

RANDALL GUENSLER, Ph.D.  
Professor  
Georgia Institute of Technology  
School of Civil and Environmental Engineering

I. Earned Degrees

Ph.D.	1993	University of California, Davis	Civil Engineering, Transportation
M.S.	1989	University of California, Davis	Civil/Environmental Engineering
B.S.	1985	University of California, Davis	Individualized Engineering Civil Engineering, Urban Planning, Environ. Studies

II. Employment History

2005-Date	Professor	Georgia Institute of Technology Civil and Environmental Engineering
2014-Date	Associate Director	National Center for Sustainable Transportation University Transportation Center
2013-Date	Adjunct Professor	Georgia Institute of Technology City and Regional Planning
1996-2012	Adjunct Professor	Georgia Institute of Technology Public Policy
1999-2005	Associate Professor	Georgia Institute of Technology Civil and Environmental Engineering
1994-1999	Assistant Professor	Georgia Institute of Technology Civil and Environmental Engineering
1992-1993	Lecturer	University of California, Davis Civil Engineering
1991-1994	Post Grad Researcher	University of California, Davis Institute of Transportation Studies
1989-1993	Air Resources Eng. Assoc.	California Air Resources Board Executive Office, Transportation Programs
1987-1992	Teaching Assistant	University of California, Davis Civil Engineering
1989-1991	Graduate Research Asst.	University of California, Davis Civil Engineering
1987-1989	Air Resources Eng. Assoc.	California Air Resources Board Compliance Division, Compliance Assistance
1985-1987	Air Resources Engineer	California Air Resources Board Compliance Division, Program Evaluation

### III. Honors & Awards

1. Brook Byers Fellow, Brook Byers Institute for Sustainable Systems, Georgia Institute of Technology (2015-2021).
2. Certificate of Appreciation (2019). Transportation Research Board, National Academy of Sciences. Recognition of Years of Service as Managed Lanes Committee (AHB35) Research Subcommittee Chair 2014-2019.
3. Blue Ribbon Committee Award (2019). Member, TRB Managed Lanes Committee (AHB35). Program to Promote Young Professionals into Prominent Committee Roles.
4. Mobility Award (2018). City of Atlanta's North Avenue Smart Corridor Project (Project Co-PI). Smart City Expo World Congress. Barcelona. November 2018.
5. Speaker Award (2016). One of Eight "Best Papers" Invited to Present at the 2017 TRB Annual Meeting. Awarded for the 15th National Transportation Research Board Tools of the Trade Conference. Charleston, SC. September 12-14, 2016.
6. Spotlight Presentation (2015). "Developing Vehicle Classification Inputs for Project-Level MOVES Analysis." Transportation and Air Quality Committee (ADC20) of the Transportation Research Board. Paper ranked 1<sup>st</sup> among papers reviewed by ADC20 for the 2015 TRB Annual Meeting.
7. Research Innovation Award, School of Civil and Environmental Engineering (2013).
8. Golden Shoe Award, Pedestrian-friendly Research Project, Georgia Tech's Comprehensive Sidewalk Inventory and Research, Pedestrians Educating Drivers on Safety (PEDS), Atlanta (2013).
9. Association of Pedestrian and Bicycle Professionals, Annual Meeting, Best Poster Award (2013).
10. Pyke Johnson Award for Best Transportation Research Board Paper in Planning and Environment, Yoon, et al., A Methodology for Developing Transit Bus Speed-Acceleration Matrices to be used in Load-Based Mobile Source Emissions Models, National Research Council (2005).
11. Certificate of Appreciation for Outstanding Service, National Academy of Sciences (2003).
12. Testimonial of Appreciation for Distinguished Service, National Research Council (2002).
13. Outstanding Faculty Leadership for Development of Graduate Research Assistants, School of CEE (2000).
14. Outstanding Teaching Award, School of CEE (1999).
15. Outstanding Faculty Leadership for Development of Graduate Research Assistants, School of CEE (1998).
16. Certificate of Appreciation, Clean Air Act Advisory Committee (1998).
17. Faculty Development Grant Recipient, Georgia Tech (1997).
18. C-SPAN in the Classroom Fellow (1996).
19. Georgia Institute of Technology, Class of 1969 Teaching Fellow (1996).
20. Eno Foundation Transportation Leadership Fellow (1993).
21. Chevron Corporation Research Fellow (1992).
22. Grant Recipient, UC Transportation Center (1992).
23. Institute of Transportation Studies Fellow (1991).
24. Air & Waste Management Association Scholar (1990).
25. Tribute of Appreciation, Rule Effectiveness Study, USEPA Region IX (1990).
26. Air & Waste Management Association, Third Prize, Student Poster Competition (1990).
27. University of California, Davis, Graduate Student Travel Grant Recipient (1990).
28. US Environmental Protection Agency Fellow (1989).

29. Sustained Superior Accomplishment Award, California Air Resources Board (1988).
30. Registered Engineer in Training: CA XE065494.

#### IV. Research, Scholarship, and Creative Activities

##### A. Published Books, Book Chapters, and Edited Volumes

1. Hunter, M., A. Biswas, B. Chilukuri, A. Guin, R. Fujimoto, R. Guensler, J. Laval, H. Liu, S. Neal, P. Pecher, and M.O. Rodgers (2018). "Energy-Aware Dynamic Data-Driven Distributed Traffic Simulation for Energy and Emissions Reduction." Chapter 20. Handbook of Dynamic Data Driven Application Systems. pp. 467-487. Springer-Cham.
2. Henclewood, D., W. Suh, A. Guin, R. Guensler, R. Fujimoto, and M. Hunter (2015). "Real-Time Data-Driven Arterial Simulation for Performance Measure Estimation." Modeling and Simulation in the Systems Engineering Life Cycle. Part of the series entitled: Simulation Foundations, Methods and Applications pp 309-321. May 2015.
3. Bachman, W., W. Sarasua, S. Hallmark, and R. Guensler (2000). "Modeling Regional Mobile Source Emissions in a Geographic Information System Framework." Geographic Information Systems in Transportation Research. Elsevier Science. New York, NY. 2000.
4. Guensler, R. (2000). "Motor Vehicle Emissions Control." Macmillan Encyclopedia of Energy. 2000.
5. Guensler, R. (2000). "Traffic Flow Improvement." Macmillan Encyclopedia of Energy. 2000.
6. Fomunung, I., S. Washington, and R. Guensler (1999). "Comparison of MEASURE and MOBILE5a Predictions with Laboratory Measurements of Vehicle Emission Factors." Transportation Planning and Air Quality IV. Arun Chatterjee, Ed. American Society of Civil Engineers. New York, NY. 1999.
7. Guensler, R. (1998). "Increasing Vehicle Occupancy in the United States." L'Avenir Des Deplacements en Ville (The Future of Urban Travel). Odile Andan, et al., Eds. Laboratoire d'Economie des Transports. Lyon, France. Tome 2. pp. 127- 155. 1998.
8. Guensler, R., W. Bachman, and S. Washington (1998). "An Overview of the MEASURE GIS-Based Modal Emissions Model." Transportation Planning and Air Quality III. Tom Wholley, Ed. American Society of Civil Engineers. New York, NY. pp. 51-70. 1998.
9. Guensler, R., and D. Sperling (1994). "Congestion Pricing and Motor Vehicle Emissions: An Initial Review." Curbing Gridlock: Peak Period Fees to Relieve Traffic Congestion, Volume 2, pp. 356-379. National Academy Press. Washington, DC. 1994.
10. Guensler, R. (1993). "Data Needs for Evolving Motor Vehicle Emission Modeling Approaches." Transportation Planning and Air Quality II. Paul Benson, Ed. American Society of Civil Engineers. New York, NY. 1993.
11. Washington, S., R. Guensler, and D. Sperling (1993). "Emission Impacts of Intelligent Vehicle Highway Systems." Transportation Planning and Air Quality II. Paul Benson, Ed. American Society of Civil Engineers. New York, NY. 1993.

##### B. Refereed Publications and Submitted Articles

###### B1. Published & Accepted Journal Articles

1. Chang, C.H., H. Li, Y. Wang, Y. Zhao, and R. Guensler (submitted). Estimating Door-to-door Travel Time Savings Provided by Managed Lanes using Shortest Path Algorithms (20-06120). Transportation Research Record.
2. Kim, D., H. Liu, M.O. Rodgers, and R. Guensler (submitted). Development of a Roadway Link Screening Model for Near-Road Air Quality Analysis at the Regional-Scale: A Case Study for Particulate Matter. Atmospheric Environment.

