Niemeier, D.**, S. Bai, (2008) Urban Travel Demand Modeling, in *Transportation Planning Handbook*, 3rd Edition, (ed. M. Meyer), ITE, TB-011B, Washington DC:1023pps
104. **Committee for Review of Travel Demand Modeling by the Metropolitan Washington Council of Governments** (2004) Report to the NRC, National Research Council, National Academy Press: Washington DC
105. **Committee to Review the Bureau of Transportation Statistics Survey Program**, (2004) *Measuring Personal Travel and Goods Movement: A Review of the Bureau of Transportation Statistics' Surveys*, National Research Council, National Academy Press: Washington DC
106. **Niemeier, D.** (*In-press*) Mobile Source Emissions: An Overview of the Regulatory and Modeling Frameworks, *Transportation Engineering Handbook: Planning Methods and Applications* (ed. K. Goulias), CRC Press
107. B. Holmén and **D. Niemeier** (2007) *Issues in Transportation-Air Quality Modeling*, The Pergamon/Elsevier Science Handbooks in Transport, Handbook 4: Transport and the Environment, (ed. D. Hensher, K. Button), Pergamon/Elsevier Science
108. Utts, J. and **D. Niemeier** (1998). Multinomial prediction intervals for micro-scale highway emissions, (ed. S.Geisser), Institute for Mathematics and Applications, Statistics in the health sciences: diagnostics and prediction, IMA Volume 114, Springer.

D. CONFERENCE PRESENTATIONS AND INVITED TALKS

- 2008 Invited Seminar, University of Reno, Nevada, April 2008, Interdisciplinary Connections in the Environment
Invited Seminar, University of Washington, Seattle, Feb 2008, Climate Change and the Carbon Market Speaker, Climate change and travel modeling tutorial, Innovations in travel modeling conference, 2008, Transportation Research Board, Portland Oregon
- 2007 Plenary Talk (Invited), 2007 AEESP Conference, Interactions at the Interface – Making the Connections Between Environments, Disciplines and Nations, July, 2007
^GVan Houtte, J. D.S. Eisinger, D.A. Niemeier, Project Assessments for 8-Hour Ozone Conformity in Isolated Rural Areas" TRB 86th Annual Meeting, Washington DC
D.S. Eisinger, D.A. Niemeier, Construction Emissions: Using Project Data to Improve Regional Inventories, Presented at the 86th Annual Meeting of the Transportation Research Board
- 2006 ^GYura, E., T. Kear, **D. Niemeier**, Using CALINE Dispersion to assess vehicular PM2.5 hotspots, *Transportation Research Board, Annual Conference*, Washington DC
- 2005 Zhang, K.M. ^G, A. S. Wexler, **D. Niemeier**, Y. Zhu, W.C. Hinds, C. Sioutas (Feb 2005) On-road size-resolved particulate emission factors: Results, Annual Conference of the American Association for Aerosol Research PM Supersites Conference, Atlanta, GA
Bai, S., **D. Niemeier**, The impact of speed post-processing methods on regional mobile emissions estimation, Transportation Research Board, Annual Meeting, Washington DC
Zhang, K.M. ^G, A. S. Wexler, **D. Niemeier**, Y. Zhu, W.C. Hinds, C. Sioutas (Feb 2005) On-road size-resolved particulate emission factors, European Aerosol Conference, Ghent, Belgium
- 2004 **Niemeier, D.** (Nov 2004) We all know we should, but do we? A comparative assessment of how gender roles are handled in current travel demand forecasting models, Transportation Research Board, Women's Issues in Transportation Conference, Chicago
Niemeier, D. (Oct 2004), *Keynote Address*, Workshop for Women Faculty Candidates, University of Texas, Austin.
Niemeier, D. (Oct 2004), *Invited Speaker*, On a Wing and a Prayer: Identifying Vehicles with High Tailpipe Emissions, Virginia Polytechnic Institute, Blacksburg
Gao, O. ^G and **D. Niemeier** (June 2004) Using Weigh-In-Motion Traffic Data in Mobile Emissions Estimation and Air Quality Studies, North American Travel Monitoring Exhibition & Conference: Obtaining and Using Traffic Monitoring Data for Improving System Performance. Loews Coronado Bay, San Diego, California, June 27-30, 2004 (NATMEC 2004)
Niemeier, D. (Feb 2004), *Invited Speaker*, Interdisciplinary Research and Education, NRC Workshop on Research Opportunities in GeoEngineering, Beckman Center, Irvine, CA
Zhang, K.M. ^G, A. S. Wexler, **D. A. Niemeier**, Y. Zhu, W.C. Hinds, C. Sioutas (Oct 2004) On-road size-resolved ultrafine particulate emission factors for diesel and gasoline-powered vehicles, 23rd Annual Conference of the American Association for Aerosol Research, Atlanta, GA
- 2003 **Niemeier, D.** (October 2003), *Invited Panelist*, University of Michigan Women in Science and Engineering Leadership Retreat, Panel on Academic Leadership, Ypsilanti, MI
Niemeier, D. (November, 2003), *Invited Speaker*, NSF Women's Engineering Leadership Conference, Dinner Speaker, Salt Lake City, UT
Niemeier, D. (September 2003), *Invited Panelist*, Workshop for the Advancement and Retention of Underrepresented and Minority Engineering Educators, Dean and Department Chair Panel Discussion, National Science Foundation
Gao, O. ^G, **D. Niemeier** (2004, *abstract reviewed*) Using WIM data to study heavy-duty truck traffic patterns for emission inventory development, The North American Travel Monitoring Exhibition and Conference, 2004, Transportation Research Board, San Diego, CA.
Niemeier, D. (April 2003), *Invited Lecture*, Women in Science Lecture, Syracuse University
Gonzalez, C., **D. Niemeier**, K. Scow, January 2003, The Future of the City of Intellect: From the Culture of Research to a Culture of Freedom: Examples from the Sciences, 89th Meeting of the Association of American Colleges and Universities: The Courage to Question: Liberal Education in the 21st Century, Seattle, WA
- 2002 **Niemeier, D.** (April 2002). Mobile Emissions: From Science to Apoplexy, *Invited Talk*, Northwestern

