

CURRICULUM VITAE

Dr. Robert B. Noland

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EDUCATION:

PhD, Energy Management & Environmental Policy, University of Pennsylvania, 1992

MSc, Energy Management & Policy, University of Pennsylvania, 1986

BA, Chemistry, University of California, 1981 (with Honors)

APPOINTMENTS:

- 9/2008 – date **Professor of Transportation Planning and Policy**, Edward J. Bloustein School of Planning and Public Policy, Rutgers University, New Brunswick, NJ.
- 10/2004 – 9/2008 **Reader in Transport and Environmental Policy**. Centre for Transport Studies, Department of Civil and Environmental Engineering, Imperial College London.
- 10/2003 – 9/2004 **Senior Lecturer in Transport and Environmental Policy**. Centre for Transport Studies, Department of Civil and Environmental Engineering, Imperial College London.
- 9/1999 – 9/2003 **Lecturer in Transport and the Environment**. Centre for Transport Studies, Department of Civil and Environmental Engineering, Imperial College London.
- 9/1995 – 9/1999 **Policy Analyst**, U.S. Environmental Protection Agency, Office of Policy, Energy and Transportation Sectors Division.
- 9/1993-9/1995 **Postgraduate Researcher**. Department of Economics and Institute of Transportation Studies, University of California, Irvine, CA.
- Fall 1992 **Adjunct Lecturer**. Center for Energy and the Environment, University of Pennsylvania, Philadelphia, PA.
- 1987 – 1992 **Teaching Assistant**. Center for Energy and the Environment and the Dept. of City and Regional Planning, University of Pennsylvania, PA.
- 1986 – 1993 **Research Assistant**. Center for Energy and the Environment and Morris Arboretum of the University of Pennsylvania.

Assignments within positions held

- 9/2008 – date **Director, Alan M. Voorhees Transportation Center**, Edward J. Bloustein School of Planning and Public Policy, Rutgers University, New Brunswick, NJ.
- 3/2009 – date **Visiting Professor**, Department of Civil and Building Engineering, Loughborough University.
- 12/2002 – 7/2006 **Fourth Year Coordinator**, Department of Civil and Environmental Engineering, Imperial College London.
- 6/2002 – 8/2008 **Course Director, MSc in Business Management**, Department of Civil and Environmental Engineering, Imperial College London.

PUBLICATIONS LIST

Dissertation

"The Role of Risk in Policies to Promote Bicycle Transportation", 1992, supervisor: Howard Kunreuther

Refereed journal papers:

- J1. Feldman, Stephen L., Mark A. Bernstein, and **Robert B. Noland**, "The Costs of Completing Unfinished US Nuclear Power Plants", Energy Policy, 16(3), (1988), 270-279.
- J2. **Noland, Robert B.**, Reed Wills, and Robert M Wirtshafter, "The Advantages of Automated Spreadsheets for Cogeneration Financial Analysis", Energy Engineering, 89(1), (1992), 57-70.
- J3. **Noland, Robert B.**, and Howard Kunreuther, "Short-run and Long-run Policies for Increasing Bicycle Transportation for Daily Commuter Trips", Transport Policy, 2(1), (1995), 67-79.
- J4. **Noland, Robert B.**, "Perceived Risk and Modal Choice: Risk Compensation in Transportation Systems", Accident Analysis and Prevention, 27(4), (1995), 503-521.
- J5. **Noland, Robert B.** and Kenneth A. Small, "Travel-Time Uncertainty, Departure Time Choice, and the Cost of Morning Commutes", Transportation Research Record , 1493, (1995), 150-158.
- J6. **Noland, Robert B.**, "Pedestrian Travel Times and Motor Vehicle Traffic Signals". Transportation Research Record, 1553, (1996), 28-33.
- J7. **Noland, Robert B.**, "Commuter Responses to Travel Time Uncertainty under Congested Conditions: Expected Costs and the Provision of Information", Journal of Urban Economics, Vol. 41, (1997), 377-406.
- J8. Mullen, Maureen A., James H. Wilson, Jr., Laura Gottsman, **Robert B. Noland** and William L. Schroeer, "Emissions Impact of Eliminating National Speed Limits: One Year Later", Transportation Research Record, 1587, (1997), 113-120.
- J9. **Noland, Robert B.**, Kenneth A. Small, Pia Maria Koskonoja, and Xuehao Chu, "Simulating Travel Reliability", Regional Science and Urban Economics, 28(5), (1998), 535-564.

- J10. Downing, Donna, and **Robert B. Noland**, "Environmental Consequences of Reducing the Federal Role in Transportation: Legal Framework", Transportation Research Record, 1626, (1998), 3-10.
- J11. Beshers, Eric, Brian Hayduk, and **Robert B. Noland**, 1998, "Devolution of Surface Transportation: Preliminary Assessment of Revenue and Financial Aspects", Transportation Research Record, 1649, (1998), 26-38.
- J12. **Noland, Robert B.**, "Simulated Relationships Between Highway Capacity, Transit Ridership, and Service Frequency," Journal of Public Transportation, 3(1), (2000), 1-27.
- J13. Fulton, Lewis M., **Robert B. Noland**, Daniel J. Meszler and John V. Thomas, "A Statistical Analysis of Induced Travel Effects in the U.S. Mid-Atlantic Region", Journal of Transportation and Statistics, 3(1), (2000), 1-14.
- J14. **Noland, Robert B.**, and William A. Cowart, "Analysis of Metropolitan Highway Capacity and the Growth in Vehicle Miles of Travel", Transportation, 27(4), (2000), 363-390.
- J15. **Noland, Robert B.**, "Relationships between Highway Capacity and Induced Vehicle Travel", Transportation Research A (Policy and Practice), 35(1), (2001), 47-72.
- J16. McDonald, Noreen C., and **Robert B. Noland**, "Simulated Travel Impacts of HOV Lane Conversion Alternatives", Transportation Research Record: Journal of the Transportation Research Board, 1765 (2001), 1-7.
- J17. Park, Jin Young, **Robert B. Noland** & John W. Polak, "Microscopic Model of Air Pollutant Concentrations: Comparison of Simulated Results with Measured and Macroscopic Estimates", Transportation Research Record: Journal of the Transportation Research Board, 1750, (2001), 64-73.
- J18. **Noland, Robert B.**, and Lewison L. Lem, "A Review of the Evidence for Induced Travel and Changes in Transportation and Environmental Policy in the US and the UK", Transportation Research D (Transport and Environment), 7(1), (2002), 1-26.
- J19. **Noland, Robert B.** and John W. Polak, "Travel Time Variability: A Review of Theoretical and Empirical Issues", Transport Reviews, 22(1), (2002), 39-54.
- J20. Quddus, Mohammed A., **Robert B. Noland**, and Hoong Chor Chin, "An Analysis of Motorcycle Injury and Vehicle Damage Severity using Ordered Probit Models", Journal of Safety Research, 33(4), (2002), 445-462.
- J21. Williams, Victoria, **Robert B. Noland**, and Ralf Toumi, "Reducing the Climate Change Impacts of Aviation by Restricting Cruise Altitudes", Transportation Research D (Transport and Environment), 7(6), (2002), 451-464.
- J22. Ochieng, Washington Y., John W. Polak, **Robert B. Noland**, Jin Young Park, Lin Zhao, Paul Elliott, David Briggs, John Gulliver, Andrew Crookell, Ruthven Evans, Matt Walker and Walter Randolph, "Integration of GPS and Dead Reckoning for Real Time Vehicle Performance and Emissions Monitoring", GPS Solutions, 6(4), (2003), 229-241.
- J23. Ochieng, Washington Y., John W. Polak, **Robert B. Noland**, Lin Zhao, David Briggs, John Gulliver, Andrew Crookell, Ruthven Evans, Matt Walker and Walter Randolph, "Monitoring real-time vehicle performance and emissions", Traffic Engineering and Control, 44(3), (2003), 102-107.
- J24. **Noland, Robert B.**, "Traffic Fatalities and Injuries: The Effect of Changes in Infrastructure and Other Trends", Accident Analysis and Prevention, 35 (2003), 599-611.
- J25. Zhao, Lin, Washington Y. Ochieng, Mohammed A. Quddus, and **Robert B. Noland**, "An extended Kalman filter algorithm for integrating GPS and low cost dead reckoning system

data for vehicle performance and emissions monitoring”, Journal of Navigation, 56(2), (2003), 257-275.

J26. **Noland, Robert B.**, John W. Polak, Michael G.H. Bell, and Neil Thorpe, How Much Disruption to Activities Could Fuel Shortages Cause?: The British Fuel Crisis of September 2000, Transportation, 30 (2003), 459-481.

J27. **Noland, Robert B.**, “Medical Treatment and Traffic Fatality Reductions in Industrialized Countries”, Accident Analysis and Prevention, 35(6), (2003), 877-883.

J28. Williams, Victoria, **Robert B. Noland**, and Ralf Toumi, “Air Transport Cruise Altitude Restrictions to Minimize Contrail Formation”, Climate Policy, 3 (2003), 207-219.

J29. Goodwin, Phil, and **Robert B. Noland**, “Building new roads really does create extra traffic: A response to Prakash et al.”, Applied Economics, 35 (2003), 1451-1457.

J30. Quddus, Mohammed A., Washington Y. Ochieng, Lin Zhao, and **Robert B. Noland**, “A General Map Matching Algorithm for Transport Telematics Applications”, GPS Solutions, 7(3), (2003), 157-167.

J31. Stathopoulos, Fotis G., and **Robert B. Noland**, “Induced Travel and Emissions from Traffic Flow Improvement Projects”, Transportation Research Record: the Journal of the Transportation Research Board, 1842 (2003), 57-63.

J32. Ashiru, Olu, John W. Polak, and **Robert B. Noland**, “Space-Time User Benefit and Utility Accessibility Measures for Individual Activity Schedules”, Transportation Research Record: the Journal of the Transportation Research Board, 1854 (2003), 62-73.

J33. Ochieng, Washington Y., Mohammed A. Quddus, and **Robert B. Noland**, “Map-Matching in Complex Urban Road Networks”. Brazilian Journal of Cartography (Revista Brasileira de Cartografia), 55(2), (2003), 1-18.

J34. **Noland, Robert B.**, and Mohammed A. Quddus, “Improvements in Medical Care and Technology and Reductions in Traffic-related Fatalities in Great Britain”, Accident Analysis and Prevention, 36(1), (2004), 103-113.

J35. **Noland, Robert B.**, and Lyoong Oh, “The Effect of Infrastructure and Demographic Change on Traffic-related Fatalities and Crashes: A Case Study of Illinois County-level Data”, Accident Analysis and Prevention, 36(4), (2004), 525-532.

J36. Majumdar, Arnab, **Robert B. Noland** and Washington Y. Ochieng, “A Spatial Analysis of Seat-belt Usage and Seat-belt Laws”, Accident Analysis and Prevention, 36(4), (2004), 551-560.

J37. **Noland, Robert B.**, and Mohammed A. Quddus, “A Spatially Disaggregate Analysis of Road Casualties in England”, Accident Analysis and Prevention, 36(6), (2004), 973-984.

J38. **Noland, Robert B.**, “Motor Vehicle Fuel Efficiency and Traffic Fatalities”, The Energy Journal 25(4), (2004), 1-22.

J39. **Noland, Robert B.**, “A Review of the Impact of Medical Care and Technology in Reducing Traffic Fatalities”, Journal of the International Association of Traffic Safety Sciences: IATSS Research, 28(2), (2004), 6-12, (invited paper).

J40. **Noland, Robert B.**, Washington Y. Ochieng, Mohammed A. Quddus, Robin J. North, John W. Polak, “The Vehicle Emissions and Performance Monitoring System: Analysis of Tailpipe Emissions and Vehicle Performance”, Transportation Planning and Technology, 27(6), (2004), 431-447.

- J41. **Noland, Robert B.**, and Mohammed A. Quddus, "Analysis of Pedestrian and Bicycle Casualties Using Regional Panel Data", Transportation Research Record: Journal of the Transportation Research Board, 1897 (2004), 28-33.
- J42. Ashiru, Olu, John W. Polak, and **Robert B. Noland**, "Utility of Schedules: Theoretical Model of Departure-Time Choice and Activity-Time Allocation with Application to Individual Activity Schedules", Transportation Research Record: Journal of the Transportation Research Board, 1894 (2004), 84-98.
- J43. Quddus, Mohammed A., Washington Y. Ochieng, and **Robert B. Noland**, "Positioning Algorithms for Transport Telematics Applications", Journal of Geospatial Engineering, 6(2), (2004), 10-30.
- J44. **Noland, Robert B.**, "Fuel Economy and Traffic Fatalities: Multivariate Analysis of International Data", Energy Policy, 33 (2005), 2183-2190.
- J45. Quddus, Mohammed A., **Robert B. Noland**, and Washington Y. Ochieng, "Validation of Map Matching Algorithms using High Precision Positioning with GPS", Journal of Navigation, 58 (2005), 257-271
- J46. **Noland, Robert B.**, and Matthew G. Karlaftis, "Sensitivity of Crash Models to Alternative Specifications", Transportation Research E (Logistics and Transportation Review), 41 (2005), 439-458.
- J47. **Noland, Robert, B.** and Mohammed A. Quddus, "Congestion and Safety: A Spatial Analysis of London", Transportation Research A (Policy and Practice), 39 (2005), 737-754.
- J48. Ochieng, Washington Y., Robin J. North, **Robert B. Noland**, and John W. Polak, "Integrated Vehicle Performance and Emission Monitoring System", Transactions of Nanjing University of Aeronautics and Astronautics 22(2), (2005), 85-90.
- J49. North, Robin J., Washington Y. Ochieng, Mohammed A. Quddus, **Robert B. Noland** and John W. Polak, "Development of a Vehicle Emissions Monitoring System", Transport, Proceedings of the Institution of Civil Engineers, 158(3), (2005), 167-177.
- J50. Williams, Victoria and **Robert B. Noland**, "Variability of Contrail Formation Conditions and the Implications for Policies to Reduce the Climate Impacts of Aviation", Transportation Research D (Transport and Environment), 10(4), (2005), 269-280.
- J51. Schmöcker, Jan-Dirk, Mohammed A. Quddus, **Robert B. Noland**, and Michael G.H. Bell, "Estimating Trip Generation of Elderly and Disabled People: Analysis of London Data", Transportation Research Record: Journal of the Transportation Research Board, 1924 (2005), 9-18.
- J52. Ishaque, Mohammed M. and **Robert B. Noland**, "Multimodal Microsimulation of Vehicle and Pedestrian Signal Timings", Transportation Research Record: Journal of the Transportation Research Board, 1939 (2005), 107-114.
- J53. **Noland, Robert B.**, William A. Cowart, Lewis M. Fulton, "Travel Demand Policies for Saving Oil During a Supply Emergency", Energy Policy, 34(17) (2006), 2994-3005.
- J54. **Noland, Robert B.**, and Mohammed A. Quddus, "Flow improvements and vehicle emissions: effects of trip generation and emission control technology", Transportation Research D (Transport and Environment), 11(1), (2006), 1-14.
- J55. Ishaque, Muhammed M., and **Robert B. Noland**, "Making Roads Safe for Pedestrians or Keeping them Out of the Way? - An Historical Perspective on Pedestrian Policies in Britain", Journal of Transport History, 27(1), (2006), 115-137.