3. Xu, X., H M Abdul Aziz, H. Liu, M.O. Rodgers, and R. Guensler (submitted). Assessment of Electric Vehicle Energy Consumption in Regional-Transportation Networks. *Applied Energy*.
4. Kim, D., H. Liu, X. Xu, H. Lu, R. Wayson, M.O. Rodgers, and R. Guensler (submitted). Distributed Computing for Regionwide Line Source Dispersion Modeling. *Computer-aided Civil and Infrastructure Engineering*.
5. Liu, H., H. Li., X. Xu, M.O. Rodgers, and R. Guensler (submitted). Synthetic Control Methods for Estimating the Effect of Purchase Incentives on Battery Electric Vehicles Sales in Georgia, USA. *Transportation Research - Part A (Planning and Policy)*.
6. Grossman, A., M. Meyer, K. Watkins, C. Ross, J. Schank, and R. Guensler (submitted). "The Impact of MAP-21 on Performance-Based Planning at MPOs." *Transport Policy*.
7. Liu, H., M.O. Rodgers, F. Liu, and R. Guensler (submitted, revised, in second review). "Estimating the Road Grade Impact on Vehicle Speed and Acceleration on Freeways with a Bayesian Hierarchical Model." *Transportmetrica A: Transportation Science*.
8. Liu, H., M.O. Rodgers, and R. Guensler (2019). "The Impact of Road Grade on Vehicle Acceleration Activity, PM<sub>2.5</sub> Emissions, and Dispersion Modeling." *Transportation Research D. Volume 75*, pp:297-319. October 2019.
9. Xu, X., H M Abdul Aziz, and R. Guensler (2019). "An Advanced Modal-Based Approach to Estimate Energy Consumption from Electric Vehicle Fleets Operating in Large-Scale Transportation Networks." *Transportation Research D. Volume 75*, pp:249-264. October 2019.
10. Guensler, R., J. Ko, D. Kim, S. Khoeini, A. Sheikh, and Y. Xu (2019). "Factors Affecting Atlanta Commuters' High Occupancy Toll Lane and Carpool Choices." *International Journal of Sustainable Transportation*. DOI: 10.1080/15568318.2019.1663961. September 2019.
11. Liu, H., R. Guensler, X. Xu, Y. Xu, and M. Rodgers (2019). "MOVES-Matrix for High-Performance On-road Energy and Emission Rate Modeling Applications." *UAWM-2019-0014*. DOI: 10.1080/10962247.2019.1640806. *Journal of the Air and Waste Management Association*. July 2019.
12. Kim, D., J. Ko, X. Xu, H. Liu, M.O. Rodgers, and R. Guensler (2019). Evaluating the Environmental Impacts of Median Bus Lanes: A Microscopic Simulation Approach. *Transportation Research Record. Volume 2673, Issue: 4*, pp: 663-673. Washington, DC. <https://doi.org/10.1177/0361198119836982>. March 2019.
13. Liu, H., M.O. Rodgers, and R. Guensler (2019). "Impact of Road Grade on Vehicle Speed-Acceleration Distribution, Emissions, and Line Source Dispersion Modeling on Freeways." *Transportation Research Part D: Transport and Environment. Volume 69*, pp: 107-122. <https://doi.org/10.1016/j.trd.2019.01.028>. April 2019.
14. Grossman, A., M.O. Rodgers, Y. Xu, R. Guensler, and K. Watkins, (2019). "If Safety Matters, Let's Measure It: Nationwide Survey Results for Bicycle and Pedestrian Treatment Planning and Prioritization." *ASCE Journal of Transportation Engineering, Part A: Systems. Volume 145, Issue 1*. January 2019.
15. Xu, X., H. Li, H. Liu, M. Rodgers and R. Guensler (2018). "Evaluation of Transit Ecodriving in Rural, Suburban, and Urban Environments." DOI: 10.1177/0361198118797778 *Transportation Research Record. Volume 2672, Issue 8*, pp. 152-164. Washington, DC. September 2018.
16. Xu, X., H. Liu, H. Li, M.O. Rodgers, R. Guensler (2018). "Integrating Engine Start, Soak, Evaporative, and Truck Hoteling Emissions into MOVES-Matrix." DOI: 10.1177/0361198118797208. *Transportation Research Record*. Washington, DC. 2018.
17. Liu, H., H. Li, M. Rodgers, R. Guensler (2018). "Development of Road Grade Data using the USGS Digital Elevation Model." *Transportation Research Part C: Emerging Technologies*, 92, pp.243–257, <https://doi.org/10.1016/j.trc.2018.05.004>.

18. Li, H., S. Khoeini, J. Cebe, Y. Xu, and R. Guensler (2018). "A Semi-Automated Method to Generate GIS-Based Sidewalk Networks for Asset Management and Pedestrian Accessibility Assessment." DOI: 10.1177/0361198118757981. Transportation Research Record. Washington, DC. April 2018.
19. Suh, W., D. Henclewood, A. Guin, R. Guensler, M. Hunter, and R. Fujimoto (2017). "Dynamic Data Driven Transportation Systems." Springer-Verlag. DOI: 10.1007/s11042-016-4318-x. Multimedia Tools and Applications. Volume 76, Issue 23, pp. 25253-25269.
20. Guensler, R., H. Liu., Y. Xu, A. Akanser, D. Kim, M.P. Hunter, M.O. Rodgers (2017). "Energy Consumption and Emission Modeling of Individual Vehicles." 10.3141/2627-11. Transportation Research Record. Number 2627. pp. 93-102. National Academy of Sciences. Washington, DC. 2017.
21. Xu, Y., H. Liu, M.O. Rodgers, M. Hunter, A. Sheikh, and R. Guensler (2017). "Understanding the Emission Impacts of HOV to HOT Lane Conversions: Experience from Atlanta, GA." Journal of the Air and Waste Management Association. DOI: 10.1080/10962247.2017.1302518. Volume 67, Number 8, pp. 910-922. August 2017.
22. DiGioia, J., K. E. Watkins, Y. Xu, M.O. Rodgers, R. Guensler (2017). "Safety Impacts of Bicycle Infrastructure; A Critical Review." Journal of Safety Research. <https://doi.org/10.1016/j.jsr.2017.02.015>. Volume 61, pp. 105-119. June 2017.
23. Liu, H., X. Xu, M. Rodgers, Y. Xu, and R. Guensler (2017). "MOVES-Matrix and Distributed Computing for Microscale Line Source Dispersion Analysis." Journal of the Air and Waste Management Association. DOI: 10.1080/10962247.2017.1287788. Volume 67, Issue 7, pp. 763-775. April 2017.
24. Ko, J., T-H Gim, and R. Guensler (2016). Locating Refueling Stations for Alternative Fuel Vehicles: A Review on Models and Applications. Transport Reviews. DOI: 10.1080/01441647.2016.1273274. Volume 37, Issue 5. December 2016.
25. Xu, Y., H. Li, H. Liu, M.O. Rodgers, R. Guensler (2016). "Eco-driving for Transit: An Effective Strategy to Conserve Fuel and Emissions. Applied Energy." 194(15) 784-797. APEN8702. DOI: 10.1016/j.apenergy.2016.09.101. October 2016.
26. Liu, H., Y. Xu, N. Stockwell, M. Rodgers, and R. Guensler (2016). "A Comparative Life-cycle Energy and Emissions Analysis for Intercity Passenger Transportation in the U.S. by Aviation, Intercity Bus, and Automobile." Transportation Research Part D: Transport and Environment, 48, pp: 267-283. DOI: 10.1016/j.trd.2016.08.027.
27. Li, H., Haobing Liu, Y. Xu, M.O. Rodgers, R. Guensler (2016). Performance of Multiple Alternatives to Reduce Carbon Emissions for Transit Fleets: A Real-world Operations Perspective. Energy Procedia (Elsevier), Vol 88, June 2016, pp 908-914.
28. Suh, W., D. Henclewood, A. Guin, R. Guensler, R. Fujimoto, M. Hunter (2016). "Real-Time Data-Driven Traffic Simulation for Performance Measure Estimation." IET Intelligent Transportation Systems. Volume 10, Issue 8. pp 562-571.
29. Xu, X., H. Liu, Y. Xu, M. Hunter, and R. Guensler (2016). "Estimating Project-level Vehicle Emissions using Vissim and MOVES Matrix." DOI 10.3141/2570-12. Transportation Research Record. Number 2570. pp. 107-117. National Academy of Sciences. Washington, DC. 2016.
30. Sheikh, A., A. Misra, and R. Guensler (2015). "High Occupancy Toll Lane Decision Making: Income Effects on Atlanta's I-85 Express Lanes." Transportation Research Record. Number 2531. pp. 45-53. National Academy of Sciences. Washington, DC. 2015.
31. Liu, H., Y. Xu, R. Guensler, and M.O. Rodgers (2015). "Developing Vehicle Classification Inputs for Project-Level MOVES Analysis." Transportation Research Record. Number 2503. pp. 81-90. National Academy of Sciences. Washington, DC. 2015.
32. Xu, Y., F. Gbolagah, H. Liu, M.O. Rodgers, and R. Guensler (2015). "Assessment of Alternative Fuel and Powertrain Transit Bus Options using Real-world Operations Data:

- Life-cycle Fuel and Emissions Modeling.” *Applied Energy*. Volume 154, Number 15. pp. 143-159.
33. Elango, V. and R. Guensler (2014). “Collection, Screening, and Evaluation of Vehicle Occupancy Data.” *Transportation Research Record*. Number 2470. pp. 142-151. National Academy of Sciences. Washington, DC. 2014.
34. Sheikh, A., A. Guin, and R. Guensler (2014). “Value of Travel Time Savings: Evidence from Atlanta’s I-85 Express Lanes.” *Transportation Research Record*. Number 2470. pp. 161-168. National Academy of Sciences. Washington, DC. 2014.
35. Castrillon, F., M. Roell, S. Khoeini, and R. Guensler (2014). “The I-85 HOT Lane's Impact on Atlanta's Commuter Bus and Vanpool Occupancy.” *Transportation Research Record*. Number 2470. pp. 169-177. National Academy of Sciences. Washington, DC. 2014.
36. Palinginis, E., M.W. Park, K. Kamiya, J. Laval, I. Brilakis, and R. Guensler (2014). “Full-Body Occlusion Handling and Density Analysis in Traffic Video-Surveillance Systems.” *Transportation Research Record*. Number 2460. pp. 58-65. National Academy of Sciences. Washington, DC. 2014.
37. Khoeini, S. and R. Guensler (2014). “Socioeconomic Assessment of the Atlanta I-85 HOV-to-HOT Conversion.” *Transportation Research Record*. Number 2450. pp. 52-61. National Academy of Sciences. Washington, DC. 2014.
38. Colberg, K., W. Suh, J. Anderson, S. Zinner, A. Guin, M. Hunter, and R. Guensler (2014). “Lane Bias Issues in Work Zone Travel Time Measurement and Reporting.” *Transportation Research Record*. Number 2458. pp. 78-87. National Academy of Sciences. Washington, DC. 2014.
39. Gbologah, F., Y. Xu, M. Rodgers, and R. Guensler (2014). “Demonstrating a Bottom-up Framework for Evaluating Energy and Emission Performance of Various Electric Rail Transit Options.” *Transportation Research Record*. Number 2428. pp. 10-17. National Academy of Sciences. Washington, DC. 2014.
40. Suh, W., A. Guin, S. Zinner, K. Colberg, M. Hunter, and R. Guensler (2014). “Marginal Benefit of Adding Antennas to Bluetooth Sensor Arrays in Freeway Travel Time Data Collection.” *Journal of Transportation Engineering*. Volume 140, Issue 12. December 2014.
41. Khoeini, S., and R. Guensler (2014). “Using Vehicle Value as a Proxy for Income: A Case Study on Atlanta’s I-85 HOT Lane.” *Research in Transportation Economics*. Volume 44. Issue C. pp. 33-42. June 2014.
42. Toth, C., W. Suh, V. Elango, R. Sadana, A. Guin, M. Hunter, and R. Guensler (2013). “Tablet-Based Traffic Counting Application Designed to Minimize Human Error.” *Transportation Research Record*. Number 2339. pp. 39-46. National Academy of Sciences. Washington, DC. 2013.
43. Elango, V., S. Khoeini, Y. Xu, and R. Guensler (2013). “Longitudinal GPS Travel Data and Breach of Privacy via Enhanced Spatial and Demographic Analysis.” *Transportation Research Record*. Number 2354. pp. 86-98. National Academy of Sciences. Washington, DC. 2013.
44. Xu, Y., V. Elango, and R. Guensler (2013). “Idle Monitoring, Real-time Intervention, and Emissions Reductions from Cobb County School Buses.” *Transportation Research Record*. Number 2340. pp. 59-65. National Academy of Sciences. Washington, DC. 2013.
45. Frackelton, A., A. Grossman, E. Palinginis, F. Castrillon, V. Elango, R. Guensler (2013). “Measuring Walkability: Development of an Automated Sidewalk Quality Assessment Tool.” *Suburban Sustainability*. Volume 1, Issue 1, Article 4. DOI: 10.5038/2164-0866.1.1.4. Available at: <http://scholarcommons.usf.edu/subsust/vol1/iss1/4>. March 2013.
46. Suh, W., D. Henclewood, A. Greenwood, A. Guin, R. Guensler, M. Hunter (2013). “Modeling Pedestrian Crossing Activities in an Urban Environment using Microscopic

- Traffic Simulation.” *Simulation: Transactions of the Society for Modeling and Simulation International*. Volume 89, Number 2, pp. 213-224. February 2013.
47. Jeon, C., A. Amekudzi, and R. Guensler (2013). “Sustainability Assessment at the Transportation Planning Level: Performance Measures and Indexes.” *Transport Policy*, Volume 25, pp. 10-21. January 2013.
48. Castrillon, F., A. Guin, R. Guensler, and J. Laval (2012). “Comparison of Modeling Approaches for the Imputation of Intelligent Transportation System VDS Data.” *Transportation Research Record*. Number 2308, pp. 138-147. National Academy of Sciences. Washington, DC. 2012.
49. Khoeini, S., R. Guensler, M.O. Rodgers, and V. Elango (2012). “Sensitivity of Commuters’ Demographic Characteristics to License Plate Data Collection Specifications: A Case Study of the I-85 HOV-to-HOT Project in Atlanta, GA.” *Transportation Research Record*. Number 2308, pp. 37-46. National Academy of Sciences. Washington, DC. 2012.
50. Jun, J., J. Ogle, and R. Guensler (2012). “A Pilot Study to Compare the Driving Habits of Crash-Involved Versus Non-Crash Involved Older Drivers from GPS-Instrumented Vehicles.” *ITE Journal*. pp. 42-47. July 2012.
51. Seshasayee, B., M. Hunter, R. Fujimoto, R. Guensler, K. Schwan, H.K. Kim, J. Sirichoke, and W. Suh (2011). “On the Resilience of Ad Hoc Distributed Simulation of Surface Transportation Systems with Unreliable Communications.” *Journal of Algorithms and Computation Technology*, Special Issue on Dynamic Data-Driven Application Systems. Volume 5, Number 4, pp. 531-544. December 2011.
52. Pearre, N., W. Kempton, R. Guensler, and V. Elango (2011). “Electric Vehicles: How Much Range is Required for a Day’s Driving?” *Transportation Research C*. Volume 19, Issue 6, pp. 1171-1184. December 2011.
53. Jun, J., R. Guensler, and J. Ogle (2011). “Differences in Observed Speed Patterns between Crash-involved and Crash-not-involved Drivers: Application of In-vehicle Monitoring Technology.” *Transportation Research C*. Volume 19, Issue 4, pp. 569-578. August 2011.
54. Ko, J., Guensler, R., and Hunter, M. (2010). “Analysis of Effects of Driver/Vehicle Characteristics on Acceleration Noise Using GPS-Equipped Vehicles.” *Transportation Research Part F*. Volume 13, Issue 1, pp. 21-31. January 2010.
55. Jeon, C.M., A. Amekudzi, R. Guensler (2010). “Evaluating Plan Alternatives for Transportation System Sustainability: Atlanta Metropolitan Region.” *International Journal of Sustainable Transportation*. Volume 4, Number 4, pp. 227-247. July 2010.
56. Kall, D., R. Guensler, M.O. Rodgers, and V.S. Pandey (2009). “Effect of High Occupancy Toll Lanes on Mass Vehicle Emissions: Application to I-85 in Atlanta, Georgia.” *Transportation Research Record*. Number 2123. pp. 88-96. National Academy of Sciences. Washington, DC. 2009.
57. Jun, J., and R. Guensler (2009). “Freeway Speed Stability Patterns Based on Instrumented Vehicle Data.” *ITE Journal on the Web*. <http://www.ite.org/itejournal/webarticles.asp>. June 2009.
58. Ko, J., R. Guensler, and M. Hunter (2009). “Exploring the Relationship between Roadway Characteristics and Speed Variation.” *Transportation Research Record*. Number 2092. pp. 1-10. National Academy of Sciences. Washington, DC. 2009.
59. Ko, J., M. Hunter and R. Guensler (2008). “Measuring Control Delay Components Using Second-by-Second GPS Speed Data.” *ASCE Journal of Transportation Engineering*. Volume 134, Number 8. pp. 338-346. August 2008.
60. Guin, A., R. Guensler, and M. Hunter (2008). “Analysis of Reduction in Effective Capacities on High-Occupancy-Vehicle Lanes Related to Traffic Behavior.” *Transportation Research Record*. Number 2065. pp. 47-53. National Academy of Sciences. Washington, DC. 2008.