University

- Niemeier, D.** (April 2002). Department Chair Panel, *Invited*, University of Texas, Austin
- Eisinger, D., **D. Niemeier**, T. Kear (2002, *abstract review*) The California Department of Transportation/Air Resources Board Modeling Program (CAMP): New Research to Improve Speed Correction Factors and Mobile Source Emissions Modeling, EPA Conference: Emission Inventories Partnering for the Future, April, Atlanta, Georgia
- 2001 **Niemeier, D.** (2001). A Vision for Change, *Invited Participant*, A socratic discussion on university reform, Kellogg Foundation, Atlanta GA
- ^GLam, T., **D. Niemeier** (2001). The land-use transportation problem: Considering mobile emissions, 36th Annual Conference of the Canadian Transportation Research Forum, Vancouver, BC
- Niemeier, D.** (2001). Fostering diverse leadership, Panel Moderator, 2001 AAHE Conference on Faculty Roles and Rewards, *The Changing Professoriate: New Technologies, New Generation*, Orlando, FL
- Niemeier, D.** (2001) Refining the spatial and temporal inputs from travel demand models, The Data Analysis Conference for the 1997 Southern California Ozone Study-North American Research Strategy for Tropospheric Ozone, California Air Resources Board, Diamond Bar, CA
- ^GMorey, J., **D. Niemeier** (2001, *abstract review*), Estimating travel activity on unpaved roads for PM10 conformity, International Emission Inventory Conference: One Atmosphere, One Inventory, Many Challenges, U.S. EPA, Denver, CO.
- 1999 **Niemeier, D.** (1999). Highway Economic Recovery System, Vetting Workshop, *Invited Participant*, Carnegie-Mellon University, Pittsburgh.
- Niemeier, D.** (1999). Statistical variability in mobile emissions estimation, 1999 Joint Statistical Meetings, Baltimore.
- Hendren, T., **D. Niemeier** (1999). State Highway Expenditure Reporting: What Questions Should We Ask for the 21st Century, Transportation Research Board, 78th Annual Meeting, Washington, DC.
- 1998 **Niemeier, D.** (1998). Welfare to work in real-time, *Invited Presenter, Getting Welfare Recipients to Work: Transportation and Welfare Reform, Conference*, Dept. of Urban Planning, University of California, Los Angeles.
- ^GFranklin, J., **D. Niemeier** (1998). Discrete choice elasticities for the choice of elderly and disabled travelers between fixed-route transit and paratransit, Transportation Research Board, 77th Annual Meeting, Washington, DC.
- ^GMeng, Y., **D. Niemeier** (1998). Project level carbon monoxide “hot-spots” analysis for level of service D intersections, Transportation Research Board, 77th Annual Meeting, Washington, DC.
- 1997 **Niemeier, D.** (1997), Workshop Chair, *Nationwide Personal Transportation Survey*, 1st Symposium, Bethesda, MD. October.
- Shafizadeh, K., **D. Niemeier**, P. Mokhtarian, and I. Salomon, (1997). Telecommuting commuting benefits and costs: A literature review and analysis framework, 8th Meeting of the International Association of Travel Behavior Research, Austin, TX.
- Niemeier, D.**, ^GM. Bagley, and J. Nelson (1997). Value of travel time: Accounting for household responsibility, 8th Meeting of the International Association of Travel Behavior Research, Austin, TX.
- 1996 **Niemeier, D.** (1996). *Transportation Investment Strategy under ISTEA*, Transportation Research Board, 75th Annual Meeting, Washington, DC.
- ^GShafizadeh, K., **D. Niemeier** (1996). Bicycle journey to work: Travel behavior characteristics and spatial attributes, Annual Meeting, *Transportation Research Board*, Washington DC.
- 1995 **Niemeier, D.** (1995). Invited Participant, Workshop on the Measurement of Range, Scope and Extent of the Impacts of Congestion Pricing, U.S. DOT, FHWA, Washington, DC.
- Niemeier, D.** (1995). Invited Participant, Accessibility as Planning Goal and Performance Measure, ACSP, Chicago, IL.
- Niemeier, D.** (1995). Session Moderator, Travel Demand Models, 5th Annual National Transportation Planning Methods Application Conference, Seattle, WA.
- Niemeier, D.** (1995). Spatial analysis for neighborhoods on rate of transit usage, Transportation Research Board, 74th Annual Meeting, Washington, DC.
- Niemeier, D.** (1995). Recent data collection and implications for modeling, Transportation Research

Board, 74th Annual Meeting, Washington, DC.