- J56. Williams, Victoria A., **Robert B. Noland**, "Comparing the CO₂ emissions and contrail formation from short and long haul air traffic routes from London Heathrow", Environmental Science and Policy, 9(5), (2006), 487-495
- J57. **Noland, Robert B.** and Muhammed M. Ishaque, "Smart Bicycles in an Urban Area: Evaluation of a Pilot Scheme in London", Journal of Public Transportation, 9(5), (2006): 71-95.
- J58. Quddus, Mohammed A., **Robert B. Noland**, and Washington Y. Ochieng, "A High Accuracy Fuzzy Logic Based Map Matching Algorithm for Road Transport", Journal of Intelligent Transportation Systems: Technology, Planning and Operations, 10(3), (2006), 103-115.
- J59. North, Robin J., **Robert B. Noland**, Washington Y. Ochieng, and John W. Polak, "Modelling of Particulate Matter Mass Emissions from a Light-duty Diesel Vehicle", Transportation Research D (Transport and Environment), 11(5), (2006), 344-357.
- J60. Quddus, Mohammed A., Washington Y. Ochieng, **Robert B. Noland**, "Integrity of map matching algorithms", Transportation Research C (Emerging Technologies), 14, (2006), 283-302.
- J61. **Noland, Robert B.** and John V. Thomas, "Multivariate analysis of trip-chaining behaviour", Environment and Planning B (Planning and Design), 34(6), (2007), 953-970.
- J62. Ishaque, Muhammed M. and **Robert B. Noland**, "Trade-offs between vehicular and pedestrian traffic using micro-simulation methods", Transport Policy, 14(2), (2007), 124-138.
- J63. **Noland, Robert B.**, "Transport Planning and Environmental Assessment: Implications of Induced Travel Effects", International Journal of Sustainable Transportation, 1(1), (2007), 1-28.
- J64. Quddus, Mohammed A., Washington Y. Ochieng, **Robert B. Noland**, "Current Map Matching Algorithms for Transport Applications: State-of-the-art and Future Research Directions", Transportation Research C (Emerging Technologies), 15(5), (2007), 312-328.
- J65. Williams, Victoria, **Robert B. Noland**, Arnab Majumdar, Ralf Toumi, Washington Y. Ochieng, and Jarlath Molloy, "Reducing Environmental Impacts of Aviation with Innovative Air Traffic Management Technologies", The Aeronautical Journal, 111(1125), 741-749 (2007).
- J66. Ishaque, Muhammad M. and **Robert B. Noland**, "Simulated Pedestrian Travel and Exposure to Vehicle Emissions", Transportation Research D (Transport and Environment), 13(1), (2008), 27-46.
- J67. Ishaque, Muhammad M. and **Robert B. Noland**, "A review of behavioural issues in pedestrian speed choice and street crossing behaviour", Transport Reviews, 28(1), 61-85 (2008).
- J68. **Noland, Robert B.**, Mohammed A. Quddus, Washington Y. Ochieng, "The effect of the London Congestion Charge on road casualties: An intervention analysis", Transportation, 35, (2008), 73-91.
- J69. Schmöcker, Jan-Dirk, Mohammed A. Quddus, **Robert B. Noland**, and Michael G.H. Bell, "Mode Choice of older and disabled people: A case study of shopping trips in London", Journal of Transport Geography, 16, (2008), 257-267.
- J70. Pejovic, Tamara, **Robert B. Noland**, Victoria Williams, and Ralf Toumi, "Estimates of UK CO₂ emissions from aviation using air traffic data", Climatic Change, 88, (2008), 367-384

- J71. Wadud, Zia, and **Robert B. Noland**, Daniel J. Graham “Equity analysis of personal tradable carbon permits for the road transport sector”, Environmental Science and Policy, 11(6), (2008), 533-544.
- J72. **Noland, Robert B.**, “Understanding Accessibility and Road Capacity Changes: A Response in Support of Metz”, Transport Reviews, 28(6), (2008), 698-706.
- J73 **Noland, Robert B.** and Zia Wadud, “Review of Oil Demand Restraint Policies for Heavy Goods Vehicles”, Energy Sources Part B: Economics, Planning, and Policy, 4, (2009), 84-99.
- J74. Wadud, Zia, Daniel J. Graham, and **Robert B. Noland**, “A Cointegration Analysis of Gasoline Demand in the United States”, Applied Economics, 41 (2009), 3327-3336.
- J75. Quddus, Mohammed A., **Robert B. Noland**, and Washington Y. Ochieng, “The Effects of Navigation Sensors and Spatial Road Network Data Quality on the Performance of Map Matching Algorithms”, GeoInformatica, 13, (2009), 85-108.
- J76. Jiwittanakulpaisarn, Piyapong, **Robert B. Noland**, Daniel J. Graham, John W. Polak, Highway Infrastructure and State-level Employment: A Causal Spatial Analysis, Papers in Regional Science, 88(1), (2009), 133-159.
- J77. Jiwittanakulpaisarn, Piyapong, **Robert B. Noland**, Daniel J. Graham, and John W. Polak, “Highway Infrastructure Investment and County Employment Growth: A Dynamic Panel Regression Analysis”, Journal of Regional Science, 49(2), (2009), 263-286.
- J78. Law, Teik Hua, Andrew W. Evans, **Robert B. Noland**, “Factors associated with the relationship between motorcycle deaths and economic growth”, Accident Analysis and Prevention, 41, (2009), 234-240.
- J79. Ishaque, Muhammad M. and **Robert B. Noland**, “Pedestrian and vehicle flow calibration in multi-modal traffic micro-simulation”, ASCE Journal of Transportation Engineering, 135(6), (2009), 338-348.
- J80. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, “A Meta-Analysis of Estimates of Urban Agglomeration Economies”, Regional Science and Urban Economics, 39, (2009), 332-342.
- J81. Wadud, Zia, Daniel J. Graham, and **Robert B. Noland**, “Modeling fuel demand for different socio-economic groups”, Applied Energy, 86(12), (2009), 2740-2749.
- J82. Pejovic, Tamara, Victoria A. Williams, **Robert B. Noland**, and Ralf Toumi, “Factors affecting the frequency and severity of airport weather delays and the implications of climate change for future delays”, Transportation Research Record: Journal of the Transportation Research Board, 2139 (2009), 97-106.
- J83. Pejovic, Tamara, **Robert B. Noland**, Victoria A. Williams, and Ralf Toumi, “A tentative analysis of the impacts of an airport closure”, Journal of Air Transport Management, 15(5), (2009), 241-248.
- J84. Crôte, Amado, **Robert B. Noland**, and Daniel J. Graham, “Is the Mexico City Metro an Inferior Good?”, Transport Policy, 16 (2009), 40-45.
- J85. Crôte, Amado, **Robert B. Noland**, and Daniel J. Graham, “Estimation of Road Traffic Demand Elasticities for Mexico City, Mexico”, Transportation Research Record: Journal of the Transportation Research Board, 2134, (2009): 99-105.
- J86. Wadud, Zia, Daniel J. Graham, and **Robert B. Noland**, “Gasoline Demand with Heterogeneity in Household Responses”, The Energy Journal, 31, (2010), 47-74.

J87. Karathodorou, Niovi, Daniel J. Graham, and **Robert B. Noland**, “Estimating the Effect of Urban Density on Fuel Demand”, Energy Economics 32, (2010), 86-92.

J88. Ochieng, Washington Y., Robin J. North, and Mohammed A. Quddus, **Robert B. Noland**, Technologies to Measure Indicators for Variable Road User Charging, Transport, Proceedings of the Institution of Civil Engineers, 163(2), (2010), 63-72.

J89. Wadud, Zia, **Robert B. Noland**, and Daniel J. Graham, “ A Semiparametric Model of Household Gasoline Demand”, Energy Economics 32, (2010), 93-101.

J90. Schmöcker, Jan-Dirk, Fengming Su and **Robert B. Noland**, “An analysis of trip chaining among older London residents”, Transportation, 37,(2010), 105-123.

J91. Crôtte, Amado, **Robert B. Noland**, and Daniel J. Graham, “An analysis of gasoline demand elasticities at the national and local levels in Mexico”, Energy Policy, 38, (2010), 4445-4456.

J92. Jiwattanakupaisarn, Piyapong, **Robert B. Noland**, and Daniel J. Graham, “Causal Linkages between Highways and Sector-level Employment”, Transportation Research A (Policy and Practice), 44, (2010), 265-280.

J93. Graham, Daniel J., Patricia S.C. Melo, Piyapong Jiwattanakupaisarn, and **Robert B. Noland**, “Testing for causality between productivity and agglomeration economies”, Journal of Regional Science, 50(5), (2010), 935-951.

J94. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, “Impact of Transport Infrastructure on Firm Formation: Evidence from Portuguese Municipalities”, Transportation Research Record: Journal of the Transportation Research Board, 2163, (2010), 133-143.

J95. Law, Teik Hua, **Robert B. Noland**, Andrew W. Evans, “The Direct and Indirect Effects of Corruption on Motor Vehicle Crash Deaths”, Accident Analysis and Prevention, 42, (2010), 1934-1942.

J96. Crôtte, Amado, **Robert B. Noland**, and Daniel J. Graham, “The role of metro fares, income, metro quality of service and fuel prices for sustainable transportation in Mexico City”, International Journal of Sustainable Transportation, 5(1), (2011), 1-24.

J97. Law, Teik Hua, **Robert B. Noland**, and Andrew W. Evans, “The Sources of the Kuznets Relationship between Road Fatalities and Economic Growth”, Journal of Transport Geography, 19, (2011), 355-365.

J98. **Noland, Robert B.**, Devajyoti Deka, Ranjit Walia, “A Statewide Analysis of Bicycling in New Jersey”, International Journal of Sustainable Transportation, 5(5), (2011), 251-269.

J99. Sehatzadeh, Bahareh, **Robert B. Noland**, and Marc D. Weiner, “Walking frequency, cars, dogs, and the built environment”, Transportation Research A: Policy and Practice, 45, (2011), 741-754.

J100. Jiwattanakupaisarn, Piyapong, **Robert B. Noland**, and Daniel J. Graham, “Highway Infrastructure and Private Output: Evidence from Static and Dynamic Production Function Models”, Transportmetrica, (on-line, Nov 2010).

J101. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, “The Effect of Labour Market Spatial Structure on Commuting in England and Wales”, Journal of Economic Geography (in press, April 2011).

J102. Chatman, Daniel C., and **Robert B. Noland**, “Do public transport investments increase agglomeration economies? A review of literature and agenda for research”, Transport Reviews (on-line, Aug 2011).

J103. Jiwattanakulpaisarn, Piyapong, **Robert B. Noland**, and Daniel J. Graham, "Marginal productivity of expanding highway capacity", submitted to the Journal of Transport Economics and Policy (in press, Aug 2011).

Books, Reviews and Edited Collections

Contributions to books edited by others

B1. **Noland, Robert B.**, "Information in a Two-route Network with Recurrent and Non-recurrent congestion", in "Behavioural and Network Impacts of Driver Information Systems", edited by Richard Emmerink and Peter Nijkamp, (Ashgate: Aldershot), 1999, 95-114.

B2. Thorpe, Neil, Michael Bell, John Polak and **Robert B. Noland**, "A Telephone Survey of Stated Travel Responses to Fuel Shortages", in "Transport Lessons from the Fuel Tax Protests of 2000", edited by Glenn Lyons and Kiron Chatterjee, (Ashgate: Aldershot), 2002, 161-182.

B3. Williams, Victoria, **Robert B. Noland**, Arnab Majumdar, Ralf Toumi and Washington Y. Ochieng, "Mitigation of Climate Impacts with Innovative Air Transport Management Tools", in "Tourism and Climate Change Mitigation: Methods, Greenhouse Gas Reductions and Policies", NHTV Academic Studies no. 6, edited by Paul Peeters, (Stichting NHTV: Breda, the Netherlands), 2007, 91-104.

Books authored

B4. International Energy Agency, Saving Oil in a Hurry, ISBN 92-64-10941-2, Paris, France (2005), 164pp.

B5. Small, Kenneth A., **Robert B. Noland**, Xuehao Chu, David Lewis, Valuation of Travel-Time Savings and Predictability in Congested Conditions for Highway User-Cost Estimation, National Cooperative Highway Research Program Report 431, Transportation Research Board, National Research Council, National Academy Press, ISBN: 0-309-06609-3, (1999), 74pp.

Books or Journals edited

B6. Wong, Walter, **Robert B. Noland**, and Michael G.H. Bell, "The theory and practice of congestion charging", edited volume of Transportation Research A (Policy and Practice), 39, (2005), 567-570.

B7. **Noland, Robert B.**, "The interaction of environmental and traffic safety policies", edited volume of Transportation Research D (Transport and Environment), 14, (2009): 373-374.

Book Reviews

B8. **Noland, Robert B.**, Review of "Street Smart: Competition, Entrepreneurship, and the Future of Roads", Journal of the American Planning Association, 73(3) (2007), 361-362.

B9. Noland, Robert B., Review of : "Fighting Traffic: The Dawn of the Motor Age in the American City", Journal of the American Planning Association, 75(4), (2009), 497-498.

Working papers

(Currently under review for publication or being revised)

W1. **Noland, Robert B.**, Behavioural and Analytical Considerations in Transport Safety Policy, Working Paper, for submission to Research in Transportation Economics (2011).

- W2. **Noland, Robert B.**, Patrick P. Brennan, Nicholas J. Klein, "A Spatial Analysis of Pedestrian Fatalities and Injuries in New Jersey", submitted to Accident Analysis and Prevention (Feb 2010, under revision).
- W3. Law, Teik Hua, **Robert B. Noland**, and Andrew W. Evans, "Factors Associated with the Enactment of Road Safety Laws: A Cross-country Panel Analysis", submitted to Risk Analysis (June 2010).
- W4. Noland, Robert B., Stephanie DiPetrillo, and Michael L. Lahr, Residential property values and the New Jersey Transit Village program", submitted for presentation at the 91st Annual Meeting of the Transportation Research Board and for publication in Transportation Research Record: Journal of the Transportation Research Board (July 2010).
- W5. Noland, Robert B., Hyunsoo Park, Leigh Ann Von Hagen, and Daniel G. Chatman, "A mode choice analysis of school trips in New Jersey", submitted for presentation at the 91st Annual Meeting of the Transportation Research Board. (July 2011).
- W6. Hanson, Christopher S. and Robert B. Noland, "Life-cycle greenhouse gas emissions of materials used in road construction", submitted for presentation at the 91st Annual Meeting of the Transportation Research Board and for publication in Transportation Research Record: Journal of the Transportation Research Board (July 2011).
- W7. Lachapelle, Ugo and Robert B. Noland, Does the commute mode affect the frequency of walking? The public transit link, submitted to Transport Policy (May 2011).
- W8. Park, Hyunsoo, Robert B. Noland and Ugo Lachapelle, Active School Trips: Associations with Caregiver Walking Frequency, Working paper (July 2011).
- W9. Lachapelle, Ugo and Robert B. Noland, Inconsistencies in associations between crime and walking: a reflection of poverty and density, submitted to Environment and Planning B (Sept 2011) and for presentation at the 91st Annual Meeting of the Transportation Research Board.
- W10. Lachapelle, Ugo and Robert B. Noland, Teaching children about bicycle safety: An evaluation of the New Jersey Bike School program, submitted to Accident Analysis and Prevention (June 2011).
- W11. Weiner, Marc D., Orin T. Puniello, Robert B. Noland, Chintan Turakhia, and David Ciemnecki, Consider the Non-Adopter: Developing a Prediction Model for the Adoption of Household-Level Broadband Access, submitted to Socio-Economic Planning Sciences (June 2011).
- W12. Lachapelle, Ugo, Marc D. Wiener and Robert B. Noland, Are cell phone samples needed for studies of walking activity?, submitted for presentation at the 91st Annual Meeting of the Transportation Research Board and for publication in Transportation Research Record: Journal of the Transportation Research Board (June 2011).
- W13. Noland, Robert B. and Christopher S. Hanson, How does induced travel affect sustainable transportation policy? Manuscript prepared for Transport Beyond Oil (Jan 2011).
- W14. Kravetz, Daniel and Robert B. Noland, A Spatial Analysis of Income Disparities in Pedestrian Safety in Northern New Jersey: Is there an Environmental Justice Issue?, submitted for presentation at the 91st Annual Meeting of the Transportation Research Board and for publication in Transportation Research Record: Journal of the Transportation Research Board (June 2011).