61. Nelson, J.I., R. Guensler, and H. Li (2008). "Geographic and Demographic Profiles of Morning Peak-Hour Commuters on Highways in North Metropolitan Atlanta." *Transportation Research Record*. Number 2067, pp. 26-37. National Academy of Sciences. Washington, DC. 2008.
62. Jun, J., J. Ogle, and R. Guensler (2007). "Relationships between Crash Involvement and Temporal-Spatial Driving Behavior Activity Patterns: Use of Data for Vehicles with Global Positioning Systems." *Transportation Research Record*. Number 2019. pp. 246-255. National Academy of Sciences. Washington, DC. 2007.
63. Elango, V., R. Guensler, and J. Ogle (2007). "Day-To-Day Travel Variability in the Commute Atlanta Study." *Transportation Research Record*. Number 2014. pp. 39-49. National Academy of Sciences. Washington, DC. 2007.
64. Zuehlke, K. and R. Guensler (2007). "Employer Perceptions and Implementation of Commute Alternatives Strategies." *Journal of Public Transportation*. Volume 10, Number 4, pp. 171-194. 2007.
65. Ko, J., R. Guensler, and M. Hunter (2006). "Variability in Traffic Flow Quality Experienced by Drivers: Evidence from Instrumented Vehicles." *Transportation Research Record*. Number 1988. pp. 1-9. National Academy of Sciences. Washington, DC. 2006.
66. Jun, J., R. Guensler, and J. Ogle (2006). "Smoothing Methods Designed to Minimize the Impact of GPS Random Error on Travel Distance, Speed, and Acceleration Profile Estimates." *Transportation Research Record*. Number 1972. pp. 141-150. National Academy of Sciences. Washington, DC. 2006.
67. Yoon, S., H. Li, J. Jun, J. Ogle, R. Guensler, and M. Rodgers (2005). "Methodology for Developing Transit Bus Speed-Acceleration Matrices for Load-Based Mobile Source Emissions Models." *Transportation Research Record*. 1941. pp. 26-33. National Academy of Sciences. Washington, DC. 2005.
68. DeHart-Davis, L. and R. Guensler (2005). "Employers as Mediating Institutions for Public Policy: The Case of Commute Options Programs." *Policy Studies Journal*, Volume 33, Number 4, pp. 675-697. 2005.
69. Ogle, J., R. Guensler, and V. Elango (2005). "Commute Atlanta Value Pricing Program: Recruitment Methods and Travel Diary Response Rates." *Transportation Research Record*. Number 1931. pp. 28-37. National Academy of Sciences. Washington, DC. 2005.
70. Li, H., R. Guensler, and J. Ogle (2005). "An Analysis of Morning Commute Route Choice Patterns Using GPS Based Vehicle Activity Data." *Transportation Research Record*. 1926. pp. 162-170. National Academy of Sciences. Washington, DC. 2005.
71. Wu, H., J. Lee, M. Hunter, R. Fujimoto, R. Guensler, and J. Ko (2005). "Efficiency of Simulated Vehicle-to-Vehicle Message Propagation in Atlanta, Georgia, I-75 Corridor." *Transportation Research Record*. Number 1910. pp. 82-89. National Academy of Sciences. Washington, DC. 2005.
72. Lederer, P. R., L. F. Cohn, R. Guensler, and R. A. Harris (2005). "Effect of On-Ramp Geometric and Operational Factors on Vehicle Activity." *ASCE Journal of Transportation Engineering*. Volume 131, Number 1. January 2005.
73. Li, H., R. Guensler, J. Ogle, and J. Wang (2004). "Using Global Positioning System Data to Understand Day-to-Day Dynamics of Morning Commute Behavior." *Transportation Research Record*. Number 1895. pp. 78-84. National Academy of Sciences. Washington, DC. 2004.
74. Guensler, R., K. Dixon, V. Elango, and S. Yoon (2004). "MOBILE-Matrix: Georgia Statewide MPTT Application for Rural Areas." *Transportation Research Record*. Number 1880. pp. 83-89. National Academy of Sciences. Washington, DC. 2004.
75. Yoon, S., M. Rodgers, J. Pearson and R. Guensler (2004). "Engine and Vehicle Characteristics of Heavy-Duty Diesel Vehicles in the Development of Emissions Inventories: Model Year, Engine Horsepower and Vehicle Weight." *Transportation*



- Research Record. Number 1880. pp. 99-107. National Academy of Sciences. Washington, DC. 2004.
76. Guensler, R., A. Amekudzi, J. Williams, S. Mergelsberg, and J. Ogle (2003). "Current State Regulatory Support for Pay-as-You-Drive Automobile Insurance Options." *Journal of Insurance Regulation*. Volume 21, Number 3. Spring, pp. 31. 2003.
77. Ogle, J., R. Guensler, W. Bachman, M. Koutsak, and J. Wolf (2002). "Accuracy of GPS for Determining Driver Performance Parameters." *Transportation Research Record*. Number 1818. pp. 12-24. National Academy of Sciences. Washington, DC. 2002.
78. Hallmark, S., R. Guensler, and I. Fomunung (2002). "Characterizing On-road Variables that Affect Vehicle Modal Operation." *Transportation Research D*. Volume 7, Number 2, pp. 81-98. 2002.
79. Wolf, J., R. Guensler, and W. Bachman (2001). "Elimination of the Travel Diary: Experiment to Derive Trip Purpose from GPS Travel Data." *Transportation Research Record*. Number 1768. pp. 125-134. National Academy of Sciences. Washington, DC. 2001.
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## B2. Conference Presentations with Proceedings (Refereed)

1. Dai, Z., H. Liu, and R. Guensler (accepted). Predicting Travel Mode Choice Based on 2017 NHTS Trip Data with Multinomial Logit Model and Light Gradient Boosting Machine (19-07739). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
2. Chang, C.H., H. Li, Y. Wang, Y. Zhao, and R. Guensler (accepted). Estimating Door-to-door Travel Time Savings Provided by Managed Lanes using Shortest Path Algorithms (20-06120). . 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
3. Liu, D. Z. Dai, K. Todd, N. O-Charoen, K. Mayans, and R. Guensler (accepted). A Top-down Approach to Assessing the Upper Bound Carpool Potential for SOV Commuters (20-05809). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
4. Lu, H., H. Liu, A. Guin, M.O. Rodgers, and R. Guensler (accepted). Using Cluster Analysis to Identify Potential Outliers in Video Detection Traffic Data (20-05994). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
5. Liu, H., H. Li., X. Xu, M.O. Rodgers, and R. Guensler (accepted). Synthetic Control Methods for Estimating the Effect of Purchase Incentives on Battery Electric Vehicles Sales in Georgia, USA (20-01550). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
6. Li, H., H. Liu, X. Xu, Y. Wang, M.O. Rodgers, and R. Guensler (accepted). A Framework for Assessing Fleet-wide Transit Bus Energy Consumption with Alternative Fuels (20-