- 1994 **Niemeier, D.** (1994). Invited Participant, Chapter Preparation on Changing Demographics and Transportation Implications, Biennial Report to Congress on the Infrastructure, Tempe, AZ.
- Niemeier, D.** (1994). Transportation Planning in Context, Nevada Chapter of the American Planning Association, 1994 Annual Conference: Planning with Design, Los Vegas, Nv.
- Niemeier, D.,** F. Mannering, (1994). Interrelationships between workplace location and mode choice, 73rd Annual Meeting, Transportation Research Board, Washington, DC.
- Niemeier, D.,** J. Morita (1994). Duration of trip-making activities by men and women: A survival analysis, 73rd Annual Meeting, Transportation Research Board, Washington, DC.
- Rutherford, S., **D. Niemeier,** C. Kooperberg (1994). Daily travel patterns and electric vehicles: An exploratory data analysis, 73rd Annual Meeting, Transportation Research Board, Washington, DC.
- ^GBadgett, S., **D. Niemeier,** S. Rutherford (1994). Case studies: Employee commuter cycling in Seattle, 73rd Annual Meeting, Transportation Research Board, Washington, DC.
- 1993 **Niemeier, D.,** S. Rutherford, D. Whitehouse (1993). Project programming: Implementing statewide transportation policy objectives, 73rd Annual Meeting, Transportation Research Board, Committee on Transportation Programming, Planning and Systems Evaluation, Washington, DC.
- 1992 **Niemeier, D.,** S. Rutherford, ^GJ. Strauss (1992). Analysis of participants in TDM alternatives at the University of Washington, 72nd Annual Meeting, Transportation Research Board, Wash.DC.
- 1991 **Niemeier, D.** (1991). GIS and Transportation Planning, Instructor, Lincoln Land Institute, Special Conference on Innovations in GIS, Boston, MA.

E. TECHNICAL REPORTS

- 2008 H. Chen, D. Eisinger, **D. Niemeier,** Construction Equipment Retrofits And Replacements: A New Tool To Estimate Emission Reduction Benefits, December, 2008
- Bai, S., D. Eisinger, **D. Niemeier** MOVES vs. EMFAC: A Comparative Assessment Based on a Los Angeles County Case Study, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA
- Bai, S., D. Eisinger, **D. Niemeier,** Modeling Uncertainties and Near-Road PM2.5: A Comparison of CALINE4, CAL3QHC and AERMOD" *UC Davis-Caltrans AQ Project Report Series*, Davis, CA
- 2006 Jungers, B., T. Kear, D. Eisinger, **D. Niemeier,** A survey of air quality dispersion models for project level conformity analysis. *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.,
- T. Kear, D. Eisinger, **D. Niemeier,** Using 'SIP Currency' Principles to Address Outdated Conformity Emission Budgets, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA
- 2004 ^GVan Houtte, J. D.S. Eisinger, D.A. Niemeier, Gross Emitting Vehicles: A Review of the Literature, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA
- 2003 Gao, O., **D. Niemeier** (2003) Hourly truck traffic profiles and emissions: Southern California weigh-in-motion data, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.,
- Eisinger, D., K. Nanzetta, T. Kear, R. O'Loughlin, M. Brady, **D. Niemeier** (2003) Particulate Matter and Transportation Projects, An Analysis Protocol, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA
- Sogutlugil, Mimi, **D. Niemeier** (2003) Examining the speed-VMT distributions for emissions inventories, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.,
- 2002 Holmen, B., **D. Niemeier,** ^GM. Nanzetta, S. Bergen (2002) The Physical and Chemical Characterization of Nanoparticle Particulate Matter Emissions from Gasoline and Diesel On-Road Motor Vehicles, Phase 1 Scoping Study, Draft Final, Prepared for the California Air Resources Board, Research Division, Sacramento, CA
- ^GLam, T., **D. Niemeier** (2002) Review of statewide transportation planning models, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA. aqp.engr.ucdavis.edu
- ^GLam, T., ^GK. Jierranaitanakit, **D. Niemeier** (2002) Estimation of Hourly Allocation Factors for the Central California Ozone Study Using State-Wide Model Data and Real Time Traffic Data, prepared for the California Air Resources Board, CalEPA, Sacramento, CA
- ^GJ. Morey , **Niemeier, D.** (2002). Using GIS to Estimate Statewide Vehicle Activity and Roadway Mileage for Unpaved Roads in California, prepared for the California Air Resources Board,