Transportation Research Board Refereed Conference Papers

(These papers have all gone through a competitive review process before being accepted for presentation; many have ultimately been published in final format after a second peer review process and are also listed in the peer reviewed journal section above)

- T1. **Noland, Robert B.** and Kenneth A. Small, "Travel-Time Uncertainty, Departure Time Choice, and the Cost of Morning Commutes", presented at the 74th Annual Meeting of the Transportation Research Board (1995).
- T2. **Noland, Robert B.**, "Pedestrian Travel Times and Motor Vehicle Traffic Signals", presented at the 75th Annual Meeting of the Transportation Research Board (1996).
- T3. **Noland, Robert B.**, Kenneth A. Small, Pia Maria Koskenoja, and Xuehao Chu, "A Discrete Choice Simulation Model of Urban Highway Congestion Incorporating Travel Reliability", presented at the 75th Annual Meeting of the Transportation Research Board (1996).
- T4. Mullen, Maureen A., James H. Wilson, Jr., Laura Gottsman, **Robert B. Noland** and William L. Schroer, "The Emissions Impact of Eliminating National Speed Limits: One Year Later", presented at the 76th Annual Meeting of the Transportation Research Board (1997).
- T5. Downing, Donna, and **Robert B. Noland**, "Environmental Consequences of Reducing the Federal Role in Transportation: Legal Framework", presented at the 77th Annual Meeting of the Transportation Research Board (1998).
- T6. Beshers, Eric, Brian Hayduk, and **Robert B. Noland**, 1998, "Devolution of Surface Transportation: A Preliminary Assessment of Revenue and Financial Aspects", presented at the 77th Annual Meeting of the Transportation Research Board (1998).
- T7. Ostria, Sergio, Sandeep Aneja, and **Robert B. Noland**, "Emissions and Fuel Consumption Impacts of Intelligent Transportation Systems: Modeling and Evaluation Methodologies", presented at the 77th Annual Meeting of the Transportation Research Board (1998).
- T8. **Noland, Robert B.**, "Relationships between Highway Capacity and Induced Vehicle Travel", presented at the 78th Annual Meeting of the Transportation Research Board (1999).
- T9. **Noland, Robert B.**, "Simulated Relationships Between Highway Capacity, Transit Ridership, and Service Frequency", presented at the 78th Annual Meeting of the Transportation Research Board (1999).
- T10. Fulton, Lewis M., Daniel J. Meszler, **Robert B. Noland** and John V. Thomas, "A Statistical Analysis of Induced Travel Effects in the U.S. Mid-Atlantic Region", presented at the 79th Annual Meeting of the Transportation Research Board (2000).
- T11. **Noland, Robert B.**, and William A. Cowart, "Analysis of Metropolitan Highway Capacity and the Growth in Vehicle Miles of Travel", presented at the 79th Annual Meeting of the Transportation Research Board (2000).
- T12. McDonald, Noreen C., and **Robert B. Noland**, "Simulated Travel Impacts of HOV Lane Conversion Alternatives", presented at the 80th Annual Meeting of the Transportation Research Board (2001).
- T13. Park, Jin Young, **Robert B. Noland** & John W. Polak, "A Microscopic Model of Air Pollutant Concentrations: Comparison of Simulated Results with Measured and Macroscopic Estimates", presented at the 80th Annual Meeting of the Transportation Research Board (2001).

T14. **Noland, Robert B.**, “Traffic Fatalities and Injuries: Are Reductions the Result of ‘Improvements’ in Highway Design Standards?”, presented at the 80th Annual Meeting of the Transportation Research Board (2001).

T15. **Noland, Robert B.** and John W. Polak, “Travel Time Variability: A Review of Theoretical and Empirical Issues”, presented at the 80th Annual Meeting of the Transportation Research Board (2001).

T16. **Noland, Robert B.**, John W. Polak, Michael G.H. Bell, and Neil Thorpe, “Expected Disruption and Flexibility of Vehicle Users to Fuel Shortages”, presented at the 81st Annual Meeting of the Transportation Research Board (2002).

T17. Williams, Victoria, **Robert B. Noland**, and Ralf Toumi, “Air Transport Cruise Altitude Restrictions to Minimize Contrail Formation”, presented at the 82nd Annual Meeting of the Transportation Research Board (2003).

T18. Stathopoulos, Fotis G., and **Robert B. Noland**, “Induced Travel and Emissions from Traffic Flow Improvement Projects”, presented at the 82nd Annual Meeting of the Transportation Research Board (2003).

T19. Ashiru, Olu, John W. Polak, and **Robert B. Noland**, “Space-Time User Benefit and Utility Accessibility Measures for Individual Activity Schedules”, presented at the 82nd Annual Meeting of the Transportation Research Board (2003).

T20. **Noland, Robert B.**, 2002, “Motor Vehicle Fuel Efficiency and Traffic Fatalities”, presented at the 82nd Annual Meeting of the Transportation Research Board (2003)

T21. **Noland, Robert B.**, and Mohammed A. Quddus, “A Spatially Disaggregate Analysis of Road Casualties in England”, presented at the 82nd Annual Meeting of the Transportation Research Board (2003).

T22. **Noland, Robert B.**, and Matthew G. Karlaftis, “Policy Recommendations from Accident Models: Are the Results Specification-Sensitive?”, presented at the 83rd Annual Meeting of the Transportation Research Board (2004).

T23. **Noland, Robert B.**, and Mohammed A. Quddus, “An Analyses of Pedestrian and Bicycle Casualties Using Regional Panel Data”, presented at the 83rd Annual Meeting of the Transportation Research Board (2004).

T24. Ashiru, Olu, John W. Polak, and **Robert B. Noland**, “The Utility of Schedules: A Model of Departure Time Choice and Activity Time Allocation with Application to Individual Activity Schedules”, presented at the 83rd Annual Meeting of the Transportation Research Board (2004).

T25. **Noland, Robert B.**, Washington Y. Ochieng, Mohammed A. Quddus, Robin J. North, and John W. Polak, “The Vehicle Emissions and Performance Monitoring System: Initial Analysis of Tailpipe Emissions and Vehicle Performance”, presented at the 83rd Annual Meeting of the Transportation Research Board (2004).

T26. North, R.J., W.Y. Ochieng, M. Quddus, R.B. Noland and J.W. Polak, “Validation and Characterisation of a Vehicle Performance and Emissions Monitoring System”, presented at the 84th Annual Meeting of the Transportation Research Board (2005).

T27. Ishaque, Mohammed M. and **Robert B. Noland**, “Micro-simulation of Vehicle and Pedestrian Signal Timings: Minimizing Multi-modal Travel Times”, presented at the 84th Annual Meeting of the Transportation Research Board (2005).

T28. Schmöcker, Jan-Dirk, Mohammed A. Quddus, **Robert B. Noland**, and Michael G.H. Bell, “Transport Mode Choice of the Elderly and Disabled in London”, presented at the 84th Annual Meeting of the Transportation Research Board (2005).

T29. Quddus, Mohammed A., **Robert B. Noland**, and Washington Y. Ochieng, "Validation of Map Matching Algorithms using High Precision Positioning with GPS", presented at the 84th Annual Meeting of the Transportation Research Board (2005).

T30. Schmöcker, Jan-Dirk, Mohammed A. Quddus, **Robert B. Noland**, and Michael G.H. Bell, "Estimating Trip Generation of Elderly and Disabled People: An Analysis of London Data", presented at the 84th Annual Meeting of the Transportation Research Board (2005).

T31. **Noland, Robert B.**, William A. Cowart, Lewis M. Fulton, "Travel Demand Policies for Saving Oil During a Supply Emergency", presented at the 84th Annual Meeting of the Transportation Research Board (2005). (received Barry McNutt Award from Transportation Energy and Alternative Fuels Committees)

T32. Ishaque, Muhammed M., and **Robert B. Noland**, "Making Roads Safe for Pedestrians or Keeping them Out of the Way? - An Historical Perspective on Pedestrian Policies in Britain", presented at the 85th Annual Meeting of the Transportation Research Board (2006).

T33. Quddus, Mohammed A., **Robert B. Noland**, and Washington Y. Ochieng, "The Effects of Navigation Sensors and Digital Map Quality on the Performance of Map Matching Algorithms", presented at the 85th Annual Meeting of the Transportation Research Board (2006).

T34. Williams, Victoria A., **Robert B. Noland**, "Comparing the CO₂ emissions and contrail formation from short and long haul air traffic routes from London Heathrow", presented at the Annual Meeting of the Transportation Research Board (2006).

T35. North, Robin J., **Robert B. Noland**, Washington Y. Ochieng, John W. Polak, "Use of gaseous emission rates to model microscopic particulate matter emissions from a light-duty diesel vehicle", presented at the 85th Annual Meeting of the Transportation Research Board (2006).

T36. Ishaque, Mohammed M. and **Robert B. Noland**, "Micro-simulated comparisons of alternative signalized pedestrian crossings", presented at the 85th Annual Meeting of the Transportation Research Board (2006).

T37. **Noland, Robert B.** and John V. Thomas, "Multivariate analysis of trip-chaining behaviour", presented at the 85th Annual Meeting of the Transportation Research Board (2006).

T38. **Noland, Robert B.**, Mohammed A. Quddus, Washington Y. Ochieng, "The effect of the London Congestion Charge on road casualties: An intervention analysis", presented at the 85th Annual Meeting of the Transportation Research Board (2006).

T39. **Noland, Robert B.** and Zia Wadud, Review of Oil Demand Restraint Policies for Heavy Goods Vehicles, presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T40. Wadud, Zia, Daniel J. Graham, and **Robert B. Noland**, "Modeling fuel demand for different socio-economic groups", presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T41. Wadud, Zia, , and **Robert B. Noland**, Daniel J. Graham "Equity implications of tradable carbon permits for the personal transport sector", presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T42. Ishaque, Muhammad M. and **Robert B. Noland**, "Pedestrian Exposure to Vehicle Emissions", presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T43. Pejovic, Tamara, **Robert B. Noland**, Victoria Williams, and Ralf Toumi, "Calculating UK CO₂ emissions using real air traffic data", presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T44. Jiwattanakupaisarn, Piyapong, **Robert B. Noland**, Daniel J. Graham, John W. Polak, Highway Infrastructure Investment and Regional Employment Growth: A Dynamic Panel Regression Analysis, presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T45. Quddus, Mohammed A., Washington Y. Ochieng, **Robert B. Noland**, "Current Map Matching Algorithms for Transport Applications: State-of-the-art and Future Research Directions", presented at the 86th Annual Meeting of the Transportation Research Board (2007).

T46. Ochieng, Washington Y., Robin J. North, and Mohammed A. Quddus, **Robert B. Noland**, "Technologies to Measure Indicators for Variable Road User Charging", presented at the 87th Annual Meeting of the Transportation Research Board, 2008.

T47. Wadud, Zia, Daniel J. Graham, and **Robert B. Noland**, "Gasoline Demand with Heterogeneity in Household Responses", presented at the 87th Annual Meeting of the Transportation Research Board, 2008.

T48. **Noland, Robert B.**, Jan-Dirk Schmöcker, and Michael G.H. Bell, "Trip Chaining Behaviour of Older People: Effects of Medical Conditions and Urban Form", presented at the 87th Annual Meeting of the Transportation Research Board, 2008.

T49. Crôte, Amado, **Robert B. Noland**, and Daniel J. Graham, "Demand Estimation of Metro Usage in Mexico City", presented at the 87th Annual Meeting of the Transportation Research Board, 2008.

T50. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, "Firm Formation and Transport Infrastructure: A Study of Portugal", presented at the 87th Annual Meeting of the Transportation Research Board, 2008.

T51. Crôte, Amado, **Robert B. Noland**, and Daniel J. Graham, "An analysis of gasoline demand elasticities at the national and local levels in Mexico", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T52. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, "Estimating the spatial decay of labour market interactions using data on commuting flows", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T53. Law, Teik Hua, **Robert B. Noland**, and Andrew W. Evans, "The Sources of the Kuznets Relationship in Road Fatalities", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T54. Pejovic, Tamara, Victoria A. Williams, **Robert B. Noland**, and Ralf Toumi, "Factors affecting airport weather delay and the impact of climate change", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T55. Crôte, Amado, **Robert B. Noland**, and Daniel J. Graham, "Estimation of Road Traffic Demand Elasticities for Mexico City", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T56. Jiwattanakupaisarn, Piyapong, **Robert B. Noland**, and Daniel J. Graham, "Marginal productivity of expanding highway capacity", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T57. Karathodorou, Niovi, Daniel J. Graham, and **Robert B. Noland**, "Estimating the Effect of Urban Density on Fuel Demand", presented at the 88th Annual Meeting of the Transportation Research Board, 2009.

T58. **Noland, Robert B.**, Devajyoti Deka, Ranjit Walia, "A Statewide Analysis of Bicycling in New Jersey", presented at the 89th Annual Meeting of the Transportation Research Board, 2010.

T59. Jiwattanakulpaisarn, Piyapong, **Robert B. Noland**, and Daniel J. Graham, "Highway Infrastructure and Private Output: Evidence from Static and Dynamic Production Function Models", presented at the 89th Annual Meeting of the Transportation Research Board, 2010.

T60. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, "Impact of Transport Infrastructure on Firm Formation: Evidence from the Portuguese Municipalities", presented at the 89th Annual Meeting of the Transportation Research Board, 2010.

T61. Crôte, Amado; **Robert B. Noland**, and Daniel J. Graham, "An application of distance-based road user charges in the Mexico City Metropolitan Area", presented at the 89th Annual Meeting of the Transportation Research Board, 2010.

T62. Law, Teik Hua, **Robert B. Noland**, and Andrew W. Evans, "Factors Associated with the Enactment of Road Safety Laws: A Cross-country Panel Analysis", presented at the 90th Annual Meeting of the Transportation Research Board, 2011.

T63. Chatman, Daniel C., and **Robert B. Noland**, "Do Public Transport Investments Increase Agglomeration Economies? A Literature Review and A Research Agenda", presented at the 90th Annual Meeting of the Transportation Research Board, 2011.

Papers in Published Conference Proceedings

C1. Bernstein, Mark A., and **Robert B. Noland**, "Measuring the Impact of Pollution Regulations on Coal-Fired Power Plants", *Proceedings of 8th Annual North American Conference of the International Association of Energy Economists*, Boston MA, 1986, 193-196.

C2. **Noland, Robert B.**, "The Impact of Risk Perceptions on Bicycle Transportation", *The Bicycle: Global Perspectives*, papers presented at *Conference Velo Mondiale, Pro-Bike, Velo City*, Montreal, Quebec, 1992, 345-350.