- 02410). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
7. Kim, D., H. Liu, X. Xu, H. Lu, R. Wayson, M.O. Rodgers, and R. Guensler (accepted). Streamlined Data Processing for Regionwide Applications of Line Source Dispersion Modeling Via Distributed Computing (20-01774). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
8. Kim, D., H. Liu, M.O. Rodgers, and R. Guensler (accepted). Development of Roadway Link Screening Model for Regional-Level Near-Road Air Quality Analysis: A Case Study for Particulate Matter (20-03022). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
9. Xu, X., H. Liu, M.O. Rodgers, and R. Guensler (accepted). A Sensitivity Analysis of Electric Vehicle Energy Efficiency, Driving Range, and Operating Cost Using Regional-level Household Daily Travel Patterns (20-01680). 99th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2020.
10. Zhao, Y. and R. Guensler (2019). Gender Differences in Predicted Travel Activity in Atlanta using an Activity Based Model with Path Retention. 6<sup>th</sup> International Conference on Women's Issues in Transportation. Irvine, CA. September 10-13, 2019.
11. Liu, H., D. Kim, H. Lu, R. Wayson, M.O. Rodgers, and R. Guensler (2019). A Regional Air Quality Impact Assessment Screening Tool based upon MOVES-Matrix and AERMOD. Guidelines on Air Quality Models: Planning Ahead. Air and Waste Management Association 8<sup>th</sup> Specialty Conference on Air Quality Modeling. Durham, NC. March 19-21, 2019.
12. Lu, H., H. Liu, X. Xu, M.O. Rodgers, and R. Guensler (2019). MOVES Project-Level Uncertainty Analysis: Impacts of Variability in On-road Operating Conditions on Emission Rates (19-05261). 98th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2019.
13. Liu, H., M.O. Rodgers, and R. Guensler (2019). Impact of Road Grade on Vehicle Speed-Acceleration Distributions, Emissions, and Line Source Dispersion Modeling on Freeways (19-05978). 98th Annual Meeting of the Transportation Research Board (presentation only, full paper review, extended abstract in proceedings). Proceedings. Washington, DC. January 2019.
14. Kim, D., A. Guin, J. Ko, M.O. Rodgers, and R. Guensler (2019). Energy and Emissions Impact of Truck-Only Lanes: A Case Study of Interstate 75 between Macon and McDonough, Georgia (19-05988). 98th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2019.
15. Kim, D., J. Ko, X. Xu, H. Liu, M.O. Rodgers, and R. Guensler (2019). Evaluating the Environmental Impacts of Median Bus Lanes: A Microscopic Simulation Approach (19-04263). 98th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2019.
16. Grossman, A., M.D. Meyer, C. Ross, K.E. Watkins, J. Schank, and R. Guensler (2019). MPO Performance-based Planning in Response to MAP-21: National Survey Results (19-04713). 98th Annual Meeting of the Transportation Research Board. Proceedings. Washington, DC. January 2019.
17. Liu, H., M.O. Rodgers, F. Liu, and R. Guensler (2019). Estimating the Road Grade Impact on Vehicle Speed and Acceleration on Freeways with a Bayesian Hierarchical Model (19-05901). 98th Annual Meeting of the Transportation Research Board (presentation only, full paper review, extended abstract in proceedings). Washington, DC. January 2019.
18. Zhao, Y., D. Kim, M. Rodgers, and R. Guensler (2018). Private Vehicle Ownership and Operating Cost Calculator for Teaching and Research. 58<sup>th</sup> Annual Conference of the Association of Collegiate Schools of Planning (25 attendees). Buffalo, New York. October 2018.

19. Boyer, D., D. Walls, J. Greenwald, C. Dyess, and R. Guensler (2018). Sidewalk Prioritization Index: Objective and Transparent Sidewalk Asset Management. 17th National Transportation Research Board Tools of the Trade Conference (35 attendees). Kansas City, MO. August 22-24, 2018.
20. Xu, X., H. Li, H. Liu, M. Rodgers and R. Guensler (2018). Evaluation of Transit Eco-Driving in Rural, Suburban, and Urban Environments (18-05181). 97th Annual Meeting of the Transportation Research Board (50 attendees). Proceedings and Podium Session. Washington, DC. January 2018.
21. Li, H., Y. Wang, X. Xu, H. Liu, A. Guin, M. Rodgers, M. Hunter, J. Laval, and R. Guensler (2018). Assessing the Time, Monetary, and Energy Costs of Alternative Modes (18-05362). 97th Annual Meeting of the Transportation Research Board (presentation only, full paper review, extended abstract in proceedings). Washington, DC. January 2018.
22. Xu, X., H. Liu, Y. Xu, M. Rodgers and R. Guensler (2018). Regional Emission Analysis with Travel Demand Models and MOVES-Matrix (18-05363). 97th Annual Meeting of the Transportation Research Board (presentation only, full paper review, extended abstract in proceedings). Washington, DC. January 2018.
23. Liu, H., H. Li, M. Rodgers, R. Guensler (2018). Development of Road Grade Data using the USGS Digital Elevation Model (18-03535). 97th Annual Meeting of the Transportation Research Board (presentation only, full paper review, extended abstract in proceedings). Washington, DC. January 2018.
24. Xu, X., H. Li, H. Liu, M.O. Rodgers, and R. Guensler (2017). MOVES-Matrix for Start, Evaporative, and Extended Idle Emissions. Air and Waste Management Association, 110th Annual Meeting Proceedings (CD-ROM). June 2017.
25. Cebe, J., C. Dyess, V. Joshi, R. Guensler, M. Whaley, T. Rabinek, A. Behera, R. Liu (2017). "Policies and Practices to Reduce Sidewalk and Street Tree Conflicts: Recommendations for Atlanta and Other Medium to Large Cities." 96th Annual Meeting of the Transportation Research Board (60 attendees). Washington, DC. January 2017.
26. Hunter, M., A. Biswas, B. Chilukuri, A. Guin, R. Fujimoto, R. Guensler, J. Laval, H. Liu, S. Neal, P. Pecher, M. Rodgers (2016). Energy-Aware Dynamic Data-Driven Distributed Traffic Simulation for Energy and Emissions Reduction. Dynamic Data-Driven Application Systems Conference (100+ attendees). Hartford, CT. September 2016.
27. Cebe, J., A. Grossman, C. Dyess, and R. Guensler (2016). Sidewalk Scout, Sidewalk Sentry, and the Sidewalk Quality Index: Cost-Effective Tools for Inventorying and Managing Sidewalk Assets and Prioritizing Improvements in Small to Large Communities. 15th National Transportation Research Board Tools of the Trade Conference (40 attendees). Charleston, SC. September 12-14, 2016.
28. Grossman, A., C. Dyess, S. Mudrinich, and R. Guensler (2016). "Using ADA Transition Plans to Improve Pedestrian Access to Transit: A Downtown Atlanta Pilot Study." 95th Annual Meeting of the Transportation Research Board. Washington, DC. January 2016.
29. Guensler, R. H. Liu, X. Xu, Y. Xu, and M. Rodgers (2016). "MOVES-Matrix: Setup, Implementation, and Application." 95th Annual Meeting of the Transportation Research Board. Washington, DC. January 2016.
30. Li, H., H. Liu, X. Xu, Y. Xu, and R. Guensler (2016). "Benefits from Reducing Local Transit Service Deadheading: An Atlanta Case Study." 95th Annual Meeting of the Transportation Research Board. Washington, DC. January 2016.
31. Li, H., Haobing Liu, Y. Xu, M.O. Rodgers, R. Guensler (2015). Performance of Multiple Alternatives to Reduce Carbon Emissions for Transit Fleets: A Real-world Operations Perspective (CUE2015-80). CUE2015-Applied Energy Symposium and Summit 2015. Fuzhou, Fujian, China. November 15-17, 2015.

32. Akanser, A., Elango, V., A. Grossman, R. Sadana; K. Poddar, Y. Xu, and R. Guensler (2015). "Commute Warrior: Android Application for Collecting Longitudinal Travel Survey Data." 2015 Transportation Research Forum. Atlanta, GA. March 2015.
33. Akanser, A., V. Elango, A. Grossman, Y. Xu, and R. Guensler (2015). "Sidewalk Scout: Crowdsourcing Android Application for Collecting Sidewalk Condition Data." 2015 Transportation Research Forum. Atlanta, GA. March 2015.
34. Liu, H., Y. Xu, M.O. Rodgers, C. Toth, and R. Guensler (2015). "MOVES2014 Project-Level Sensitivity Analysis: Impacts of On-road Fleet Composition and Operation Aggregation on Emission Results." Air and Waste Management Association, 108th Annual Meeting Proceedings (CD-ROM). June 2015.
35. Liu, H., Y. Xu, R. Guensler, and M.O. Rodgers (2015). "A Proposed Method for Developing Vehicle Classification Input for Project-Level MOVES Analysis." 94th Annual Meeting of the Transportation Research Board. Washington, DC. January 2015.
36. Toth, C.; R. Guensler, and J. Laval (2015). "Empirical Data-Driven Macroscopic Lane Changing Model. 94th Annual Meeting of the Transportation Research Board." Washington, DC. January 2015.
37. Khoeini, S., V. Elango, Y. Xu, and R. Guensler (2015). "Generating Sidewalk Networks Using Roadway Network and Parcel Polygon Data." 94th Annual Meeting of the Transportation Research Board. Washington, DC. January 2015.
38. Frackelton, A., and R. Guensler (2015). "Pedestrian Project Prioritization Incorporating App-Collected Sidewalk Data." 94th Annual Meeting of the Transportation Research Board. Washington, DC. January 2015.
39. Park, M., Palinginis, E., Brilakis, I., Laval, J., Hunter, M., and Guensler R. (2014). "Unsupervised Framework for Traffic Counting: Speed Estimation Based on Camera Network Data." 2014 International Conference on Computing in Civil and Building Engineering: pp. 1594-1601. June 2014.
40. Xu, Y., H. Liu, and R. Guensler (2014). "Emissions Impact of HOV to HOT Lane Conversions: An Atlanta, Georgia Case Study." Proceedings of the Air and Waste Management Association 2014 Annual Conference & Exhibition, Long Beach, CA, June 24-27, 2014.
41. Grossman, A., V. Elango, A. Frackelton, and R. Guensler (2014). "The Use of a Sidewalk Quality Assessment Survey in Developing Sidewalk Ratings (14-4933)." 93rd Annual Meeting of the Transportation Research Board. Washington, DC. January 2014.
42. Toth, C., R. Guensler, S. Araque, A. Guin, V. Elango, and M. Hunter (2014). "Atlanta I-85 HOV-to-HOT Conversion: Impacts on Weaving and Effective Capacity (14-5580)." 93rd Annual Meeting of the Transportation Research Board. Washington, DC. January 2014.
43. Li, J., Z. Lin, T. LaClair, D. Davidson, Y. Xu, R. Guensler, M.O. Rodgers, D. Lee (2014). "Evaluation of GHG Emission across Transit Bus Technologies with Real-World Driving Schedules (14-0680)." 93rd Annual Meeting of the Transportation Research Board. Washington, DC. January 2014.
44. Toth, C., and R. Guensler (2014). "Analysis of Variables that Affect HOT Speeds on I-85 Express Lanes in Atlanta (14-5587)." 93rd Annual Meeting of the Transportation Research Board. Washington, DC. January 2014.
45. Santini, D., Y. Zhou, V. Elango, Y. Xu, and R. Guensler (2014). "Daytime Charging: What is the Hierarchy of Opportunities and Customer Needs? Case Study based upon Atlanta Commute Data (14-5337)." 93rd Annual Meeting of the Transportation Research Board. Washington, DC. January 2014.
46. Weber, J., A. Misra, A. Grossman, G. Cernjul, S. McTague, K. Watkins, and R. Guensler (2014). "Bicycle Maps (14-1168)." 93rd Annual Meeting of the Transportation Research Board. Washington, DC. January 2014.