- CalEPA, Sacramento, CA
- 2001 ^GZheng, Y., **D. Niemeier** (2001) A new grid-based mobile sources emissions inventory model, Draft Report, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA. aqp.engr.ucdavis.edu
- ^GGao, O., **D. Niemeier** (2001) Mobile Emissions Inventories: EMFAC7g and EMFAC2000 comparisons by air basin, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA. aqp.engr.ucdavis.edu
- Eisenger, D., **D. Niemeier** (2001) California conformity timelines: EMFAC 2000 approval considerations, Draft Report, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.
- 2000 **Niemeier, D.**, ^GM. Sumpter (2000). Transportation needs of Sacramento County welfare recipients, UCD-ITS-RR-00-2, Final Report, prepared for the Sacramento County Department of Human Assistance, Institute of Transportation Studies, Davis, CA.
- ^GJ. Morey , ^GT. Limanond, **Niemeier, D.** (2000). Data Collection for Driving Cycle Development: Evaluation of Data Collection Protocols, UCD-ITS-RR-00-3, Final Report, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.
- Niemeier, D.**, ^GIto, D. (2000). Transportation air quality conformity modeling in Sacramento and San Joaquin Valley, Final Report, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.
- 1999 **Niemeier, D.**, ^GJ. Hicks, ^GM. Korve (1999). Estimation of allocation factors for disaggregation of travel demand model volumes to hourly volumes for highways in the South Coast Air Basin: Southern California Ozone Study, UCD-ITS-RR-13, prepared for the California Air Resources Board, Institute of Transportation Studies, Davis, CA.
- Niemeier, D.** ^GJ. Morey , ^GT. Limanond, K. Lakshminarayanan , J. Franklin (1999). An exploratory study: A new methodology for estimating unpaved road miles and vehicle activity on unpaved roads, UCD-ITS-RR-99-2, Final Report, prepared for the California Air Resources Board, Institute of Transportation Studies, Davis, CA.
- Niemeier, D.** ^GT. Limanond, K. Lakshminarayanan, J. Morey, J. Franklin (1999). Using GIS to estimate unpaved road miles and vehicle activity on unpaved roads, UCD-ITS-RR-99-3, Final Report, prepared for the California Air Resources Board, Institute of Transportation Studies, Davis, CA.
- 1998 **Niemeier, D.**, J. Utts, ^GK. Nanzetta, ^GL. Ring (1998). Speed correction curves: Scoping Study, UCD-ITS-RR-98-12, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.
- ^GReed, T., ^GJ. Franklin, **D. Niemeier**, T. Rufulo (1998), Benefit-cost analysis of multimodal projects for state-wide prioritization of capacity investments, UCD-ITS-RR-98-3, Institute of Transportation Studies, University of California, Davis, CA
- Kear, T., ^GK. Dougherty, K. Lee, D. Eisinger, **D. Niemeier** (1998), Transportation project-level carbon monoxide protocol user workbook, UCD-ITS-RR-98-9, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.
- ^GFranklin, J., **D. Niemeier** (1998), The prioritization of mobility improvements using a multicriteria prioritization algorithm, UCD-ITS-RR-98-4, Institute of Transportation Studies, University of California, Davis, CA
- ^GShafizadeh, K., **D. Niemeier**, P. Mokhtarian, I. Saloman (1998). The Costs and Benefits of Telecommuting: An evaluation of macro-scale literature, California PATH Working Paper, UCB-ITS-PWP-98-5, Institute of Transportation Studies, University of California, Berkeley.
- 1997 ^GYu, M., **D. Niemeier** (1997). Modeling carbon monoxide concentrations at level of service D intersections, UCD-ITS-RR-98-7, prepared for the California Department of Transportation, *UC Davis-Caltrans AQ Project Report Series*, Davis, CA.
- ^GLin, K.S., **D. Niemeier** (1997). Exploratory analysis: A method to improve the link between travel demand models and DTIM2, Final Report, funded by California Air Resources Board, Institute of Transportation Studies, UCD-ITS-RR-95-10, Davis, CA.
- 1996 ^GYee, J., **D. Niemeier** (1996). Overview of travel trends in the Puget Sound Panel Data, 1989-1993, Task E, Volume 1, Project Battelle 94-16, FHWA, HPM-40, Washington, DC.

- ⁶Yee, J., **D. Niemeier** (1996). Advantages and disadvantages: Longitudinal vs. repeated cross-section surveys, Project Battelle 94-16, FHWA, HPM-40, Washington, DC.
- ⁶Yee, J., **D. Niemeier** (1996). Specialized travel trends in the Puget Sound Panel Data, 1989-1993, Task E, Volume 2, Project Battelle 94-16, FHWA, HPM-40, Washington, DC.
- 1995 **Niemeier, D.**, J. Myers (1995). Categories for Oregon Department of Transportation modernization project evaluation, Draft, Oregon Transportation Department, Salem, OR.
- Niemeier, D.** (1995). Analysis of bicyclist survey responses from the Puget Sound Area and Spokane, Washington State Transportation Commission Innovations Unit, Report No. 95.4, Olympia, WA.
- Niemeier, D.** (1995). Analysis of bicycle counts from the Puget Sound Area and Spokane, Washington State Transportation Commission Innovations Unit, Report No. 95.3, Olympia, WA.
- Reed, T., **D. Niemeier**, S. Rutherford (1995). Prioritization of capacity improvements, Final Report, RP-T9233, Washington State Transportation Department, June, Olympia, Washington.
- 1992 **Niemeier, D.**, S. Rutherford (1992). Project prioritization: A new evaluation process for statewide project programming, Phase 1, Technical Report, Washington State Transportation Department, June, Olympia, Washington.

UNDERGRADUATE RESEARCHERS

- Cheng, Roger (Civil Engineering) Research Period: 2008-Present
- Bow, Benjamin (Civil Engineering) Research Period: 2008-Present
- Liang, Eric, (Civil Engineering) Research Period: 2007-Present
- Wu, Janice (Civil Engineering) Research Period: 2007-2008
- Nie, Rudy (Civil Engineering, 2008) Research Period: 2003-2008
- Tsering Wangdon (Civil Engineering, 2008) Research Period: 2003-2008
- Osborne, Adrienne (Civil Engineering, 2004), Research Period: 2000-2003.
- Kalvass, Jeffrey (Computer Science, 2005), Research Period: 2003-2004.
- Seed, Roby (Env. Sci. and Policy, 2005), Research Period: 2004-2005.
- Kable, Jason (Civil Engineering, 2005), Research Period: 2003-2004.
- Duong, Timothy (Mechanical Engineering, 2004), Research Period: 2001-2003.
- Duong, T. (2002) The effects of a warning light on air pollution, Explore the Possibilities: The 13th Annual Undergraduate Research Conference, University of California, Davis*
- Whitten, Danielle (International Policy, 2002), Research Period: 1998-2002
- Witten, D. (2002) The changing role of the California Transportation Commission, Explore the Possibilities: The 13th Annual Undergraduate Research Conference, University of California, Davis*
- Thomas, Megan, (BSCE, 2000), Research Period: 1995-2000.
- Thomas, M. (1999). A Method for Deriving Background Carbon Monoxide Concentrations for Sacramento County, (adv. D. Niemeier), Proceedings 12th National Conference on Undergraduate Research, Vol. 11, Rochester, NY.*
- Montez, Russell, (BSCE, 1999), Research Period: 1996-1999.
- Montez, R. (1999). Gap Analysis for Bicycle Flow in Mixed Traffic, (adv. D. Niemeier), Proceedings 12th National Conference on Undergraduate Research, Vol. 11, Rochester, NY.*
- Montez, R. (1999). Bicycle Traffic in Mixed-Use Roundabout Intersections, Society of Hispanic Professional Engineers, National Technical and Career Conference, Los Angeles, CA. Feb.*
- Flourney, Marlon, (BS-Env. Policy, 1999), Research Period: 1998-1999.
- Flourney, M. (1999). Cost-Benefit Analysis for Electric Vehicles, (adv. D. Niemeier), 10th Annual Conference on Undergraduate Research, UC Davis.*
- Van Wert, Chris (BSME, 1999), Research Period: 1996-1998.
- Van Wert, C. (1998). Real-time emissions from a diesel bus, 9th Annual Conference on Undergraduate Research, UC Davis.*
- Korve, Matt (BSCE, 1997), Research Period: 1996-97.
- Korve, M. and D. Niemeier (1997). Cost-benefit analysis of a separated bicycle phase, Forthcoming ASCE Journal of Transportation Engineering.*
- Hulse, Lisa (BSCE, 1995), Research Period: 1994-95
- Hulse, L. and K. Shafizadeh (1996). Bicycle Travel to Work Patterns, (adv. D. Niemeier), Proceedings 10th National Conference on Undergraduate Research, Vol. 1, Asheville, NC.*