C3. **Noland, Robert B.**, "Pedestrian Travel Times and Motor Vehicle Traffic Signals". *Proceedings of Pro-Bike Pro-Walk 96, the Ninth International Conference on Bicycle and Pedestrian Programs*, Portland, Maine, Sept. 1996, 193-201.

C4. Mullen, Maureen A., James H. Wilson, Jr., Laura Gottsman, **Robert B. Noland** and William L. Schroerer, "The Effect on Highway NOx Emissions of Abolishing National Speed Limits", Air and Waste Management Association sponsored conference, *The Emission Inventory: Key to Planning, Permits, Compliance and Reporting*, New Orleans, LA, 1996, 12pp.

C5. **Noland, Robert B.**, and Lewison L. Lem, "Induced Travel: A Review of Recent Literature and the Implications for Transportation and Environmental Policy", *European Transport Conference 2000*, Proceedings of Seminar D: Appraisal of Road Transport Initiatives, 183-210, Cambridge, 2000.

C6. **Noland, Robert B.**, John W. Polak, and Gareth Arthur, "An Assessment of Techniques for Modelling High-Occupancy Vehicle Lanes", *European Transport Conference*, Cambridge, 2001, 18pp.

- C7. Gordon, Andrew, Tom van Vuren, David Watling, John Polak, **Robert B. Noland**, Stuart Porter, and Nicholas Taylor, "Incorporating Variable Travel Time Effects into Route Choice Models", *European Transport Conference*, Cambridge, 2001, 19pp.
- C8. Polak, John, **Robert B. Noland**, Michael Bell, Neil Thorpe, and Diana Wofinden, "What Happens when the Pumps Run Dry? Experience from the 2000 Fuel Protest and its Policy Implications", *European Transport Conference*, Cambridge, 2001, 16pp.
- C9. Ashiru, Olu, John W. Polak, and **Robert B. Noland**, "The Utility of Schedules: A Model of Departure Time and Activity Time Allocation with Application to Individual Activity Scheduling", paper presented at the *10th International Conference of Travel Behaviour Research*, Lucerne, Switzerland, Aug. 2003, 44pp.
- C10. **Noland, Robert B.**, Victoria Williams, and Ralf Toumi, "Policies to Mitigate Contrail Formation from Aircraft", Air Pollution research report 83, *European Conference on Aviation, Atmosphere and Climate, Proceedings of a European Conference*, Friedrichshafen, Germany, 30 June to 3 July 2003, ed. Robert Sausen, Christine Fichter, and Georgis Amanatidis, p. 328-333, 2004.
- C11. Quddus, Mohammed A., Washington Y. Ochieng, and **Robert B. Noland**, "Integrated Positioning Algorithms for Transport Telematics Applications", *Proceedings of the Institute of Navigation GNSS 2004 Conference*, Long Beach, CA. (received "Best Presentation Award"), 2004, 12pp.
- C12. Quddus, Mohammed A., Washington Y. Ochieng, and **Robert B. Noland**, "Map Matching Algorithms for Intelligent Transport Systems Applications", presented at the 13th World Congress on Intelligent Transport Systems and Services, London, 2006, 7pp.
- C13. Ishaque, Muhammad M., and **Robert B. Noland**, "Pedestrian Friendly Traffic Control Signals to Reduce Exposure to Vehicle Pollutants", presented at the 13th World Congress on Intelligent Transport Systems and Services, London, 2006, 12pp.
- C14. Williams, Victoria, Arnab Majumdar, **Robert B. Noland**, Washington Y. Ochieng, and Ralf Toumi, "ITS in the Sky – Scope for Reducing Environmental Impacts of Aviation with Innovative Air Traffic Management Technologies", presented at the 13th World Congress on Intelligent Transport Systems and Services, London, 2006, 12pp.
- C15. Pejovic, Tamara, **Robert B. Noland**, Victoria Williams, and Ralf Toumi, "Calculating UK CO₂ emissions using real air traffic data", *Proceedings of an International Conference on Transport, Atmosphere and Climate (TAC)*, 26th to 29th June, 2006, Oxford, ed. By Robert Sausen, Anja Blum, David Lee, and Claus Brüning, 2007, 55-60.
- C16. Williams, Victoria, **Robert B. Noland**, and Ralf Toumi, "Operational impacts of trajectory adjustments to avoid ice-supersaturated regions", *Proceedings of an International Conference on Transport, Atmosphere and Climate (TAC)*, 26th to 29th June, 2006, Oxford, ed. By Robert Sausen, Anja Blum, David Lee, and Claus Brüning, 2007, 235-240.
- C17. Ishaque, Muhammed M., and **Robert B. Noland**, "Pedestrian exposure to vehicle emissions: the role of traffic signal timings", *Proceedings of an International Conference on Transport, Atmosphere and Climate (TAC)*, 26th to 29th June, 2006, Oxford, ed. By Robert Sausen, Anja Blum, David Lee, and Claus Brüning, 2007, 298-303.
- C18. Melo, Patricia C., Daniel J. Graham, and **Robert B. Noland**, "Firm Formation and Transport Infrastructure: A Study of Portugal", *Transport, Mobility and Regional Development*, Conference Proceedings of the Regional Studies Association Winter Conference, London, 2007, 58-59.
- C19. Jiwattanakulpaisarn, Piyapong, **Robert B. Noland**, Daniel J. Graham, and John W. Polak, "Road Infrastructure and Regional Employment: Granger Causality and Spatial

Spillover Effects”, *Transport, Mobility and Regional Development*, Conference Proceedings of the Regional Studies Association Winter Conference, London, 2007, 70-72.

Other Conference Papers not published in Proceedings

(Many of these papers represent research in more preliminary stages and final papers have generally been published after revisions)

- O1. **Noland, Robert B.**, Reed Wills, and Robert M Wirtshafter, "The Advantages of Automated Spreadsheets for Cogeneration Financial Analysis", *Proceedings of the Third Annual Microcomputers in Energy Conference*, Tucson, AZ, University of Arizona, 1988.
- O2. **Noland, Robert B.**, "Commuter Responses to Travel Time Uncertainty under Congested Conditions: Expected Costs and the Provision of Information", Presented at the *34th Annual Meeting of the Western Regional Science Association*, San Diego, Feb. 1995.
- O3. **Noland, Robert B.**, "Information in a Two-route Network with Recurrent and Non-recurrent congestion". Presented at the *Annual Meeting of the Regional Science Association International*, Washington, DC, 1996.
- O4. **Noland, Robert B.**, "Simulated Relationships Between Highway Capacity, Transit Ridership, and Service Frequency," Presented at the *International Symposium on Travel Demand Management*, Newcastle upon Tyne, UK, 1998.
- O5. **Noland, Robert B.**, and William A. Cowart, "Analysis of Metropolitan Highway Capacity and the Growth in Vehicle Miles of Travel", Presented at the *1999 Annual Association of Public Policy and Management Research Conference*; Washington, DC, 1999.
- O6. **Noland, Robert B.**, "Relationships between Highway Capacity and Induced Vehicle Travel", Presented at the *38th Annual Meeting of the Western Regional Science Association*, Ojai, CA, 1999.
- O7. **Noland, Robert B.**, "Analysis of Fatalities and Injuries Associated with Highway Capacity", *Universities Transport Studies Group 2000 Conference*, Liverpool, 2000.
- O8. **Noland, Robert B.**, "Induced Travel: A review of Recent Literature and the Implications for Transportation and Environmental Policy", presented at the *Annual Meeting of the Association of Collegiate Schools of Planning*, Atlanta, GA, 2000.
- O9. **Noland, Robert B.**, "Traffic Fatality Reductions: Is it Better Engineering or Better Medicine?", *World Conference on Transport Research*, Seoul, South Korea, 2001.
- O10. **Noland, Robert B.**, "Medical Treatment and Traffic Fatality Reductions in Industrialized Countries", presented at the *Traffic Safety on Three Continents* conference, Moscow, Russia, 19-21, 2001.
- O11. Williams, Victoria, **Robert B. Noland**, and Ralf Toumi, "Reducing the climate change impacts of aviation by restricting cruise altitudes", presented at the *Universities Transport Studies Group 2002 Conference*, Edinburgh and the *European Geophysical Society*, Nice, France, 2002.
- O12. Quddus, Mohammed A., **Robert B. Noland**, and Hoong Chor Chin, "An Analysis of Motorcycle Injury and Vehicle Damage Severity using Ordered Probit Models," presented at the *Universities Transport Studies Group 2002 Conference*, Edinburgh, 2002.
- O13. **Noland, Robert B.**, and Mohammed A. Quddus, "Improvements in Medical Care and Technology and Reductions in Traffic-related Fatalities in Great Britain", presented at the *2002 Annual Meeting of the European Regional Science Association*, Dortmund, Germany, 2002.

- O14. Majumdar, Arnab, **Robert B. Noland** and Washington Y. Ochieng, "A Spatial Analysis of Seat-belt Usage and Seat-belt Laws", presented at the *2002 Annual Meeting of the European Regional Science Association*, Dortmund, Germany, 2002.
- O15. **Noland, Robert B.**, and Lyoong Oh, "The Safety Effects of Changes in Infrastructure and Other Trends: A case study using Illinois HSIS data", presented at the Annual Meeting of the *Association of Collegiate Schools of Planning*, Baltimore, MD, 2002.
- O16. Ochieng, Washington Y., John W. Polak, **Robert B. Noland**, Lin Zhao, David Briggs, John Gulliver, Andrew Crookell, Ruthven Evans, Matt Walker and Walter Randolph, 2003, "The Foresight Vehicle Performance and Emissions Monitoring System", paper presented at the *Universities Transport Studies Group 2003 Conference*, Loughborough, 2003.
- O17. Majumdar, Arnab, **Robert B. Noland**, Washington Y. Ochieng, "An Analysis of the Spatio-Temporal Factors Affecting Aircraft Conflicts Based on Simulation Modelling", presented at the *2003 Annual Meeting of the European Regional Science Association*, Jyvaskyla, Finland, 2003.
- O18. Ashiru, Olu John Polak, **Robert B. Noland**, "Development and Application of an Activity Based Space-Time Accessibility Measure for Individual Activity Schedules", presented at the *2003 Annual Meeting of the European Regional Science Association*, Jyvaskyla, Finland, 2003.
- O19. Ochieng, Washington Y., **Robert B. Noland**, Mohammed A. Quddus, Robin North, and John W. Polak, "Preliminary Analyses of Vehicle Performance and Pollutant Data from the Vehicle Performance and Emissions Monitoring System", presented at the *Air and Waste Management Association, 96th Annual Conference and Exhibition*, San Diego, CA. 2003.
- O20. **Noland, Robert, B.** and Mohammed A. Quddus, "Congestion and Safety: A Spatial Analysis of London", presented at the *50th Annual Meeting of the North American Regional Science Council*, Philadelphia, and at *The Theory and Practice of Congestion Charging: An International Symposium*, London, 2003.
- O21. Williams, Victoria, **Robert B. Noland**, and Ralf Toumi, "Aircraft emissions and climate change: Atmospheric variability and the implications for climate policy", presented at the *13th World Clean Air and Environmental Protection Congress*, London, UK, 2004.
- O22. Williams, Victoria and **Robert B. Noland**, "Adjusting aircraft cruise altitudes for atmospheric conditions to reduce climate impacts", presented at *Universities Transport Studies Group 2005 Conference*, Bristol, 2005
- O23. **Noland, Robert B.**, and Mohammed A. Quddus, "Flow improvements and vehicle emissions: effects of trip generation and emission control technology", presented at *Universities Transport Studies Group 2005 Conference*, Bristol, 2005
- O24. Williams, Victoria., **Noland, Robert B.** and Toumi, Ralf, "Adjusting aircraft cruise altitudes for atmospheric conditions to reduce the climate impact due to contrail formation", presented at the *16th Global Warming International Conference and Expo*, New York, 2005.
- O25. Ishaque, Mohammed M., **Robert B. Noland**, "Pedestrian Modeling in Urban Road Networks: Issues, Limitations and Opportunities Offered by Micro-simulation", presented at the *9th Annual Computers in Urban Planning and Urban Management*, London, 2005.
- O26. Quddus, Mohammed A., **Robert B. Noland**, and Washington Y. Ochieng, "Map Matching for Location Based Services Applications", presented at the *9th Annual Computers in Urban Planning and Urban Management*, London, 2005.
- O27. **Noland, Robert B.** and Mohammed A. Quddus, "Flow Improvements and Vehicle Emissions: Effects of Trip Generation and Emission Control Technology", presented at the *9th Annual Computers in Urban Planning and Urban Management*, London, 2005.

- O28. **Noland, Robert B.**, "Transport and Environmental Planning: Research, Rhetoric and Reality", presented at the *2005 Annual Meeting of the European Regional Science Association*, Amsterdam, 2005.
- O29. **Noland, Robert B.** and John V. Thomas, "Multivariate analysis of trip-chaining behaviour", presented at the *2005 Annual Meeting of the European Regional Science Association*, Amsterdam, 2005.
- O30. Williams, Victoria A., and **Robert B. Noland**, "Comparing the CO₂ emissions and contrail formation from short and long haul air traffic routes from London, Heathrow", presented at the *2005 Annual Meeting of the European Regional Science Association*, Amsterdam, 2005.
- O31. Williams, Victoria A., and **Robert B. Noland**, "Variability of Contrail Formation Conditions and the Implications for Policies to Reduce the Climate Impacts of Aviation", *6th USA/Europe Seminar on Air Traffic Management Research and Development*, Baltimore, 2005.
- O32. Ishaque, Muhammed M., and **Robert B. Noland**, "Trade-offs between vehicular and pedestrian traffic using micro-simulation methods", presented at the *16th International Symposium on Transportation and Traffic Theory*, College Park, MD, 2005.
- O33. Ishaque, Muhammed M., and **Robert B. Noland**, "Signal coordination for bicycle traffic: A network optimization study using micro-simulation", presented at the *Velo City 2005 Conference*, Dublin, Ireland, 2005.
- O34. **Noland, Robert B.** and Mohammed A. Quddus, "Congestion, Induced Trips, and Vehicle Emissions", presented at the *Successes and Failures in Traffic Demand Management Symposium*, Edinburgh, 2005.
- O35. Williams, Victoria and **Robert B. Noland**, "Comparing the CO₂ emissions and contrail formation from short and long haul air traffic routes from London, Heathrow: Update with detailed aircraft routing", presented at the *Open Meeting of the Human Dimensions of Global Environmental Change Research Community*, Bonn, Germany, 2005.
- O36. Wadud, Zia and **Robert B. Noland**, "Equity Implications of Carbon Rationing in the Personal Transport Sector", presented at the *Open Meeting of the Human Dimensions of Global Environmental Change Research Community*, Bonn, Germany, 2005.
- O37. Williams, Victoria and **Noland, Robert B.**, "Comparing the CO₂ emissions and contrail formation from short and long haul air traffic routes", presented at the *International Seminar on Current Issues in Aviation Technology, Integration and Operations*, Mumbai, India, December 2005.
- O38. Williams, Victoria, **Robert B. Noland**, Arnab Majumdar, Ralf Toumi and Washington Y. Ochieng, "Mitigation of Climate Impacts with Innovative Air Transport Management Tools", *E-CLAT Climate Change and Tourism Conference: Climate Change, the Environment and Tourism: The Interactions*, Tilburg, Netherlands, 2006.
- O39. North, Robin J., **Robert B. Noland**, Washington Y. Ochieng, and John W. Polak, "Modelling of particulate matter mass emissions from a light-duty diesel vehicle", *International Conference on Transport, Atmosphere and Climate*, Oxford, 2006.
- O40. **Noland, Robert B.**, Behavioural and Analytical Considerations in Transport Safety Policy, paper presented at the 11th International Conference on Travel Behaviour Research, Kyoto, August 2006.
- O41. **Noland, Robert B.**, Mohammed A. Quddus, Washington Y. Ochieng, "The effect of the London Congestion Charge on road casualties: An intervention analysis", presented at *Universities Transport Studies Group 2006 Conference*, Dublin, 2006.