47. Khoeini, S. and R. Guensler (2013). "Socio-spatial Model for Managed Lane System Expansion based on a Before and After Study of Atlanta I-85 HOT Lane"; 60th Annual North American Meetings of the Regional Science Association International, Atlanta, GA, Nov 2013.
48. Guin, A., V. Elango, M. Hunter, R. Guensler (2013). "Visualization of Vehicle and Person Throughput." 7th International Visualization in Transportation Symposium: Visualization for Big Data! Irvine, CA. October 23-25, 2013.
49. Xu, Y., Lee, D., Gbologah, F., Cernjul, G., Elango, V., Rodgers, M., and Guensler, R. (2013). "Load-Based Life Cycle Greenhouse Gas Emissions Calculator for Transit Buses: An Atlanta, GA, Case Study." *Green Streets, Highways, and Development 2013*: pp. 284-294.
50. Cernjul, G., R. Guensler, M. Rodgers, Y. Xu, D. Lee, F. Gbologah, V. Elango, and A. Kumble (2013). "Load-Based Life-Cycle On-Road Greenhouse Gas Emissions Calculator: Running Emissions Sensitivity Analysis". 3rd International Conference on Urban Transportation Systems. Paris, France. ASCE Urban Public Transit Systems 2013. pp. 90-102. November 2013.
51. Xu, Y., F. Gbologah, G. Cernjul, A. Kumble, R. Guensler, M. Rodgers (2013). "Comparison of Fuel-Cycle Emissions per Passenger Mile from Multiple Bus and Rail Technologies." 3rd International Conference on Urban Transportation Systems. Paris, France. ASCE Urban Public Transit Systems 2013. pp. 204-216. November 2013.
52. Smith K. S., V. Elango, and R. Guensler (2013). "HOV/HOT Lane Vehicle Characteristics: A Case Study on Atlanta's I-85 HOV-TO-HOT Corridor." *Civil Engineering Applications in Public Transportation*. Paris, France. ASCE Urban Public Transit Systems 2013. pp. 253-264. November 2013.
53. Xu, Y., R. Guensler, and M. Rodgers (2013). "Sensitivity of Emissions Predictions Based on Global Positioning System-based Cycle Data and Assumptions of Idle Cutpoints." Air and Waste Management Association's Annual Conference & Exhibition, Chicago, IL. July 2013.
54. Khoeini, S., M.O. Rodgers, and R. Guensler (2013). "Analysis of Fleet Composition and Vehicle Value for the Atlanta I-85 HOT Lane (13-4434)." 92nd Annual Meeting of the Transportation Research Board, Washington, DC. January 2013.
55. Rome, C., V. Elango, R. Guensler (2012). "Emissions and Idling of the Cobb County School District Bus Fleet." 91st Annual Meeting of the Transportation Research Board, Washington, DC. January 2012.
56. D'Ambrosio, K., K. Smith, F. Castrillon, S. Box, C. Rome, A. Sheik, T. Vo., L. Peesapati, A. Guin, V. Elango, M. Hunter, and R. Guensler (2012). "Methodology for Collecting Vehicle Occupancy Data on Multi-Lane Interstate Highways (12-2503)." 91st Annual Meeting of the Transportation Research Board, Washington, DC. January 2012.
57. Box, S., T. Vo, W. Suh, R. Guensler, A. Guin, M. Hunter, and M.O. Rodgers (2012). "Assessment of Multi-Antenna Array Performance for Detecting Bluetooth Enabled Devices in a Traffic Stream." 91st Annual Meeting of the Transportation Research Board, Washington, DC. January 2012.
58. Toth, C., R. Guensler, A. Guin, and M. Hunter (2012). "Changes in Legal and Illegal Weaving Activity after the Restriping of I-85 HOV Lanes in Atlanta." 91st Annual Meeting of the Transportation Research Board, Washington, DC. January 2012.
59. Xu, Y., and R. Guensler (2011). "Effective GPS-Based Panel Survey Sample Size Analysis for Before-and -after Studies using Generalized Estimating Equation Methods." 90th Annual Meeting of the Transportation Research Board, Washington, DC. January 2011.
60. Henclewood, D., A. Guin, R. Guensler, R. Fujimoto and M. Hunter (2010). "Real-Time Data Driven Arterial Simulation for Performance Measure Estimation." *Proceeding of the Winter Simulation Conference (WSC)*, B. Johansson, S. Jain, J. Montoya-Torres, J. Hugan, and E. Yücesan, eds., Baltimore, MD. December 2010.

61. Elango, V., and R. Guensler (2010). "An Automated Activity Identification Method for Passively Collected GPS Data." 3rd TRB Conference on Innovations in Travel Modeling. Tempe, Arizona. May 10-12, 2010.
62. Nelson, J.I., L. Zuyeva, N. Wood, and R. Guensler (2010). "A Socio-Demographic Analysis of Northeast Atlanta I-85 Peak Period Commuters Likely to be Affected by Implementation of Value Pricing Along the Corridor." 89th Annual Meeting of the Transportation Research Board, Washington, DC. January 2010.
63. Ross, C., J. Barringer, R. Guensler, J.L. Harbour Doyle, L. Zuyeva, E. Barrella (2009). "Metropolitan Atlanta Congestion Pricing Study (09-3780)." 88th Annual Meeting of the Transportation Research Board, Washington, DC. January 2009.
64. Xu, Y., L. Zuyeva, D. Kall, V. Elango, and R. Guensler (2009). "Mileage Based Value Pricing: Phase II Case Study Implications of the Commute Atlanta Project (09-3458)." 88th Annual Meeting of the Transportation Research Board, Washington, DC. January 2009.
65. Barringer, J., C.L. Ross, R. Guensler, J.L. Harbour Doyle, L. Zuyeva, E. Barrella (2008). "Perceptions of Congestion Pricing in the Metropolitan Atlanta Region." ACSP-AESOP Joint Congress, Chicago, IL, July 2008.
66. Jeon, C.M., A. Amekudzi, R. Guensler (2008). "Sustainability Assessment at the Transportation Planning Level: Performance Measures and Indexes (08-1325)." 87th Annual Meeting of the Transportation Research Board, Washington, DC. January 2008.
67. Rountree, R.C., Miller, J., P. Vu, and R. Guensler (2008). "Georgia's Approach to Congestion with the Four T's: Tolling, Transit, Telework, and Technology (08-3066)." 87th Annual Meeting of the Transportation Research Board, Washington, DC. January 2008.
68. Vu, P., L. Zuyeva, R. Guensler, and J. Miller (2008). "Enforcement Strategies for High-Occupancy Toll Lanes (08-3025)." 87th Annual Meeting of the Transportation Research Board, Washington, DC. January 2008.
69. Miller, J.M., P. Vu, T. Slack, R. Rountree, and R. Guensler (2008). "Commuter Credits: Proposed Program to Support Public Policy Goals of HOT Lanes (08-2832)." 87th Annual Meeting of the Transportation Research Board, Washington, DC. January 2008.
70. Elango, V., P. Blaiklock, and R. Guensler (2008). "Visualization of Freight Movement with the GT Freight Data Collector and Real-time Cargo Tracking (08-0628)." 87th Annual Meeting of the Transportation Research Board, Washington, DC. January 2008.
71. Boonsiripant, S., M. Hunter, R. Guensler, M. Rodgers, and S. Wu (2007). "Speed Characteristics and Safety on Low Speed Urban Midblock Sections Based on GPS-Equipped Vehicle Data." 14th International Conference on Road Safety on Four Continents, Bangkok, Thailand. November 14-16, 2007.
72. Feng, C., R. Guensler, and M. Rodgers (2007). "The Influence of Data Quality Assurance on Idle Emission Rate Estimates for Transit Buses." Air and Waste Management Association, 100th Annual Meeting Proceedings (CD-ROM). Pittsburgh, PA. June 2007.
73. Lanigan, J., J. Zumerchik, J.P. Rodrigue, R. Guensler, and M.O. Rodgers (2007). "Shared Intermodal Terminals and Potential for Improving Efficiency of Rail-Rail Interchange." 86th Annual Meeting of the Transportation Research Board, Washington, DC. January 2007.
74. Zuehlke, K. and R. Guensler (2007). "Employer Perception of Employer-Based Trip Reduction Program Implementation." 86th Annual Meeting of the Transportation Research Board, Washington, DC. January 2007.
75. Jun, J., J. Ogle, R. Guensler, J. Brooks, and J. Oswalt (2007). "Assessing Mileage Exposure and Speed Behavior Among Older Drivers Based on Crash Involvement Status." 86th Annual Meeting of the Transportation Research Board, Washington, DC. January 2007.