Shafizadeh, Kevan (BSCE, 1995), Research Period: 1994-96.

Hulse, L. and K. Shafizadeh (1996). Bicycle Travel to Work Patterns, (adv. D.Niemeier), Proceedings 10th National Conference on Undergraduate Research, Vol. 1, Asheville, NC.

MASTERS STUDENTS (MAJOR ADVISOR)

- 2008 Micah Fuller (Transportation Technology and Policy)
Alexandra Timoshek (Transportation Technology and Policy)
Zack Steele (Ecology)
- 2006 Elizabeth Yura (Civil and Environmental Engineering)
Justin Kable (Civil and Environmental Engineering)
Reno Giordano (Transportation Technology and Policy)
- 2004 Rosenberg, Sandra (Transportation Technology and Policy)
- 2001 Foresman, Erin (Ecology)
- 2000 Ito, Doug (Transportation Technology and Policy)
Sumpter, Matt (Transportation Technology and Policy)
- 1999 Korve, Matt (Civil Engineering)
Hicks, Jaime, (Civil Engineering)
- 1998 Sugawara, Satoshi (Civil Engineering)
Shafizadeh, Kevan (Civil Engineering; Co-Advise: P. Mokhtarian)
Lakshiman, Kishore (Civil Engineering)
Brown, Shane (Civil Engineering)
Franklin, Joel (Civil Engineering)
- 1995 Stokes, JD (Civil Engineering)

DOCTORAL STUDENTS (MAJOR ADVISOR)

- Current Greg Gould (Civil and Environmental Engineering)
Alex Karner (Transportation Technology and Policy)
Nanako Tenjin (Civil and Environmental Engineering)
Zhen Dai (Candidate, Civil and Environmental Engineering)
Dana Rowan (Ecology)
Boon-Ling Yeo (Transportation Technology and Policy)
- 2008 Peng Wu (Civil and Environmental Engineering)
Julia Silvis (Transportation, Technology, Policy)
- 2007 Song Bai (Civil and Environmental Engineering), Current: Sonoma Technology
Jeroen Van Houtte (Civil and Environmental Engineering)
- 2006 Kear, Tom (Civil and Environmental Engineering, 2006), On-road heavy-duty diesel exhaust particulate mass emissions, University of California, Davis, Current: Dowling, Inc.
Chua, Beelee (ECE, 2006), Microfabricated corona ionizer and its applications, University of California, Davis, Current: BioTech Start-up
- 2005 Sogutlugil, Mimi (Civil and Environmental Engineering, 2005), Examining the effects of intra-hour and lane variability in average speeds on estimated emissions and air quality, Air Resources Board
Kiattipong Jierranaitanakit (Civil and Environmental Engineering, 2005), An Application of Logit Modeling for The Classification of Network Links for Hourly Traffic Patterns in Emission Inventories, Ministry of Transportation, Thailand
- 2004 Gao, Oliver (Civil and Environmental Engineering, 2004), Temporal and Spatial Statistical Analysis of Heavy-Duty Diesel Truck Traffic and Ozone/NOx Dynamics in Southern California, Asst. Professor, Cornell University
Nanzetta, Kathy (Civil and Environmental Engineering, 2004) Ultrafine particle number concentration measurements of a Northern California freeway and the relationships with meteorology and traffic volumes, University Of California, Davis: 445 pp.
- 2003 Hendren, Patricia, G. (TTP, 2003) *Evaluating the link between resource allocation decisions and transportation performance measures: 17 years of spending on roads*, University of California, Davis: 436pp., Current: Cambridge Systematics, Inc. Wash DC
Khorashadi, Ahmad (Civil and Environmental Engineering, 2003) *Analysis of driver injury severity logit*

- models of truck involvement/truck causation*, University of California, Davis: 236pp.
- Morey, Jennifer (Ecology, 2003) *Refining PM10 emissions inventories in CA: New methods for estimating vehicle activity on unpaved roads*, University of California, Davis: 185pp., Current: Independent Consultant, Seattle, WA
- Zheng, Yi (Civil and Environmental Engineering, 2003) *A new grid-based mobile source emission inventory model*, University of California, Davis: 226pp., Current: Student, Haas School of Business, UCB
- 2002 Lin, Jane (Civil and Environmental Engineering, 2002) *A markov process approach to driving cycle development*, University of California, Davis: 215pp., Current: Asst. Professor, University of Illinois, Chicago (Aug 2003-Present)
- 2001 Limamond, Thirayroot (Civil and Environmental Engineering, 2001), *An Integrated Travel Model for Neighborhood Shopping*, Unpublished dissertation, University of California, Davis
- Hecht, Harry (June 2001, Civil and Environmental Engineering), *Development of major transportation projects in California*, University of California, Davis, Current: Independent Consultant
- 1998 Meng, Yu (Civil and Environmental Engineering, 1998), *A New Statistical Model for Modeling CO "Hotspots"*, University of California, Davis, Current: Barclay Global
- 1997 Lin, Kuo-shian (Civil and Environmental Engineering, 1997), *Improving Transportation Emissions Modeling by Integrating Ground Counts with Travel Demand Model Forecasts*, University of California, Davis, Current: Deputy Chief, Transportation Planning Division, Ministry of Transportation and Communications, Taipei, Taiwan.