O42. Jiwattanakupaisarn, Piyapong, **Robert B. Noland**, Daniel J. Graham, John W. Polak, "Do Roadway Expansions Contribute to County Employment Growth? Evidence from North Carolina", presented at *Universities Transport Studies Group 2006 Conference*, Dublin, 2006.

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- O66. **Noland, Robert B.**, Patrick P. Brennan, Nicholas J. Klein, "A Spatial Analysis of Pedestrian Fatalities and Injuries in New Jersey", presented at the *Annual Meeting of the Association of Collegiate Schools of Planning*, Crystal City, VA, 2009
- O67. Chatman, Daniel G. and **Robert B. Noland**, "Challenges in estimating the economic impacts of transit investments beyond cost and travel time savings", *56th Annual Meeting of the North American Regional Science Council*, San Francisco, 2009.
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- O69. Chatman, Daniel C., and **Robert B. Noland**, "Estimating the Impacts of Public Transit Projects on Agglomeration Economies", presented at the *Annual Meeting of the Association of Collegiate Schools of Planning*, Minneapolis, 2010.

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CN2. **Noland, Robert B.** and Mohammed A. Quddus, "Modal Vehicle Emissions and Induced Travel Demand", presented at the 13th *World Clean Air and Environmental Protection Congress*, London, UK, 2004.

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- R15. **Noland, Robert B.**, Review of statistical methodology for child safety study, report to Jacobs-Babtie, for the Dept. of Transport, 2004.
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Other articles, newspaper op/ed pieces, and letters:

A1. Letter: "Retesting drivers of all ages could save lives", [The Philadelphia Inquirer](#), May 13, 1991

A2. Op/Ed: "Bicyclists benefit the city", [The Philadelphia Inquirer](#), July 20, 1991.

A3. Letter: "Conrail controversy", [New Scientist](#), November 23, 2002

A4. Feature Article: Fulton, Lew and **Robert Noland**, 2005, "Pricing and Taxation-Related Policies to Save Oil in the Transport Sector", [Energy Prices and Taxes](#), 4th Quarter 2005, International Energy Agency, Paris, France, xi-xvi.

A5. Article: Noland, Robert B., and Victoria A. Williams, 2008, "Not-so-jolly Jack Tar", [The House Magazine: the Parliamentary Weekly](#), No. 1263, Vol. 33, 26 May 2008, p. 33.

A6. Article: Rubin, Jonathan D., and Robert B. Noland, 2010, "Transportation and Climate Change: Developing Technologies, Policies and Strategies", [TR News](#), no. 268, May-June 2010, p. 3-5.

A7. Article: Noland, Robert B., "Legislative and Regulatory Moves to Reduce Transportation's Greenhouse Gas Emissions", TR News, no. 268, May-June 2010, p. 12.

DETAILS OF PAST AND CURRENT CONTRIBUTIONS TO EDUCATION

Current teaching

Transportation and Land Use, Graduate, Rutgers University, Fall 2010
Transportation, Environment and Land use, Graduate and Undergraduate, Rutgers University, 2008-2009

Previous teaching

Research Methods, Undergraduate, Rutgers University, Fall 2009
Transport and Traffic Engineering, Undergraduate, Imperial College, 2000-2008 (15 contact hours)
Transport and the Environment, Graduate, Imperial College, 2000-2007 (25 contact hours)
Transport Policy, Graduate, Imperial College, 2002-2007 (3 contact hours)
Microeconomic Theory, Graduate, Imperial College, 2003-2007, combined with undergraduate, 2005-2007 (15 contact hours)
Sustainable Development, Graduate (MSc module in Sustainable Development, Imperial College, 2004 (6 contact hours)
Transport and Energy, Graduate (MSc in Sustainable Energy), Imperial College, 2007 (4 contact hours)
Civil Engineering Design Course, Undergraduate, Imperial College, 2000-2002 (9 contact hours)

Guest lecturing in courses at other universities

University of Maryland (1997, 1998), undergraduate course on Energy Policy
University of California, Irvine (1994), undergraduate Geography course

Guest lecturing at Rutgers

Principles of Public Policy (Fall 2010), lecture on transportation policy
Transportation Studio (Fall 2010), lecture on bike sharing
Freight planning Studio (Spring 2011), lecture on environmental impacts of freight
Transportation Security seminar (Spring 2011), lecture on climate change impacts
Principles of Public Policy (Summer 2011), on-line recorded video lecture on transportation policy

RESEARCH

Motivation and Objectives

Research in the area of Transport is inherently multi-disciplinary and requires skills and knowledge that span a range of engineering, science and economic domains. This is particularly true of the area of Transport Policy and the Environment which requires knowledge of how individual behavior will change, how economic costs and benefits can be evaluated, how environmental impacts may occur, technological issues and solutions, planning and community impacts, and how the political system reacts and responds to these challenges. My research area covers many of these issues with a key focus on how transport policies both affect and interact with environmental outcomes.

Developing the appropriate techniques necessary for evaluating transport issues is one of the key intellectual challenges involved in this work. My approach to understanding and examining these issues is quantitative in nature. This involves the development and application of statistical modeling and simulation techniques, the collection of behavioral data,

the use of existing data sources, and the development and testing of models of human behavior to examine alternative hypotheses.

Much of the existing knowledge on how Transport Policy interacts with the Environment has been based upon deterministic methods of analysis. My basic approach is to look at these issues by incorporating elements of human behavior into my modeling approaches. This leads to stochastic modeling systems that may result in unanticipated results, but provide a much deeper understanding of the fundamental relationships involved.

Research in these areas may often appear to be fragmented and disparate. Bringing this knowledge together with a coherent policy focus is also a major objective. One of my objectives is to overcome these barriers to enable solutions to be found to many of the problems associated with transport and the environment. As the discussion that follows will highlight, transport policy covers a broad range of topics that are critical to decision makers in dealing with real problems that exist. Much of my research covers multiple areas with the focus always returning to the key question of assessing transport and environmental problems and finding effective policy solutions.

Achievements and Current Research

Since 1992 when I completed my doctoral dissertation, I have made major progress in advancing understanding of transport and environmental issues. Much of my research is widely cited in academic peer-reviewed journals, government reports, advocacy papers, judicial proceedings, and in testimony before government committees. This success has spurred other academics to study similar research areas and to update lecture materials based on some of the knowledge gained from my research (some of my research papers are required readings in undergraduate and graduate curricula in transport). Policies on transport in many countries have changed partly in response to the results of some of this research. These areas will be highlighted in the following paragraphs.

Bicycle Transport

My initial research focus was in the area of non-motorized transport, specifically bicycles as a means of transport. This is an area that, at the time, had not received much attention from analytical transport researchers. My work sought to understand why individuals chose to use bicycles as a mode of transport for commute trips, with a focus on understanding how perceptions of risk (or relative safety) influenced individual decisions and behavior.

This was the first academic work to develop and estimate a mode choice model that examined the choice of selecting a bicycle as a mode of transport. Over the last 10 years, many practitioners have updated their modeling systems to include bicycle transport in their models of regional transport systems, largely in response to policy changes in the early 1990's. My work, which was based on data from Philadelphia, was later cited in reports that supported a major Federal investment in bicycle lanes within the City of Philadelphia. Government policy, at both the state and federal level, also seeks to promote bicycles as a viable mode of transport, something that was not viewed seriously at the time I began this stream of research. Recent work has again used data from New Jersey to examine how various area-based and demographic measures are associated with frequency of bicycling.

Reliability of Travel

Further modeling work examined how behavior may change in response to the reliability of transport, especially how this may vary over the course of a day. This led to work (as a post-doctoral fellow under the supervision of Prof. Kenneth Small) on developing and empirically testing models of travel time reliability. Results clearly showed that travelers make trade-offs based on the reliability of the transport network. Understanding these type of trade-offs provides essential information for cost/benefit analysis of major infrastructure projects. This is an area of research that has expanded considerably in the last few years and my research

with Prof. Small is frequently cited as some of the seminal work in this area. Recently I have received numerous papers to review in this area, extending and building upon our research.

Induced Travel

One of the behavioral reactions of travelers that has long been debated in the transport literature, is how additional road capacity may affect the demand for travel. This type of behavioral reaction would tend to undermine the benefits of adding road capacity to reduce traffic congestion, while also leading to increased environmental effects. My work in this area included the development of a series of statistical models to examine this hypothesis (known as induced travel) in more detail. The intellectual challenge with this type of work is to develop and estimate statistical models that allow the testing of relevant hypotheses. In this case, building models that allow a causal relationship to be established was an additional challenge. My research in this area produced the first analysis that established a causal relationship between road expansion and increased levels of travel, which provided a major advance in the understanding of this phenomenon.

My work in this area has been widely cited in academic journal papers, legal documents, advocacy papers, and in US congressional testimony. At least two major conferences were initiated to examine these areas in greater depth. In addition, my work spurred other academics to examine this hypothesis and led to the publication of several other research papers, all of which generally confirmed my results. This work has affected policy in many countries and is seen as a major contribution to establishing better assessment methods for transport projects while evaluating the environmental impacts of travel behavior changes.

I have also examined the pollutant emissions associated with induced travel using micro-simulation models. This work suggests that reductions in emissions associated with the smoothing of traffic flow are quickly lost when new trips are generated. This research is intimately linked to environmental assessment of transport projects, as political debates over project scope normally develop over environmental effects and whether the project increases overall emissions.

Road Safety

My work on induced travel led me to examine similar behavioral effects associated with road safety. Generally, traffic engineers have assumed that building new roads will lead to net safety benefits. However, this would tend to not account for the effect of new traffic that might be generated. This, of course, is also important for cost / benefit analysis of road projects as safety evaluation is often used as the justification for many projects. My research suggests, that new infrastructure at best, provides no safety benefit, and that in some cases actual traffic fatalities may increase leading to real economic costs. This work has a clear link to environmental analysis as the justification used in environmental assessments that safety will be improved often trumps negative environmental impacts; however, if this information is wrong, the benefits of many projects disappear.

This work has led to academic debates within the road safety community, including a workshop at the Annual Meeting of the Transportation Research Board on issues associated with modeling in safety research. This has heightened awareness amongst transport safety researchers of these issues and I have further produced a working manuscript that summarizes many of these issues. Within the planning literature, this is an area that has gained recent attention with new analysis expanding on my original work, with a focus on how road design in urban areas can adversely affect safety.

As part of this work, I also developed methods for analyzing how medical care and technology improvements over the last 30 years have dramatically increased road crash survival rates. This was in itself a challenge, as it required the creative development of relevant proxy variables and the application of detailed statistical models. This is an area that I have analyzed in some detail, using British, US, and international databases. This research has attracted media attention including an article in the British Medical Journal summarizing the British analysis results. Additional safety work has involved some of the first research to use

detailed spatial data to examine factors associated with road safety, including links with area-based deprivation, and the estimation of geo-spatial techniques to examine the usage of safety belts. More recently, we have evaluated how the London congestion charge affected road safety finding that while net impacts are zero, there has been a small increase in motorcycle crashes. This is a good example of how a broader analysis of transport policies can find unexpected effects using detailed stochastic modeling approaches. Current work in spatial modeling of safety is applying Bayesian analysis techniques to analyze pedestrian safety in New Jersey.

Energy Policy

Research in the area of energy policy has been of growing interest and has direct links to climate change research (see below). Some of my early work as a graduate student was in examining costs associated with nuclear power and examining energy conservation programs. My most recent work in this area has focused on transport demand management strategies for energy demand reduction. Work commissioned by the International Energy Agency (IEA) sought to examine which policies are most effective during energy supply crises, and how petroleum demand could be rapidly reduced. This research led to a book being produced for the IEA which provides guidance to member countries on how to develop their own contingency plans for reducing oil consumption. Some of these policy approaches are now being considered as a means to both off-set high petroleum prices and also to reduce climate impacts from transport. Several countries have used the guidance to update and revise their contingency plans.

Pedestrians

Recent work has developed methods to simulate pedestrian movements and interactions with vehicles. This work examines how travel times of both vehicles and pedestrians are changed when alternative traffic signal policies are implemented. This was extended to also analyze pedestrian exposure to pollutants as an additional criteria in the assessment of different signal timing cycles. Carbon emissions and energy consumption can also be evaluated using these methodologies.

Our research into pedestrian policy and the engineering approaches currently used to provide pedestrian facilities also involved an historical analysis of UK policy. This revealed a lack of research-based evidence on how cities have attempted to deal with the safety of pedestrians and how this has systematically reduced their mobility. This was an effort that went beyond traditional disciplinary boundaries and engaged in historical archival research. We were invited to present this research at the History department at the University of York and my researcher accepted this invitation.

Recent work on pedestrians has involved an analysis of the frequency of walking using data collected in New Jersey. Our estimation included a structural model that shows a causal relationship that increased car ownership by households reduces walking frequency. The more interesting result is that car ownership is determined by the built environment, thus, more walkable areas tend to have lower car ownership. This work is new, but I expect it will be considered a major advance in our understanding of pedestrian behavior.

Technology and Policy

One component of my research has been to collaborate with experts on emissions and air quality sensor technology in order to collect data to inform development of transport and environmental policies. This has occurred primarily through involvement with two EPSRC funded projects, VPEMS and more recently MESSAGE (with respectively Prof. Ochieng and Prof. Polak who led these projects).

The VPEMS project was conducted in collaboration with industrial partners and resulted in the development of a low cost tailpipe emissions device that was fully integrated with tracking and communications technologies. One critical part of this project was the development of sophisticated map-matching algorithms that allowed tracking and positioning of vehicles based on GPS data. Algorithms developed as part of this project have been adopted by industry and implemented in some practical applications. The other primary focus of the VPEMS project was analysis of the data collected. This included real-time particulate emissions which were linked with vehicle operating parameters and ultimately led to development of emissions forecasting tools that can be used to analyze the impact of various traffic and transport policies. My contribution to this effort was in the specification of requirements for pollution monitoring, development of data collection procedures, modeling of the data that was collected, and analysis of the policy impacts of different traffic management procedures.

The MESSAGE project is a large multi-university collaboration focused on developing computer software (i.e., e-science) that can collect and analyze data from a large number of mobile sources in real-time. The focus is on assessing air quality by using vehicles for data collection, allowing a much better resolution of where people are affected by emissions from vehicles.

Climate Change

Research in the area of climate change is gaining increasing interest. I have been involved with determining the research priorities of the Imperial College Grantham Institute for Climate Change. The focus on climate change is a major component of much of my research and touches on many of the related topics (e.g. non-motorized transport, energy policy and behavioral modeling to examine policy options). More direct analysis of climate change issues have fallen into three separate streams of research, two of which have had major impacts, while the third has just recently been completed.