76. Li, H., R. Guensler, J. Ogle, J. Jun, and V. Elango (2007). "Descriptive Analysis of Long-Distance Travel by Personal Vehicles Using 2004 Commute Atlanta Data." 86th Annual Meeting of the Transportation Research Board, Washington, DC. January 2007.
77. Jeon, C.M., A. Amekudzi, R. Guensler (2007). "Evaluating Transportation System Sustainability: Atlanta Metropolitan Region." 86th Annual Meeting of the Transportation Research Board, Washington, DC. January 2007.
78. Ko, J., Hunter, M., and Guensler, R. (2007). "Measuring Control Delay Using Second-by-Second GPS Speed Data." 86th Annual Meeting of the Transportation Research Board, Washington, DC. January 2007.
79. Jun, J., S. Yoon, and R. Guensler (2006). "Impacts of Acceleration Calculation Methods on On-road Vehicle Engine Power Estimation." Air and Waste Management Association, 99th Annual Meeting Proceedings (CD-ROM). Pittsburgh, PA. June 2006.
80. Ko, J., R. Guensler, M. Hunter, and H. Li (2006). "Instrumented Vehicle Measured Speed Variation and Freeway Traffic Congestion." Proceedings of the 9th International Conference on Applications of Advanced Technology in Transportation, held in Chicago, IL. American Society of Civil Engineers, New York, NY. August, 2006.
81. Lee, J., R. Guensler, and J. Jun (2006). "Potential Use of Operating Mode Durations and Dynamic Ratios in Analyzing Driver Behavior Using Instrumented Vehicle Data." Published in CD-ROM of the Proceedings of the 85th Annual Meeting of the Transportation Research Board. Washington, DC. January, 2006.
82. Yoon, S., J. Pearson, R. Guensler, and M.O. Rodgers (2006). "A New Heavy-Duty Vehicle Visual Classification: Impact upon Regional Mobile Source Emissions Inventories." Published in CD-ROM of the Proceedings of the 85th Annual Meeting of the Transportation Research Board. Washington, DC. January, 2006.
83. Li H., R. Guensler and J. Ogle (2006). "Impact of Objective Route Attributes on the Choice of Primary Morning Commute Route." Published in the CD-ROM Proceedings of the 85th Annual Meeting of the Transportation Research Board. Washington, DC. January, 2006.
84. Schönfelder, S., H. Li, R. Guensler, J. Ogle, K.W. Axhausen (2006). "Analysis of Commute Atlanta Instrumented Vehicle GPS Data: Destination Choice Behavior and Activity Spaces." Published in the CD-ROM Proceedings of the 83rd Annual Meeting of the Transportation Research Board. Washington, DC. January, 2006.
85. Wu, H., R. Fujimoto, R. Guensler, M. Hunter (2005). "Multihop Networks: An Architecture Study of Infrastructure-Based Vehicular Networks." Proceedings of the Eighth ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM). Montreal, Canada. pp. 36-39. American Society of Computing, New York, NY. October 2005.
86. Wu, H., R. Fujimoto, R. Guensler, M. Hunter (2005). "An Empirical Study of Short Range Communications for Vehicles". VANET, Proceedings of the Second ACM Workshop on Vehicular Ad Hoc Networks held in Köln, Germany. pp. 83-84. Association of Computing Machinery, New York, NY. September 2005.
87. Lee, J., M. Hunter, J. Ko, R. Guensler, and H.K. Kim, (2005), "Large-Scale Microscopic Simulation Model Development Utilizing Macroscopic Travel Demand Model Data", Proceedings of the 6th Annual Conference of the Canadian Society of Civil Engineers, Toronto, Ontario, Canada, June 02-04, 2005.
88. Feng, C., S. Yoon, and R. Guensler (2005). "Data Needs for a Proposed Modal Heavy-Duty Diesel Vehicle Emission Model." Air and Waste Management Association, 98th Annual Meeting Proceedings (CD-ROM). Pittsburgh, PA. June 2005.
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### B3. Other Refereed Materials

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2. Collet, S., R. Guensler, M. Beardsley, R. Mathur, and S. Gao (2016). Highlights from the Coordinating Research Council's 2016 Air Quality Research Needs Workshop: Top 11 Research Needs. Environmental Manager. Air and Waste Management Association. Pittsburgh, PA. July 2016.
3. Xu, Y., and R. Guensler (2015). "Capturing Personal Modality Styles Using Multiday GPS Data – Findings from the San Francisco Bay Area." In Multiday GPS Travel Behavior Data for Travel Analysis, Report No. FHWA-HEP-015-026, Federal Highway Administration. March 2015.
4. Battelle and Texas A&M Transportation Institute (2015). "MAP-21 Air Quality and Congestion Mitigation Measure Outcomes Assessment Study." Report No. FHWA-HEP-15-008, Federal Highway Administration. Case Study Expert Coauthor.
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6. ORNL and Georgia Tech (2014). Zhenhong Lin, Jan-Mou Li, and Diane Davidson (Oak Ridge National Laboratory), and Y. Xu, D.Y. Lee, F. Gbologah, G. Cernjul, M.O. Rodgers, and R. Guensler (Georgia Institute of Technology). "Development of a Greenhouse Gas Emissions Calculator Incorporating Electric Vehicle Options." Final Report Project No. TN-26-7060-00. March 2014.
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## C. Other Publications and Creative Products

### C1. Non-refereed Journal Publications

1. Guensler, R. (2007). "Commute Atlanta: Instrumented Vehicles, Value Pricing, Travel Behavior, and Safety." Georgia Transportation Institute Annual Report.
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3. Shaheen, S., R. Guensler, and F. Mar (1995). "Concurrent Air Quality Analysis under the National Environmental Policy Act and Transportation/Air Quality Conformity." Transportation Quarterly. Volume 49, Number 4. Fall.
4. Guensler, R. (1994). "Loopholes for Air Pollution." ITS Review. University of California, Berkeley. Berkeley, CA. November/December 1994.
5. Guensler, R. (1993). "Critical Research Needs in Land Use, Transportation, and Air Quality." TR News. Number 167. National Research Council, Transportation Research Board. Washington, DC. July-August 1993.

### C2. Non-refereed Conference and Workshop Proceedings

1. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, H. Liu, X. Xu, H. Li, D. Kim, Y. Zhao, Y. Wang, and H. Lu. (2019). Invited. Applications of Integrated Energy and Emissions Modeling Tools (68 attendees). Guensler and Li (speakers). National Center for Sustainable Transportation. Webinar (+Archive). ITS Davis. Davis, CA. March 22, 2019.
2. Xu, X., H. Liu, H.M. A. Aziz, M.O. Rodgers, and R. Guensler (2019). An Advanced Modal-Based Modeling Approach to Estimate the Energy Consumption of Electric Vehicle Subfleets in Large-Scale Transportation Networks. Transportation, Air Quality, and Health Symposium. Austin, TX. February 2019.