D. POST-DOCTORAL RESEARCHERS (MAJOR ADVISOR)

- Sheryl Mebane, 2008-Present
- Song Bai 2006-07, Sonoma Technology
- Sangho Choo 2004-05
- Mimi Sogutlugil, 2005-06, California Air Resources Board
- Shafizadeh, Kevan, 2002-2004, (Ph.D., Civil Engineering), Assistant Professor, Cal State University, Sacramento
- Chen, Cynthia, 2002-2003, (Ph.D., Civil Engineering), Assistant Professor, City University, New York
- Lam, Terence, 2000-2002 (Ph.D., Civil Engineering), Sr. Researcher, US Government Accounting Office
- Kim, Sung, 1998-1999 (Ph.D., Statistics), Assistant Professor, University of Georgia
- Meng, Yu, 1998-1999 (Ph.D., Civil Engineering), Sr. Analyst, CalPERS

SERVICE

A. DEPARTMENT

- 2001-2004 Department Chair
- 2000-01 Vice-Chair
Undergraduate Curriculum Revisions Committee
Chair, Building Committee
- 1999-00 Vice-Chair
Chair, Building Committee
Undergraduate Curriculum Revisions Committee
Management Technology Program, Ad-Hoc Committee
- 1998-99 Building Committee
Undergraduate Curriculum Revisions Committee
Undergraduate Advisor
- 1997-98 Building Committee
Computer Committee
Undergraduate Curriculum Revisions Committee
Faculty Search Committee
Undergraduate Advisor
- 1996-97 Building Committee
Computer Committee
Undergraduate Curriculum Revisions Committee

- 1995-96 Faculty Search Committee
Academic Senate Representative
Computer Committee
- 1994-95 Academic Senate Representative, Alternate

B. COLLEGE

- 2000-01 College Executive Committee
- 1999-00 Advisory Committee on Recruitment
- 1998-99 Committee on Undergraduate Study
- 1997-98 Chair, Committee on Student Development
Committee on Undergraduate Study
- 1996-97 Chair, Committee on Student Development

C. CAMPUS

- 2005-09 Director, John Muir Institute on the Environment
Associate Vice Chancellor, Office of Research
- 2005-06 Chair, NCAA Certification Report, Subcommittee on Academic Integrity
- 2002-03 Chair, Special Senate Review Committee, UC Davis Transition to Division 1 Athletics
University Mediator, Mediation Services, Human Resources
Preliminary Investigating Officer, Provost Office, Academic Personnel
Sub-Committee: Academic Planning and Development, Graduate Council
- 2001-02 Committee on Academic Planning and Budget Review
University Mediator, Mediation Services, Human Resources
Committee to develop material for new chairs, Vice Provost for Academic Affairs
Sub-Committee: Academic Planning and Development, Graduate Council
- 2000-01 Committee on Academic Planning and Budget Review
Provost Academic Advisory Council
Sub-Committee: Academic Planning and Development, Graduate Council
Arbitration Hearing (Chair), Human Resources and Risk Management
University Mediator, Mediation Services, Human Resources
Consortium for Women and Research Advisory Board
UC Davis Washington Center Advisory Committee
Atmospheric Science Graduate Group, Executive Committee
- 1999-00 Provost Academic Advisory Council
Provost Academic Planning Council
Chancellor's and Provost's Task Force on Faculty Recruitment
Sub-Committee: Academic Planning and Development, Graduate Council
Arbitration Hearing (Chair), Human Resources and Risk Management
UC Davis Washington Center Advisory Committee
Graduate Council Program Review, Materials Science
Consortium for Women and Research Advisory Board
- 1998-99 Recruitment Committee, Vice Provost, Undergraduate Studies
Provost Academic Advisory Council
Provost Academic Planning Council
Chair, Consortium for Women and Research Advisory Board
Committee on Admissions and Enrollment
UC Davis Washington Center Advisory Committee
Sub-Committee, Humanities and Environmental Sciences, Env. Initiative
Panelist, Chancellor's Fall Conference, Topic: Curriculum and Outreach
Graduate Council Review, Materials Science

D. PROFESSIONAL

- 2007-08 Member-at-large, AAAS Section on Engineering (2007-2012)
Member, Transportation Research Board, Committee on Construction Management (AFH10)