First is our work on the climate issues surrounding air transport which has received major public and political attention in recent years. Climate change impacts of aviation are not caused solely by carbon emissions. A growing body of research suggests that formation of contrails (vapor trails) results in far more radiative forcing (due especially to triggering the formation of cirrus clouds) than direct emissions of carbon emissions. Research in this area examined policies to mitigate contrail formation by altering flight paths such that aircraft would fly in atmospheric zones that are less conducive to contrail formation. Airspace simulation models were used to examine the net impact on carbon emissions, travel times, and air traffic controller workload. At least for European air space, carbon emissions and travel time increases are relatively unimportant, when looking at both planned altitude changes and unplanned diversions around super-saturated airspace. In terms of implementing this type of policy, however, the capacity of the air traffic control system to maintain current levels of safety poses more difficulties and we are currently involved with a European Commission project seeking to provide guidance on how air space can be redesigned to minimize environmental and climate impacts.

This work has received substantial interest from the academic community (primarily those working in atmospheric physics and chemistry). Our initial work was cited in a report by the Royal Commission on Environmental Protection and more recently in the assessment report of the International Panel on Climate Change.

Work in this area has been advanced by my research assistant, Dr. Victoria Williams, who received funding for a five year EPSRC advanced research fellowship (starting in 2004) and has been conducted in collaboration with Prof. Ralf Toumi from the Physics Department. Since obtaining her funding Dr. Williams has become recognized as one of the key experts in the area of aviation and the environment, recently contributing chapters to two texts on this topic.

Second, I have conducted research that examines the safety issues associated with improving the fuel economy of cars. Arguments have been made over many years that weight and size reductions to improve fuel economy have resulted in more traffic fatalities. Previous research in this area was limited by the use of inadequate statistical methods. The lack of rigorous academic analysis of this issue impeded changes in US fuel economy standards for over 25 years. My work in this area led to the estimation of detailed statistical models that control for the many other factors that have affected overall traffic safety. Results suggest that while weight and size reductions made in the 1970's probably had adverse effects, these have largely disappeared since both vehicle safety technologies have improved the safety of vehicles and fuel efficiency technologies have enabled efficiency increases without major reductions in vehicle size and weight. This is an important topic for developing policies to achieve greater sustainability in the transport sector, by reducing emissions of carbon dioxide that contribute to climate change. This work has contributed to policy changes in both the US and the European Union. The US has increased fuel economy standards for the first time in over 30 years that will lead to major reductions in carbon emissions in transport. The EU has also implemented carbon emission standards for new vehicles, the first time that these have been regulated in Europe.

The other area of research related to climate change has been an examination of personal carbon trading in the road transport sector. This work has involved estimating statistical models of road fuel consumption that controls for individual level factors, such as income and residential location. This is a key contribution to the area of both fuel demand research and an understanding of the potential welfare implications of various approaches to carbon trading. This research was cited by reports presented at an international roundtable sponsored by the International Transport Forum and the International Energy Agency.

Recent work on climate change has been development of a methodology for assessing the greenhouse gas emissions from the construction of transport facilities. This includes roads, bridges, and transit. We are developing a life-cycle analysis approach that can be applied to projects in New Jersey. This project has the potential to shape the way that contracts are specified in the state and ultimately may provide incentives for contractors to use more carbon efficient procedures on construction projects.

Economic impacts

A growing area of research is an evaluation of how transport investments affect the economy. Over the last few years, in collaboration with Dr. Graham at Imperial College, we have estimated a variety of models that examine the employment impacts from road infrastructure. These have generally found only small effects, especially when spatial correlation is controlled for. We have also examined the marginal productivity of road infrastructure and found that in general, these probably do not exceed the marginal costs of new road construction. Our analysis was based on US data. This type of research can potentially be influential in policy decisions and we hope to complete the final work in this area prior to debate on the reauthorization of transportation legislation in the US.

Another active area of research is being conducted in collaboration with Dr. Chatman. This is a TCRP funded study to examine the agglomeration benefits of transit. We are examining this issue using both a nationwide database of metro areas and two regional databases of firm-level data. Results of our statistical analysis will be eventually used to develop methods that transit agencies can use to estimate agglomeration externalities.

Travel behavior research

Research in travel behavior continues to be a focus. Recent work, discussed above, has examined pedestrian and bicyclist behavior. Other work has examined the complexity of trip chaining and individual level factors associated with trip chaining behavior. This has focused on examining land use and accessibility and how this affects trip-chaining behavior. Understanding these issues has implications for how cities are developed and potentially

restructured to minimize carbon emissions in the future. The other focus of my travel behavior research has been to examine the behavior of older people, both their mode choice, trip generation and also their trip chaining behavior. The factors associated with the travel of older persons and the potential disabilities they may face are of interest to policy makers seeking to provide mobility to these population groups in a sustainable manner.

Two new areas of travel behavior research are currently under development. First, our experience with analyzing older people's travel behavior has introduced questions of what the appropriate survey techniques are. In collaboration with Dr. Weiner of the Bloustein Survey Research Center we are planning to conduct a detailed assessment of strategies to reach and sample hard to reach older populations. In addition, we are planning to seek funding to assess the state of the art in stated preference research in transport. Our initial review of these issues has identified many unresolved issues with how survey research is conducted.

Developing Countries

Recent work has examined the relationship between economic development and road safety. This is a major issue in rapidly developing countries that are experiencing large increases in road fatalities. Our research has been focused on understanding how road fatalities increase in the early stages of development but then tend to decrease as incomes increase. This has typically been seen as a response to institutional change and public demands for greater safety investments by the government. A key research question is whether this will occur in more authoritarian regimes that may be less responsive to public demands and that may also suffer from institutional corruption. While it may not be readily apparent that there is a link to climate policy in this research, a key issue is maintaining a mix of travel modes and in particular non-motorized modes in fast growing urban areas. These modes tend to be more vulnerable and when unsafe policies are followed this can increase the desire for motorization and resulting carbon emissions.

Additional work on developing country issues is an analysis of fuel and travel demand elasticities in Mexico and Mexico City. One of the key challenges in Mexico City is that as incomes increase people tend to not use public transport systems. Finding the right mix of policies to both increase public transport usage and provide mobility in a sprawling city is one of the objectives of this research. It is not clear that developing countries will follow the same path to motorization that western countries have already followed, so there are opportunities to mitigate environmental and climate impacts from transport before this happens.

RESEARCH GRANTS AND CONTRACTS OBTAINED: Imperial College London

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support defined in £s sterling*	Role e.g. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
DTLR	Travel Time Variability Research	24	Jan 2000	£3960		Prof. John Polak	
EPSRC	The Development and Demonstration of a Vehicle Performance and Emissions Monitoring System	36	Oct 2000	£224,137		Prof. Washington Ochieng, Prof. John Polak, Prof. Paul Elliot	
DETR	Review of High Occupancy Vehicle (HOV) Lanes	6	Oct 2000	£7150	PI for project	Prof. John Polak	
Air BP	Review of UK and European Aviation Policy	1	Nov 2000	£1500	PI for project	Dr. Arnab Majumdar	
Commission for Integrated Transport and Transport for London	Travel Behaviour Impacts of the 2000 Fuel Protests	9	Nov 2000	£30,000		Prof. John Polak, Prof. Mike Bell, Mr. Neil Thorpe	
DETR	Social Inclusion: Transport Aspects	12	Jan 2001	£37,650		Prof. John Polak, Dr. Tom Van Vuren, Dr. Brian Morton	
The Royal Society	Conference grant		Jan 2001	£610	PI for project		
EPSRC	A Model of Aviation Air Space, Emissions, and the Impact on Climate Change	15	July 2001	£58,659	PI for project	Prof. Ralf Toumi	

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support defined in £s sterling*	Role eg. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
EPSRC	The Influence of Transport Infrastructure and Medical Technology on Traffic Fatalities	12	Aug 2001	£62,409	PI for project		
The Royal Society	Conference grant		Jan 2002	£790	PI for project		
European Commission (DG-TREN)	Cost / Benefit Analyses of Road Safety Improvements	2.5	Dec 2002	€15,000 (£10,067)	PI for Imperial	ICF Consulting	Under sub-contract to ICF Consulting, Ltd.
The Royal Society	Conference grant		Jan 2003	£630	PI for project		
International Energy Agency	Oil Demand Restraint in the Transport Sector	6	Sept 2003	€39,000 (£26,530)	PI for project	ICF Consulting	
Corporation of London	Travel grant		Aug 2003	£387	PI for project		
Transport for London	Door-to-Door Travel Demand Analysis	6	Dec 2003	£94,000		Prof. Mike Bell	
Rees Jeffreys Road Fund	PhD Student Bursary for Moazzam Ishaque	36	Jan 2004	£18,000	Supervisor of student		
Royal Academy of Engineering	International Travel Grant		Jan 2004	£400	PI for project		
EPSRC	Research Fellowship for Dr. Victoria Williams	60	Jan 2004	£193,729	Supervisor for Fellowship	Dr. Victoria Williams, Prof. Ralf Toumi	
EPSRC	Integration of Multi-Modal Reliability in the Assessment of Transport Schemes	36	Jan. 2004	£292,982		Prof. John Polak	

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support defined in £s sterling*	Role eg. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
Centro Mexicano de Derecho Ambiental and Institute for Transportation and Development Policy	Transportation and Air Quality Legislative Reform in the Federal District of Mexico	6	Jan. 2004	\$3000 (£1715)	PI for project		
The Royal Society	Travel grant		Feb 2004	£745	PI for project		
Transport for London	Pedestrians and micro-simulation modelling	6	May 2004	£16,500	PI for Imperial	Babtie, Ltd.	Under sub-contract to Babtie Ltd.
Volvo Research and Educational Foundations	Estimating the Increase in Emissions Associated with Induced Travel from Road Capacity Expansions and Traffic Flow Improvement Projects	12	June 2004	SEK 630,000 (£47,566)	PI for project		
Jacobs-Babtie	Review of statistical methodology for child safety study	1 day	Sept 2004	£770	PI for project		
EPSRC	Impact of climate change on UK air transport	36	Oct 2004	£72,229	PI for project	Prof. Ralf Toumi, Dr. Victoria Williams	

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support defined in £s sterling*	Role eg. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
OYBike Systems, Ltd.	An Evaluation of the OYBike System	6	Oct 2004	£11,200	PI for project		Indirectly funded by the London Development Agency and Transport for London
Rees Jeffreys Road Fund	Support for Particulate Emissions Monitoring	2 weeks	Dec 2004	£5,400	PI for project	Prof. Washington Ochieng, Prof. John Polak	
Highways Agency	Instantaneous Vehicle Emission Monitoring	3	Jan 2005	£17,885	PI for project	Prof. Washington Ochieng, Prof. John Polak	Under subcontract to Transport Research Laboratory
The Royal Society	Travel grant		Feb 2005	£690	PI for project		
Royal Academy of Engineering	International Travel Grant		July 2005	£700	PI for project		
Namtek	Map-matching Algorithms	3	Nov 2005	£30,000		Prof. Washington Ochieng	
International Energy Agency	Review of Policies and Analytical Requirements to Assess Oil Demand Restraint for Heavy Goods Vehicles	3	Feb 2006	€ 13,900 (£9450)	PI for project		
The Royal Society	Travel grant		Feb 2006	£825	PI for project		
Royal Academy of Engineering	International Travel Grant		June 2006	£900	PI for project		

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support defined in £s sterling*	Role eg. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
EPSRC and Dept. for Transport	Pervasive Mobile Environmental Sensor Grids	36	Oct 2006	£1,443,620		Prof. John Polak, Prof. Washington Ochieng, Prof. John Darlington, Prof. Yike Guo, Prof. Kin Leung, Dr. John Hassard	Large consortium includes Cambridge, Leeds, Newcastle and Southampton plus other departments at Imperial
ESRC	Visiting Academic, Dr. Levinson: The Co-Evolution of Transport Networks and Land Use	11	Oct 2006	£79,950	PI for project	Prof. David Levinson, visiting academic from Univ. of Minnesota	
European Commission	Cooperative Approach to Air Traffic Services II (CAATS II)	36	Nov 2006	€ 231,879 (£156,412)	PI for project	Dr. Victoria Williams	Member of consortium led by ISDEFE (Madrid, Spain)
The Royal Society	Travel grant		Feb 2007	£905	PI for project		
Royal Academy of Engineering	International Travel Grant		May 2007	£700	PI for project		
Volvo Research and Educational Foundations	Deprivation and Road Safety	12	Oct 2007	SEK 640,000 (£47,200)	PI for project	Dr. Daniel Graham	
Horizon Scanning Centre	Review of Delta Scan Outlooks		Nov 2007	£700	Small contribution to larger project	Imperial College Consultants	
The Royal Society	Travel grant		Feb 2008	£850	PI for project		

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support defined in £s sterling*	Role eg. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
Royal Academy of Engineering	International Travel Grant		Apr 2008	£600	PI for project		

RESEARCH GRANTS AND CONTRACTS OBTAINED: Rutgers University

Source of Funds	Title of Project	Duration (months)	Date of Start	Total Value of Support	Role eg. are/were you the Principal Investigator?	Names of other grant or Contract Holders (if any)	Other Comments
Transit Cooperative Research Program	Methodology for Determining the Economic Development Impacts of Transit Improvements	18 months	Nov 2008	\$500,000	Became PI effective Sept 2009	Dan Chatman	
New Jersey Association of Realtors, Governmental Research Foundation	An evaluation of property values in New Jersey transit villages	6 months	June 2009	\$50,000	PI for project		
New Jersey Department of Transportation	Lifecycle carbon footprint analysis of transportation capital projects	15 months	July 2009	\$302,938	PI for project		
National Science Foundation	IGERT: Solutions for Renewable and Sustainable Fuel in the 21st Century	60 months	Sept 2009	\$3,198,175	Named on grant	Eric Lam, Dept of Plant Biology and Pathology is PI	
Region II,	Pedestrian Behavior in	15	Jan 2010	\$50,000	PI for project		

University Transportation Research Center	New Jersey	months					
Transit Cooperative Research Program	Assessing and Comparing Environmental Performance of Major Transit Investments	18 months	Jan 2010	\$33,370	PI for Rutgers	Chris Porter, Cambridge Systematics is PI	
New Jersey Department of Transportation	Measuring Benefits of Transit-Oriented Development	24 months	Jan 2011	\$318,615	PI for project		
Rutgers Transportation Coordinating Council / Federal Transit Administration	A Cross-sectional Time-series Analysis of Agglomeration Impacts of Transit	6 months	June 2011	\$20,000	PI for project	Daniel Chatman	
New Jersey Department of Transportation	Carbon Footprint Estimator Phase II	15 months	Oct 2011	\$170,032	PI for project		

PhD STUDENT SUPERVISION, Rutgers University

PhD, Chair of committee, Rutgers University Bloustein School

Nicholas Klein, 2010 – ongoing

Bahareh Sehatzadeh, 2010 – ongoing

PhD committee member, Rutgers University, Bloustein School

Pamela Lebeaux, 2011 - ongoing

Nicholas Tulach, 2010 - ongoing

Michael Strange (active), 2009 - ongoing

Nisha Korattyswaroopam, 2010, Improving the Efficiency of Urban Bus Services in India

Sharon Pinnelas, 2010, Traffic Now, Transit Later: Understanding Current and Future Travel Behavior of Residents in Active-Adult Communities

PhD committee member, Rutgers University, external

Eren Ozguven, Civil Engineering, 2010 - ongoing

Mark Barnes, Geography Dept, 2010 - ongoing

PhD STUDENT SUPERVISION, Imperial College

Law Teik Hua, The Effects of Political Governance, Policy measures and Economic Growth on the Kuznets Relationship in Motor Vehicle Crash Deaths, Sept. 2009.

Amado Crotte, Dec 2008, Estimation of Transport Related Demand Elasticities in Mexico City. An Application of Road User Charging

Piyapong Jiwattanakulpaisarn, April 2008, The Impact of Transport Infrastructure Investment on Regional Employment: An Empirical Investigation

Tamara Pejovic, April 2008, Implications of Climate Change for the UK Aviation Sector

Zia Wadud, Jan 2008, Personal Tradable Carbon Permits for Road Transport: Heterogeneity of Demand Responses and Distributional Analysis

Robin North, Jan. 2007, Assessment of Real-world Pollutant Emissions from a Light-duty Diesel Vehicle

Moazzam Ishaque, Nov. 2006, Policies for Pedestrian Access: Multi-modal Trade-off Analysis Using Micro-simulation Techniques

Mohammed Quddus, Jan. 2006, High Integrity Map Matching Algorithms for Advanced Transport Telematics Application

PhD STUDENTS SUPERVISED UNTIL AUG 2008 DEPARTURE FROM IMPERIAL COLLEGE

Niovi Karathodorou, Performance Modelling of Transport Systems, currently supervised by Dr. Daniel Graham

Jarlath Molloy, Jan. 2011, Mitigating Aviation's Environmental Impact in Europe, supervised by Prof. Washington Ochieng

Patricia Melo, March 2010, Estimating the Effect of Agglomeration Economies on Wages: Empirical Evidence and Methodological Issues, supervised by Dr. Daniel Graham

PhD STUDENT TRANSFER (PROPOSAL) EXAMINATIONS, Imperial College

Lyoong Oh (Fall 1999)

Roger Allport (Winter 2002)

Robin North (Spring 2004)

Stephane Hess (Spring 2004)

Fengming Su (Winter 2005)

Jan-Dirk Schmöcker (Winter 2005)

Xin Shi (Winter 2006)

Atul Patel (Winter 2006)

Sonal Ahuja (Spring 2006)

Carl Milner (Winter 2007)

Dimitrios Pavlidis (Summer 2007, Centre for Environmental Policy)

Marie-Dominique Depuy (Winter 2008)

POSTDOCTORAL SUPERVISION, Rutgers University

Christopher Hanson, 2009 – present
Ugo Lachapelle, 2010 - 2011

POSTDOCTORAL SUPERVISION, Imperial College

Victoria Williams, 2001, 2003-2008

VISITING STUDENT SUPERVISION, Imperial College

Burcu Muzlum, Chevening Scholar for 3 months (June-Sept, 2006)
Ekrem Karademir, Chevening Scholar for 3 months (June-Sept, 2008)
Sietske Veenman, visiting PhD Erasmus student from Radboud University (Apr-July, 2007).

SUPERVISION OF DIRECTED STUDIES AND INTERNSHIP PROJECTS, Rutgers University

Lisa Dewey-Mattia (2009) – internship
Manzell Blakely (2010) - internship
Lewis Thorwaldsen (2010) – internship
Dorothy Le (2011) – directed study
Daniel Kravetz (2011) – directed study
Grace Bogdan (2011) – directed study
Karthik Rao Cavale (2011) – directed study

MANAGEMENT, ADMINISTRATIVE AND OTHER RELEVANT ACTIVITIES

Director, Alan M. Voorhees Transportation Center, Sept 2008 – present

Since arriving at Rutgers in 2008, I have been Director of the Alan M. Voorhees Transportation Center. The Center currently employs about 15 research staff and up to 10 student researchers each year. Funding turnover has averaged about \$2 million per year, the majority of which is for projects funded by the New Jersey Department of Transportation and other state agencies. The work conducted by the Center involves a mix of applied research and service work for the state agencies. In addition, the National Transit Institute, funded by the Federal Transit Administration to conduct training for transit agencies throughout the country is overseen by the Director of the Voorhees Transportation Center.

Departmental Service, Rutgers University

Undergraduate Sustainability Certificate Committee, Fall 2011
Promotion Reading Committee, Fall 2011
PhD student admissions committee, Jan 2010 to Aug 2010
Sub-committee on faculty hiring needs for the Urban Planning and Policy Development program, Nov 2009 to Aug 2010
Information Technology Advisory Committee, Spring 2009 to present
Bloustein School Appointments and Promotions Committee, Fall 2008

Departmental Service, Imperial College

Civil Engineering Departmental Business School liaison, April 2007 – present.

PhD Student Reading Group Coordinator, Jan 2003 – Jan 2006
Responsible for coordinating PhD student reading group within the transport section.

Development of Centre for Transport Studies website, May 2000 – Aug 2008

Oversaw development of websites for the Transport section. This involved developing a research oriented website and a separate website for our joint MSc course with UCL.

Advertising Committee, MSc in Transport, Nov. 2000 – Aug 2008

Developed new brochure for MSc in Transport. Responsible for developing strategy for advertising and promotion of MSc course.

Departmental Web Site Committee, Oct. 2001 – Aug 2008

Member of departmental web site committee. Oversaw and helped resolve problems with final development of new departmental website.

Transport Section Safety Committee, March 2002 – Aug 2008

Responsible for assisting with safety policy in transport section.

Timetabler, MSc in Transport, July 2000 – June 2003

Responsible for setting timetable for MSc course and developing web-based delivery of timetables.

Departmental Library Committee, Oct. 1999 – April 2005

Activities on this committee involve reviewing library policy and budget for departmental library.

College Service, Imperial College

Organized the first of a series of workshops for the Grantham Institute for Climate Change, March 2007.

Appointed to Grantham Studentship Selection Committee, March 2007.

Appointed to Grantham Institute for Climate Change Interim Operations Committee, April 2007.

PERSONAL/CAREER DEVELOPMENT AND PROFESSIONAL ACTIVITIES

Paper Prizes

Best Presentation Award at Institute of Navigation GNSS 2004 Conference, Long Beach, CA for “Integrated Positioning Algorithms for Transport Telematics Applications”, co-authored with Mohammed A. Quddus and Washington Y. Ochieng.

Barry McNutt Award from the Transportation Research Board, Transportation Energy and Alternative Fuels Committees, in recognition of the 2005 TRB paper that best met the standards and spirit fostered by Barry McNutt during his 35 years of transportation and energy policy analysis, for “Travel Demand Policies for Saving Oil During a Supply Emergency”, co-authored with William A. Cowart and Lewis M. Fulton.

Prizes Awarded to Supervised Students

Piyapong Jiwattanakupaisarn awarded a co-winner of the Epainos for the best paper presented at the European Regional Science Association meetings by a young regional scientist, Paris, 2007.

Tamara Pejovic awarded a co-winner of first prize for the JMP Consulting Sustainable Development Student Award for 2006. This is for the paper entitled “UK Air Transport CO₂ Emissions Estimate”.

Amado Crotte was co-winner of the 2008 Banamex Prize in Economics for his work on transport demand elasticities and congestion pricing in Mexico City.

Government Service Awards

US Department of Transportation, "Find the Good and Praise It" award, in recognition of development of the first Transportation Science and Technology Strategy, Sept. 1998.

US Department of Transportation, "Find the Good and Praise It" award, in recognition of contribution to the development of improved transportation modeling and analysis techniques as a member of the Travel Model Improvement Program, Dec. 1998.

US Department of Transportation, "Find the Good and Praise It" award, in recognition of contribution to the team effort to launch the new Transportation and Community and System Preservation (TCSP) Program, Feb. 2000.

Vice Presidential Hammer Award of the National Partnership for Reinventing Government, for the Transportation and Community and System Preservation Program Working Group, 2000.

Professional Memberships and Activities

Member, Steering committee of the Biennial Asilomar Conference on Transportation and Energy, 2011.

Chair, Special Task Force on Climate Change and Energy of the Transportation Research Board (2010-present)

Chair, Joint Sub-committee on Transportation and Climate Change of the Transportation Research Board (2007-2010)

Member, Energy and Alternative Fuels Committee of the Transportation Research Board (2007-2008)

Member, Transportation Energy Committee of the Transportation Research Board (1997-2007)

Member, Transportation and Air Quality Committee of the Transportation Research Board (2003-present)

Regional Science Association International (1994-present)

Association of Public Policy and Management (1998-1999)

Editorial Responsibilities

Associate Editor for *Transportation Research D (Transport and Environment)*, May 2005 - present.

Associate Editor for *International Journal of Sustainable Transportation*, Nov 2005 – present.

Member of Editorial Advisory Board

Transport Policy (Jan 2006 - present)

Accident Analysis and Prevention, (Jan 2007 – present).

Journal of Transport and Land Use (May 2007 – present)

Member of the paper review sub-committee of the TRB Transportation and Energy Committee.

In charge of paper reviews for the Transportation Research Board sub-committee on Global Climate Change (2007-2009).

Guest co-editor (with Mike Bell and Walter Wong) of a special issue of *Transportation Research A (Policy and Practice)* on Congestion Pricing: Policy and Practice.

Guest editor of a special issue of *Transportation Research D (Transport and Environment)* on The interaction of environmental and traffic safety policies

Coordinator and co-editor (with Jonathan D. Rubin) of a theme issue of *TR News* on Climate Change: Curbing Transportation's Contributions.

On average about 40-50 papers are currently received for review each year.

Numerous papers have been reviewed for the following international journals:

Transport journals:

Accident Analysis and Prevention
Canadian Journal of Transportation
European Transport \ Transporti Europei
Intelligent Transportation Systems Journal
International Journal of Sustainable Transportation
Journal of Advanced Transportation
Journal of Transport Economics and Policy
Journal of Transport Geography
Journal of Transportation and Statistics
Journal of Transportation Engineering
Transport Policy
Transport, Proceedings of the Institution of Civil Engineers
Transport Reviews
Transportation
Transportation Research A (Policy and Practice)
Transportation Research B (Methodological)
Transportation Research C (Emerging Technologies)
Transportation Research D (Transport and Environment)
Transportation Research E (Logistics and Transportation Review)
Transportation Science
Transportmetrica

Energy and Environment journals:

Atmospheric Environment
Carbon Management
Energy Economics
The Energy Journal
Energy Policy
Environmental Modeling and Assessment
Environmental Modeling and Software
Environmental Science and Technology
Journal of the Air and Waste Management Association

Planning, Geography, Economics and Urban Studies journals:

Applied Economics
Applied Spatial Analysis and Policy
The B.E. Journal of Economic Analysis and Policy
Environment and Planning A (Environment and Planning)
Environment and Planning B (Planning and Design)
Geographical Analysis
Journal of Choice Modelling
Journal of Maps
Journal of Economic Behavior and Organization
Journal of Regional Science
Journal of Urban Economics
Mathematical Population Studies
Papers in Regional Science
Procedia – Social and Behavioral Sciences
Regional Science and Urban Economics

Review of Urban and Regional Development Studies
The Professional Geographer
Urban Policy and Research
Urban Studies

Engineering journals:

Aircraft Engineering and Aerospace Technology
Computer-Aided Civil and Infrastructure Engineering
Decision Support Systems
European Journal of Operational Research
HKIE Transactions
Integrated Computer-Aided Engineering
Safety Science
Simulation Modelling Practice and Theory

Medical journals:

Indian Journal of Medical Sciences
International Journal of Epidemiology
Journal of Public Health

Papers and abstracts have also been reviewed for the following international conferences:

Annual Meeting of the Transportation Research Board
Annual Meeting of the Air and Waste Management Association
International Conference on the Applications of Advanced Technologies in Transportation Engineering
International Symposium on Transportation and Traffic Theory
World Congress and Exhibition on Intelligent Transport Systems and Services
International Conference on Travel Behaviour Research
World Conference on Transport Research
Transportation Land Use, Planning, and Air Quality, TRB, 2007
International Conference on Applications of Advanced Technologies in Transportation, 2008
International Choice Modelling Conference, 2009
International Transport Economics Conference, 2009
IEEE Annual Conference on Intelligent Transportation Systems

Review of Research Proposals

University of California Transportation Center (Berkeley, CA)
UK Engineering and Physical Sciences Research Council
UK Economic and Social Research Council
UK Economic and Social Research Council, end of award *rapporteur*
UK Natural Environment Research Council
Institute for the Promotion of Innovation and Science in Flanders (Brussels, Belgium)
Research Grants Council of Hong Kong
FONDECYT, National Fund for Scientific and Technological Development, Chile.
Dutch Technology Foundation
Sustainable Transportation Center, University of California, Davis
Oregon Transportation Research and Educational Consortium
Internal review of contracts and research grants when employed at US EPA
City University of New York, internal research awards
National Science Foundation
The Wellcome Trust

Tenure and promotion review

Civil, Environmental, and Infrastructure Engineering Department, School of Information Technology and Engineering, George Mason University, Fairfax, Virginia, Oct. 2005.

University of Michigan, School of Natural Resources and Environment, June 2011

Interview panel appointments

Trinity College Dublin, Dept. of Civil, Structural and Environmental Engineering,
Lectureships in Civil Engineering, July 2008.

Other reviews

Hong Kong Society of Transport Studies PhD Dissertation Award
Review given to Blackwell publishers on the quality and scientific impact of the
Journal of Transportation and Statistics, Sept. 2005.
Anonymous book review for the Policy Press.
Book proposal review for SAGE Publications.
Book proposal review for the Policy Press.
Energy Efficiency and Conservation Block Grants, Department of Energy, 2010

Examination duties: internal and external

University College London, Dept. of Civil and Environmental Engineering (PhD,
internal), March 2001, "Some Factors Influencing the Development of the Motorway
Network in the UK"

Middlesex University, National Centre for Work Based Learning Partnerships (Dprof,
external), Jan. 2002, "A Sustainability Action Plan for BAA"

University College London, Dept. of Civil and Environmental Engineering (PhD,
internal), Sept. 2003, "A methodology for systematic diagnosis of accidents in urban
areas in Portugal"

University of Oxford, School of Geography and the Environment (PhD, external),
June 2005, "Stochastic agent-based modelling for reality: Dynamic discrete choice
analysis with interaction",

Hong Kong Polytechnic University, Dept of Civil and Environmental Engineering
(PhD), Dec 2009, "Pedestrian Activity-Simulation Model for Hong Kong Congested
Urban Area".

Invited plenary presentations

"Behavioural and Analytical Considerations in Transport Safety Policy", Plenary
presentation at the Annual Conference of the Universities Transport Studies Group,
Harrogate, Jan. 2007.

Invited lectures and research presentations

I have been invited to present my research at numerous Universities and Research
organizations. These presentations have generally been on issues of interest to
academic researchers and decision making officials.

Florida International University (1992)
University of New Brunswick (1997)
University of California, Irvine (1997, 2002)
Boston University (1998)
Resources for the Future, Washington, DC (1999)
Organization for Economic Cooperation and Development, Paris (2000)
US Centers for Disease Control and Prevention, Atlanta, Georgia (2000)
University of California, Berkeley (2001)
Surface Transportation Policy Project, Washington, DC (2001)
Massachusetts Institute of Technology (2004)

Yale University (2007)
University of Surrey (2007)
Hong Kong Polytechnic University (2009)
Loughborough University (2011)
Rutgers, Civil and Environmental Engineering (2011)

Other activities (NJ/NY region)

Member, Board of Directors, University Transportation Research Center for Region 2 (2008 – present)

Panel presentation, The 2008 New Jersey Planning Conference, Emissions reduction opportunities in transportation, New Brunswick, Nov. 2008.