- Journal Manuscript Reviews
Environmental Science and Technology
Transportation Research A/B/D
Atmospheric Environment
Transportation
Transportation Research Board
- Independent Review Panel, Delta Risk Management Strategy (DRMS) Evaluation
Yolo County Government Operations: Review to Reduce GHG Emissions
Center for Sustainable Transportation, *Moving from Research to Practice: An AB32 Workshop for Caltrans, Lead Convener*
- 2006-07 Elected, Member-at-large, AAAS Section on Engineering (2007-2012)
Member, Transportation Research Board, Committee on Construction Management (AFH10)
Journal Manuscript Reviews
Environmental Science and Technology
Transportation Research A/B/D
Atmospheric Environment
Transportation
Transportation Research Board
- 2005-06 Panama Canal review
External Reviewer, University of Wisconsin, Dept. of Civil and Environmental Engineering
Award Nominations and Review Plan Committee, AEESP
Environment and Planning, Journal Manuscript Reviews
Transportation, Journal Manuscript Reviews
Atmospheric Environment, Journal Manuscript Reviews
- 2004-05 (sabab) Member, Academic Review Panel to Review Cost Increases on San Francisco Bay Bridge, Appointed by the Secretary of Business, Transportation and Housing, Sacramento, CA (Jan 05)
Member, ASCE Committee on Academic Prerequisites for Professional Practice
Panelist, National Science Foundation, Graduate Student Research Fellowship Review Panel (Feb 05)
ASCE Journal of Infrastructure Systems, Journal Manuscript Reviews
Transportation, Journal Manuscript Reviews
Transportation Research B/D, Journal Manuscript Reviews
Atmospheric Environment, Journal Manuscript Reviews
Urban Studies, Journal Manuscript Reviews
- 2003-04 External Reviewer, Graduate Program Review, Oregon State University, Dept. of Civil and Environmental Engineering
Member, ASCE President's Committee on Faculty Professional Engineering Licensure
Peer Reviewer, On-site Review of the Mickey Leland National Urban Air Toxics Research Center, U.S. Environmental Protection Agency, Office of Research and Development, Sept. 17-19.
Member, Committee for Review of Travel Demand Forecasting Modeling by the Metropolitan Washington Council of Governments, Transportation Research Board, National Research Council, National Academy of Science
Member, ASCE Committee on Academic Prerequisites for Professional Practice
Member, NSF Review Panel, Director's Award for Distinguished Teaching Scholars (DTS)
ASCE Journal of Infrastructure Systems, Journal Manuscript Reviews
Transportation, Journal Manuscript Reviews
Transportation Research B/D, Journal Manuscript Reviews
Atmospheric Environment, Journal Manuscript Reviews
- 2002-03 Member, Committee to Review FHWA BTS Data, National Research Council, National Academy of Science
Member, Committee for Review of Travel Demand Forecasting Modeling by the Metropolitan Washington Council of Governments, Transportation Research Board, National Research Council, National Academy of Science
External Reviewer, College of Engineering, Dept of Civil Engineering, University of Connecticut
Member, Transportation-Air Quality Task Force, Air and Waste Management Association

- Member, ASCE Committee on Academic Prerequisites for Professional Practice
 Reviewer, 3 Outside Tenure Reviews/1 Outside Appointment Review
Transportation Research Board, Journal Manuscript Reviews
Transportation, Journal Manuscript Reviews
Transportation Research A/D, Journal Manuscript Reviews
Journal of Air and Waste Management, Journal Manuscript Reviews
Environmental Science and Technology, Journal Manuscript Reviews
ASCE Journal of Transportation Engineering, Journal Manuscript Reviews
Journal of the American Statistical Association, Journal Manuscript Reviews
- 2001-02 NSF Review, Division of International Programs, International Cooperative Science
 NSF Biocomplexity Review Panel
 Canadian Foundation for Climate and Atmospheric Science, Proposal Review
 Member, Committee to Review FHWA BTS Data, National Academy of Science
 Member, External Expert Peer Review Group, NCHRP Project 25-15, Transportation Research Board,
 National Research Council
 Member, External Expert Peer Review Group, Washington Department of Transp, Statewide Model
Transportation Research Board, Journal Manuscript Reviews
Transportation Research, Journal Manuscript Reviews
Journal of Air and Waste Management, Journal Manuscript Reviews
- 2000-01 NSF Infrastructure and Information Systems CAREER Review Panel
 NSF IGERT Review Panel
 External Reviewer, College of Engineering, Michigan State University
Transportation Research Board, Journal Manuscript Reviews
Transportation, Journal Manuscript Reviews
Journal of Air and Waste Management, Journal Manuscript Reviews
- 1999-00 Reviewer, *Modeling MOBILE Source Emissions*, National Research Council, The National Academy
 Reviewer, EPA Draft Guidance Document: *Development of Methodology for Estimating VMT
 Weighting by Facility Type*
 Transportation Research Board, *Committee on Passenger Travel Demand Forecasting*, 1997-Present
Microcomputers in Civil Engineering, Journal Manuscript Reviews
Transportation Research, Part A/B/D, Journal Manuscript Reviews
Transportation Research Board, Journal Manuscript Reviews
- 1998-99 ORU External Review Committee, Institute of Transportation Studies, University of California, Irvine
 Transportation Research Board, *Committee on Passenger Travel Demand Forecasting*, 1997-2002
Microcomputers in Civil Engineering, Journal Manuscript Reviews
Transportation, Journal Manuscript Reviews
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Transportation Research Board, Journal Manuscript Reviews
- 1997-98 Transportation Research Board, *Committee on Passenger Travel Demand Forecasting*, 1997-2002
 Transportation Research Board, *Committee on Intergovernmental Relations and Policy Processes*,
 1997-2001
- 1996-97 Transportation Research Board, *Committee on Intergovernmental Relations and Policy Processes*,
 1997-2001
 Professional Engineering Review Course, Transportation
 Federal Transit Agency, Invited Participant, *TCRP Project H-15: Defining the Research Needed to
 Support Mobility for the 21st Century*
Transportation, Journal Manuscript Reviews
Transportation, Part C, Journal Manuscript Reviews
Transportation, Part D, Journal Manuscript Reviews
 UCTC, New England Region, Massachusetts Institute of Technology, Proposal Review.
- 1995-96 Professional Engineering Review Course
Transportation, Part C, Journal Manuscript Reviews
Transportation, Part D, Journal Manuscript Reviews
Microcomputers in Civil Engineering, Journal Manuscript Reviews