Co-sponsored and presented at workshop organized by Princeton University Policy Research Institute for the Region, Transportation & Infrastructure Issues for the Next Decade, Mar. 2009.

Participate in North Jersey Transportation Planning Authority workgroup on climate change and transportation, 2008 – present

Member of the Steering Committee of the Transportation and Urban Planning Program of the New York Academy of Sciences, Green Science and Sustainability Program, 2009 - present.

Invited to moderate session on Climate Change and Transport in Europe at conference on Climate Change Policy: Lessons from the European Experience, The Eagleton Institute of Politics, Rutgers University, March 2010.

Invited to testify before the New Jersey Clean Air Council on “Economic and behavioral effects of transportation infrastructure”, April 2010.

Invited to Roundtable Dialogue: Translating Research into Practice, Communicating about Climate Change, Rutgers University, Ecologies in the Balance program, March 2011.

Invited to present at “Intersections: Aligning Environmental and Transportation Policies to Mitigate Climate Change.” Co-organized by the Rudin Center for Transportation at the NYU Wagner School of Public Service and the Institute for Policy Integrity at the NYU School of Law, and sponsored by the Environmental Protection Agency, Oct 2011.

Other activities (UK)

Invited to sit on review panel for EPSRC Theme Day in Land Transport (2000)

Invited presentation at Department of Transport, Local Government, and Regions workshop on Departure Time Choice, London, UK, Jan. 2002. Presentation on “Simulated Impacts of HOV Lane Conversion Alternatives”

Invited presentation at AERONET II Flexible Flight Workshop, University of Sheffield, Nov. 2003. Presentation on “Aviation Altitude Restrictions and Climate Change Impacts”

Co-organizer of “The Theory and Practice of Congestion Charging: An International Symposium”, London, Aug 2003.

Invited speaker at the 13th World Clean Air and Environmental Protection Congress and Exhibition, London, UK, August 2004. Presentation on "Transport Policies for Environmental Protection"

Provided expert advice on statistical methods for UK Department for Transport study evaluating the impact of training children in road safety techniques (Jan. 2005).

Invited to give paper at the Successes and Failures of Traffic Demand Management Symposium, Edinburgh, Aug. 2005. Presented paper "Congestion, Induced Trips, and Vehicle Emissions"

Invited to Expanding Air - London First Breakfast Discussion with Lord Soley and Tony Douglas, Mar 2007.

Invited to Foundation for Science and Technology and The Royal Academy of Engineering Dinner and Discussion on "Adapting to and Mitigating the Impacts of Climate Change: the Engineering Challenge", Oct 2007.

Other activities (US)

Invited to participate in National Automated Highway System Consortium, Workshop on Environmental and Social Effects of the AHS, Minneapolis, MN, Sept. 1996

Invited presentation at Regional Congestion Pricing Workshop, Tampa, FL, April 1997. Presentation on "Environmental Benefits of Congestion Pricing"

Invited presentation at UC Davis Workshop on NEXTEA (reauthorization of the Intermodal Surface Transportation Efficiency Act), May 1997. Presentation on "Evaluation of the Benefits of the CMAQ Program"

Invited to participate on panel discussion of the National Teleconference Series, "The Reauthorization of ISTEA II", Center for Transportation and the Environment, North Carolina State University, Raleigh, NC, July 1997. Panel discussion on Environmental Issues in the Reauthorization of the Intermodal Surface Transportation Efficiency Act

Invited to speak at Nationwide Personal Transportation Survey Symposium, Bethesda, MD, Oct. 1997. Policy panel on use of data in transport analyses

Invited presentation at Annual Meeting of ITS America, Detroit, MI, May 1998. Presentation on "ITS and Sustainability"

Co-Chair of National Science and Technology Council Committee on Transportation and Sustainability (1998-1999).

Invited presentation at the Review of the Federal Transportation Science & Technology Strategy, July 6-8, 1998. Presentation on Transportation and Sustainability

Annual Meeting of the Transportation Research Board, Washington, DC, Jan. 1999. Organized and Chaired session on "Transportation and Sustainability"

Served on review panel for the US Department of Transportation, Transportation and Community and System Preservation pilot project program, March 1999.

Appointed to serve on review panel for NCHRP project 25-21, "Assessment of Short-Term Versus Long-Term Air Quality Effects of Traffic Flow Improvements" (1999-2003); the NCHRP is the National Cooperative Highway Research Program, managed by the Transportation Research Board to produce research reports for the US Dept. of Transportation and State Highway and Transportation Agencies.

Participated on organizing committee for 2000 TRB conference on “National Conference on Transportation and the Environment for the 21st Century”, July 2000.

Invited presentation at UCLA Extension Lake Arrowhead Symposium on Transportation and Land Use, Lake Arrowhead, CA, Oct. 2002. Presentation on the “Environmental Effect of Congestion Reduction Policies”

Invited presentation at Traffic Congestion: Issues and Options, Washington, DC, June 2003. Presentation on “Research on the Effects of Capacity Expansion – Implications for Policy and Practice”.

Panel presentation, Annual Meeting of the Transportation Research Board, 2005, session on Transportation and Air Quality: International Comparisons, presentation on Transport Policy and Air Quality Procedures in the United Kingdom

Panel presentation, Annual Meeting of the Transportation Research Board, 2006, session on Crude Awakening: Oil in the New Millennium, presentation on Saving Oil in a Hurry: Demand Restraint Policies to Mitigate Price Pressures.

Invited Workshop Presentation, Annual Meeting of the Transportation Research Board, 2006, Cause, Effect and Intervention: Present and Future Directions in Road Safety Research, presentation on Theory, estimation and interpretation of crash models: issues with cross-sectional and time-series analysis.

Invited to participate in the workshop: “Simultaneously Improving Vehicle Safety and Fuel Economy Through Improvements in Vehicle Design and Materials”, sponsored by the William and Flora Hewlett Foundation, Washington, DC, Oct. 2006.

Invited to participate in the US Environmental Protection Agency, Workshop on Integrating Climate Change Adaptation Considerations into Air Quality Decision Making, Raleigh, NC, Dec. 2007.

Invited Workshop Presentation, Annual Meeting of the Transportation Research Board, 2009, Nonmotorized Transportation Pilot Program: Breaking New Ground in Bicycle/Pedestrian Research, presentation on Non-motorized transport and climate change policies.

Invited presentation, Expanded fuel taxation: an effective approach for dealing with climate change, 2nd Annual Transportation & Infrastructure Convention, Washington, DC, Mar. 2009.

Invited as a Member of the Scientific Committee of the Worldwide Symposium on Transport and Land Use Research, 2010-2011.

Invited as a Member, Steering Committee Bi-annual Asilomar Conference on Transportation and Energy, 2011.

Other activities (International)

Invited to participate in Legal Reform Project for Mexico City by the Institute for Transportation and Development Policy, funded by the Hewlett Foundation. This project is aiming to institute legislative reform for the metropolitan-level transportation and air quality planning process in Mexico City, June 2004.

Invited to give a presentation on “Saving Oil in a Hurry: Oil Demand Restraint in Transport” at the International Energy Agency/European Conference of Ministers of Transport workshop on “Managing Oil Demand in Transport”, March 2005.

Invited to participate on the International Advisory Panel for the The Kyoto World Cities 20/20 Challenge, 2005-2007, April 2005.

Invited to participate in UK-Japan Bilateral Workshop: The Environmental Impact of Aircraft Emissions & Noise and Impact Reduction Technologies, Tokyo, Japan, Jan. 2006.

Invited to give presentation to the International Energy Agency, Standing Group on Emergency Questions, on "Review of Policies and Analytical Requirements to Assess Oil Demand Restraint for Heavy Goods Vehicles", June 2006.

Invited to participate in the UK/Canada Workshop on Urban Energy Efficiency, Toronto, Canada on Nov. 2006.

Invited to participate in the OECD/ITF Research Roundtable, Oil Dependence: Is transport running out of affordable fuel?, Paris, Nov. 2007.

Advisory committee, Climate 2009: International Conference on Climate Change Impacts and Adaptation Strategies for Bangladesh, Feb. 2009.

Invited to present colloquium at the Hong Kong Polytechnic University, Spatial Factors Associated with Pedestrian Injuries and Fatalities, Dec. 2009.

Presentations and chaired sessions at major international academic and professional conferences:

Annual Meeting of the Transportation Research Board (Washington, 1995 – 2011)
European Transport Conference (Cambridge, 2000)
Universities Transport Studies Group (Liverpool, 2000; Edinburgh, 2002; Loughborough 2003; Newcastle, 2004; Bristol, 2005; Dublin, 2006, Harrogate, 2007)
World Conference on Transport Research (Seoul, 2001; Berkeley, 2007)
Traffic Safety on Three Continents (Moscow, 2001)
Annual North American Meeting of the Regional Science Association International (Niagara Falls, 1994; Arlington, VA, 1996; Philadelphia, 2003, Toronto, 2006; Brooklyn, 2008)
Annual Meeting of the Western Regional Science Association (San Diego, 1995; Ojai, CA, 1999)
Annual Meeting of the European Regional Science Association (Dortmund, 2002; Jyväskylä, Finland, 2003; Amsterdam, 2005)
Annual Meeting of the Western Economic Association (San Diego, 1995)
Annual Meeting of the Association of Collegiate Schools of Planning (Atlanta, 2000; Baltimore, 2002; Crystal City, VA, 2009; Minneapolis, 2010)
Air Transport Research Society World Conference (Seattle, 2002)
European Conference on Aviation, Atmosphere and Climate (Friedrichshafen, 2003)
International Conference on Transport, Atmosphere and Climate (Oxford, 2006)
World Clean Air and Environmental Protection Congress (London, 2004)
Computers in Urban Planning and Urban Management (London, 2005)
International Symposium on Transportation and Traffic Theory (College Park, MD, 2005)
International Conference on Travel Behaviour Research (Kyoto, 2006)

Consultancy Research

As previously detailed under Research Activities, I have been involved with consultancy to the UK Department for Transport, Transport for London, the

International Energy Agency, Air BP, the Commission for Integrated Transport, and the European Commission.

International Media Coverage of Research

Rocky Mountain News (Denver, CO), 19 Feb 1996, article refers to research on emission impacts of speed limit changes

Planning, February 1997, cited in article on Travel Model Improvement Program

New Scientist, Jan 16, 1999, article on induced travel research

Daily Environment Report, 28 June 1999, article on induced travel research

The Washington Post, 13 Jan 2000, article on induced travel research

The Cincinnati Post, 17 Jan 2000, article on induced travel research

The Cincinnati Enquirer, 17 Jan 2000, article on induced travel research

New York Times, 28 Jan 2000, article on induced travel research

The Seattle Times, 27 Sept 2000, article refers to induced travel research

EPSRC Newslines, Issue 22, 2002, article on aviation / climate change research

New Scientist, 19 Oct 2002, article and editorial refers to aviation / climate change research

Der Spiegel, 19 Oct 2002, article on aviation / climate change research

The Engineer, 28 Oct 2002, article refers to VPEMS project

The Seattle Times, 31 Oct 2002, article refers to safety research

Aviation and Environment News, 5 Feb 2003, article on aviation / climate change research

The International Herald Tribune, 14 Feb 2003, cited concerning London congestion charging scheme

British Medical Journal, 9 May 2003, article on research into traffic safety and medical technology improvements

Health-news.co.uk, 13 May 2003, article on research into traffic safety and medical technology improvements

www.thenetrisk.com, 14 May 2003, article on research into traffic safety and medical technology improvements

Frankfurter Rundschau, 11 June 2003, article on research into traffic safety and medical technology improvements

Traffic Engineering and Control, June 2003, news item on research into traffic safety and medical technology improvements

Inland Valley Daily Bulletin, 13 Nov 2004, cited on induced travel research

LiveScience, 26 January 2005, article on aviation and climate change research

Aljazeera.net, 24 March 2005, article on work for International Energy Agency on transport demand restraint policies to save oil in emergency situations.

Financial Times, 1 April 2005, front page article on work for International Energy Agency on transport demand restraint policies to save oil in emergency situations. This was followed up by an additional FT article and editorial on 4 April 2005 and coverage in other press outlets throughout the world.

Reuters, 28 April 2005, article on work for International Energy Agency on transport demand restraint policies to save oil in emergency situations. Based on IEA book "Saving Oil in a Hurry" which was released.

El Pais, 14 May 2006, interviewed for article in El Pais on research in aviation and climate change.

New Scientist, 14 June 2006, interviewed for article on aviation and contrails

BBC News, on-line, 9 Jan 2007, quoted regarding aviation and climate change

New Scientist, 10 Jan 2007, quoted regarding aviation and climate change

BBC London Inside Out, broadcast 12 Jan 2007, interview on aviation and contrails

Nigerian Tribune, 23 March 2007, quoted regarding aviation and climate change

United Press International, 22 August 2007, article on congestion charge and motorcycle safety research

The Guardian, 20 Feb 2008, cited in short article on estimates of carbon emissions from UK flights

The Philadelphia Inquirer, 3 Nov 2008, cited in article about possible induced demand on New Jersey Turnpike expansion

The Sunday Observer, 21 Dec 2008, cited in article about London Heathrow airport expansion and climate change

Financial Times, 16 Jan 2009, cited in article about car-pooling.

NJ BIZ, 6 July, 2009, cited in article about transit and transportation funding.

WCBS Radio, 1 Feb 2010, interviewed about potential tolls on NJ interstate highways

Home News Tribune, 21 Feb 2010, quoted in 'Cutting NJ Transit Funding not good policy', op/ed by Steven M. Clayton

The Philadelphia Inquirer, 28 Feb 2010, quoted in 'Next N.J. transt chief faces rough road ahead', on gas taxes in New Jersey

Fedgazette, Regional Business and Economics Newspaper, Federal Reserve Bank of Minneapolis, March 2010. Cited in a "A Hard Road" on funding of transportation.

The Engineer, 14 July 2010, quoted in 'Airport expansion ban could damage UK prosperity', in response to ICE report promoting runway development at Heathrow.

WCBS Radio, 23 Nov 2010, interviewed about rail capacity into Manhattan.

Star-Ledger, 7 Feb 2011, quoted in "Transit Village status not ticket to higher property values" concerning report released on NJ Transit Villages.

Westfield Patch, 7 Feb 2011, quoted in "Report: Transit Village Designation Only Part of Property Value Rise", concerning report released on NJ Transit Villages.

NJN News, 8 Feb 2011, interviewed for “Transit Village Initiative Revitalizing Neighborhoods”, concerning report released on NJ Transit Villages.
<http://njnnewspublictv.wordpress.com/2011/02/08/transitvillages/>

Daily Targum, 9 Feb 2011, interviewed for “Amtrak CEO announces northern NJ rail line expansion”, for story on Voorhees Transportation Center Distinguished Lecture by Joe Boardman.

River Dell Patch, 10 Feb 2011, quoted in “Report: Transit Village Designation Only Part of Property Value Rise”, concerning report released on NJ Transit Villages.

Daily Targum, 18 Feb 2011, quoted in “GatewayTunnel to help economy, experts say”, on proposed Gateway project.

New Scientist, 29 Mar 2011, interviewed in “Contrails warm the world more than aviation emissions”.

The Record, 4 July 2011, cited in “GOP bill taking aim at Amtrak”