EXTRAMURAL FUNDING (PI UNLESS NOTED)

GIS Locomotive Inventory, (2006-2009) \$130,000, California Air Resources Board
UC Davis-Caltrans Air Quality Project (2002-On-going) (Cum. Program \$4.5m)
Capital Outlay Support (2008-2010) \$138,000, California Department of Transportation
Regional Development, Population Trends, and Technology Change Impacts on Future Air Pollution Emissions, Environmental Protection Agency, (2004-2008) \$700,000, PI: M. Kleeman, Co-PIs: D. Niemeier, S. Handy
A New Model for Producing Highly Resolved Mobile Source Emissions, (2003-2006), National Science Foundation, \$300,000
Development of a MEMs Ambient PM Sampler, (2004-2006), California Air Resources Board Technology Development Program, \$250,000, Co-PIs: N. Tien, A. Wexler, B. Holmen
ADVANCE *Leadership: Stepping up the Academic Ladder: Examining the Progress of Women as Science and Engineering Department Chairs*, (2002-2004) National Science Foundation, \$200,000
Women in Engineering Leadership Conference, (2001-03), National Science Foundation, \$91,000.
IGERT: *Nanophases in the environment, agriculture, and technology* (1999-2004), National Science Foundation (PI: A. Navrotsky, Co-PI's: D. Niemeier *et al*), \$1.3m
Mobile Source Travel Activity Data Collection and Modeling for Central California Ozone Study, (2000-2003), California Air Resources Board, \$600,000.
Physical and Chemical Characterization of Ultra-Fine and Nanoparticle Matter Emissions From Gas and Diesel On-road Vehicles, (2000-2003), California Air Resources Board, \$501,000 (PI: Britt Holmen, Co-PI: D. Niemeier).
Estimating Statewide Unpaved Roads Travel Activity for Air Quality Models, (2000-2002), California Air Resources Board, \$90,000.
Experimental Design for Collection of Mobile Emissions Travel Activity for the Central California Ozone Study, (1999) California Air Resources Board, \$25,000.
Estimation of Summer 98 Allocation Factors for South Coast Air Basin, (1999) California Air Resources Board, \$18,000.
Data Collection of Travel Activity – 1997 South Coast Ozone Study (1996-7) California Air Resources Board, \$65,000 (Phase 1), \$185,000 (Phase 2, National Renewable Energy Laboratory)
Modeling Travel Activity on Unpaved Roads (1997-99), California Air Resources Board, \$73,850.
Exploratory Analysis: A Method to Improve the Link Between Travel Demand Models and DTIM2 (1994-95), California Air Resources Board, \$86,000.
URI: *Emerging Urban Systems: Competing Land Uses, and the Effects on Built and Natural Environments*, National Science Foundation, (1999-2002), \$380,000.
Linking Undergraduates to Research on the Environment (1997-02), (PI: Jeannie Darby, Co-PI's: Britt Holmen, Deb Niemeier), Research Experience for Undergraduates, National Science Foundation, \$249,800.
CAREER: *Optimizing Transportation Infrastructure Longevity: Engineering Based Allocation of Resources* (1997-03), National Science Foundation, \$214,214.
CAREER Matching Funds: *Optimizing Transportation Infrastructure Longevity: Engineering Based Allocation of Resources* (1997-02), National Science Foundation, \$100,000.
CAREER Undergraduate Researcher Funding: *Optimizing Transportation Infrastructure Longevity: Engineering Based Allocation of Resources* (1997-02), National Science Foundation, \$10,000.
UC Davis-Caltrans Air Quality Project (1999-2002)
Statewide Air Quality Management, Research, and Assistance, (1999-2003)
CAMP Data Management/Technical Assistance, (1999-2002)
Conformity Budgets and Particulate Matter Equivalent Emissions (1999-2002)
Emission Modeling: Conformity and Gridding Methods (1999-2002)
Air Toxics Research and Policy Analysis, (1999-2002)
Emissions Modeling (1999-2003)
Emissions Research (1999-2003)
Completion and Implementation of CO Protocol, (1997), California Dept. of Transportation, \$60,000
The effect of LOS D intersection configurations on CO emissions (1997), California Dept of Transp., \$18,000.
Speed Correction Curves (1997-1998), California Dept. of Transportation, \$95,000/\$50,000.

Expert Review and General Assistance (1997-1998), California Department of Transportation, \$15,000.
Model Projects: Enhancing the Educational Environment and Opportunities for Women in Engineering, Mathematics, and Science (1997-01), Alfred P. Sloan Foundation, \$525,000.
Welfare to Work Travel Study, (1999) Sacramento County Department of Human Assistance, \$23,000.
Fixed Route and Paratransit Services: A Comparison of Accessibility Using Compensating Variation (1995-96), UCTC, \$30,000.
Neighborhood Microlevel Accessibility Measures (1996-97), UCTC, \$42,000.
Is There a Case for Public Investment in Telecommuting? A Cost/Benefit Analysis (1996-97), (PI: Pat Mokhtarian, Co-PI: D. Niemeier), PATH, \$45,617.
Prioritization of Capacity Improvements (1996-97), Oregon Department of Transportation, \$180,000.
Cost-Benefit Analysis: A Case Study (1996-97), Federal Highway Administration, Oregon Department of Transportation, \$25,000.
Community Based Economic Analysis of Trucking Facilities (1996), California Trucking Association, \$15,000.
The Elderly and Paratransit Services (1996), Daimler-Benz, \$5,000.