3. Guensler, R. (2018). Invited. Advances in Integrated Modeling for Energy and Emissions (35 attendees). Transportation Research Board Committee on Transportation and Air Quality (ADC20) Summer Meeting. Washington, DC. August 1, 2018.
4. Cebe, J., C. Dyess, D. Boyer, and R. Guensler (2017). Planning a Pedestrian Paradise: Effective Strategies and Innovative Tools for Inventorying Sidewalk Assets and Developing ADA Transition Plans (26 attendees). Georgia Walking Summit. Augusta, GA. May 4-5, 2017.
5. Akanser, A., A. Grossman, Y. Xu, R. Guensler (2016). "Commute Warrior: An Android Application to Collect Longitudinal Travel Survey Data." European Transport Conference. Barcelona, Spain. October 5-7, 2016.
6. Guensler, R. H. Liu, Y. Xu, and M.O. Rodgers (2016). Energy Consumption and Emission Modeling of Individual Vehicle Using MOVES-Matrix (100+ attendees). TAP 2016 - 21st International Transport and Air Pollution Conference. Lyon, France. May 2016.
7. Guensler, R., M. Hunter, K. Abdelghany, M.O. Rodgers, and Y. Xu (2016). High-resolution Performance Monitoring in Managed Lane Evaluation (60 attendees). 15th International Conference on Managed Lanes. Miami, Florida. May 4-6, 2016.
8. Guensler, R., H. Liu, Y. Xu, and M.O. Rodgers (2015). "MOVES-Matrix: Setup, Implementation, and Application." Podium presentation at the 25th CRC Real World Emissions Workshop, Long Beach, CA, (200+ attendees). March 23, 2015.
9. Xu, Y., Li, H., A. Sheikh, S. Khoeini, R. Donahey, and R. Guensler (2015). "I-85 HOV to HOT Carpool Survey Results." University Transportation Center (UTC) Conference for the Southeastern Region, Birmingham, AL. March 26, 2015.
10. Elango, V., A. Akanser, R. Sadana, Y. Xu, and R. Guensler (2014). "Commute Warrior - Travel Activity Tracking Android Application." University Transportation Center (UTC) Conference for the Southeastern Region, Atlanta, GA. March 24, 2014.
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12. Guensler, R., A. Frackelton, A. Grossman, E. Palinginis, R. Sadana, F. Castrillon, V. Elango, K. Watkins (2013). "Building a Sidewalk Inventory and Prioritization System." Southeast University Transportation Center Conference, Orlando, FL. April 2013.
13. Grossman, A., A. Frackelton, E. Palinginis, Y. Xu, V. Elango, F. Castrillon, R. Sadana, and R. Guensler (2013). "Sidewalk Quality Analysis Towards More Accessible Urban Environments." Joint Association of European Schools of Planning/Association of Collegiate Schools of Planning Congress. Dublin, Ireland. July, 2013.
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15. Vedala, S., S. Khoeini, V. Elango, and R. Guensler (2011). "Demographic Analysis of HOV and General Purpose Lane Use along the I-85 Corridor in Metro Atlanta." Proceedings of the TRB 2011 Using Census Data for Transportation Conference. Irvine, CA. October, 2011.
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17. D'Ambrosio, K., K. Smith, V. Elango, and R. Guensler (2011). "Assessment of Visual Vehicle Occupancy Data Collection Methods." Proceedings of the 2011 TRB Transportation Planning, Land Use, and Air Quality Conference. San Antonio, TX. May, 2011.

18. Rome, C., V. Elango, and R. Guensler (2011). "School Bus Engine Idle Emissions Reductions." Proceedings of the 2011 TRB Transportation Planning, Land Use, and Air Quality Conference. San Antonio, TX. May, 2011.
19. Wood, N., and R. Guensler (2011). "Assessing the Marginal Cost of Freeway Congestion for Vehicle Fleets Using Passive GPS Data." 13th TRB Transportation Planning Applications Conference. Reno, NV. May, 2011.
20. Elango, V., and R. Guensler (2011). "On-road Vehicle Activity GPS Data and Privacy." 13th TRB Transportation Planning Applications Conference. Reno, NV. May, 2011.
21. Barringer, J., C. Ross, R. Guensler, and L. Zuyeva (2009). "Congestion Pricing and Associated Equity Concerns in the Metropolitan Atlanta Region." Proceedings of the Association of Collegiate Schools of Planning Annual Meeting. Crystal City, VA. October 2009.
22. Kall, D., and R. Guensler (2009). "Effect of High Occupancy Toll (HOT) Lanes on Mass Vehicle Emissions: An Application to I-85 in Atlanta." Presented at Southern District Institute of Transportation Engineers (SDITE) 2009 Annual Meeting. Birmingham, Alabama. April 2009.
23. Vu, Patrick, and R. Guensler (2008). "Gantry-Controlled Access: A Combined Tolling and Enforcement System." 2008 Freeway and Tollway Operations Conference. Fort Lauderdale, FL. June 2008.
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25. Guensler, R., H. Li, L. Zuyeva, K. Zuehlke, J.I. Nelson, Y. Xu, D. Kall, and V. Pandey (2007). "Reducing Congestion and Improving Air Quality through Value Pricing." Metropolis Mobility Week: Financing Urban Mobility Seoul, Korea. June 2007.
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41. Guensler, R., K. Dixon, V. Elango, and S. Yoon (2004). "MOBILE-Matrix: Georgia's Statewide Rural Application. Little Data - Big Needs: Tools for Air Quality Planning in Small, Medium, and Rural Communities." Transportation Research Board Annual Meeting Specialty Conference. National Academy of Sciences. Washington, DC. January 2004.
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54. Guensler, R., and S. Washington (1998). "Engine Start Emission Rates Derived from FTP Data." Proceedings of the 8th Annual On-Road Vehicle Emissions Workshop. San Diego, CA. Coordinating Research Council. Atlanta, GA. April 1998.
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62. Guensler, R. (1996). "Facilitating Workgroup Activities through the Internet." Proceedings of the ASCE Third Congress on Computing in Civil Engineering. Anaheim, CA. American Society of Civil Engineers. New York, NY. June 1996.
63. Bachman, W., W. A. Sarasua, S. Washington, R. Guensler, S. Hallmark, and M. D. Meyer (1996). "Integrating Travel Demand Forecasting Models with GIS to Estimate Hot Stabilized Mobile Source Emissions." Proceedings of the 1996 AASHTO GIS-T Symposium, Kansas City, MO, April 1996.
64. Grant, C., R. Guensler, S. Washington, and W. Sarasua (1996). "Cross-Validation of Modal Vehicle Activity Data Using Remote and Onboard Instrumentation." Proceedings of the 6th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. March 1996.
65. Sarasua, W., R. Awuah-Baffour, R. Guensler, and W. Bachman (1996). "Use of GPS and GIS to Incorporate Grade and Vehicle Location Into Transportation Air Quality Modeling." Proceedings of the 6th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. March 1996.
66. Guensler, R., and W. Bachman (1995). "Developing New Engine Start Emissions Modules." 5th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. April 1995.
67. Bachman, W., R. Guensler, and D. Kasbo (1995). "Spatial and Temporal Modeling of Start and Soak Emissions." The Emission Inventory: Programs and Progress. A Specialty Conference Sponsored by the US Environmental Protection Agency and the Air and Waste Management Association. Research Triangle Park, NC. October 1995.
68. Ahanotu, D., R. Guensler, T. Bettger, M. D. Meyer, and C. Grant (1995). "Heavy-Duty Truck Activity Research in Atlanta. The Emission Inventory: Programs and Progress." Proceedings of the 1995 Air and Waste Management Association and US Environmental Protection Agency Specialty Conference. Research Triangle Park, NC. October 1995.
69. Washington, S. and R. Guensler (1994). "Modeling Air Quality for Conformity: Current Deficiencies and New Directions." Proceedings, Coping with Conformity. 1994 Summer Meeting of the Transportation Research Board Committee on Transportation and Air Quality (A1F03). Transportation Research Board. Washington, DC. July 1994.
70. Shaheen, S., R. Guensler, and F. Mar (1994). "NEPA and Transportation/Air Quality Conformity." Proceedings, Coping with Conformity. 1994 Summer Meeting of the Transportation Research Board Committee on Transportation and Air Quality (A1F03). Transportation Research Board. Washington, DC. July 1994.
71. Washington, S., and R. Guensler (1994). "Carbon Monoxide Impacts of Automatic Vehicle Identification Applied to Electronic Vehicle Tolling." Proceedings of the National Policy Conference on Intelligent Transportation Technologies and the Environment. Hubert Humphrey Institute of Public Affairs. University of Michigan. June 1994.
72. Shaheen, S., R. Guensler and S. Washington (1994). "Vehicle Scrappage Programs: Are Some Sectors of Society Paying More for Cleaner Air?" Proceedings of the 19th Annual

- Conference and Exposition. National Association of Environmental Professionals. Washington, DC. June 1994.
73. Washington, S., and R. Guensler (1993). "Maybe We Can Build Our Way Out: Rethinking Infrastructure Solutions to Transportation Problems." Proceedings of the 26th International Symposium on Automotive Technology and Automation, Dedicated Conference: The Motor Vehicle and the Environment/Demands of the Nineties and Beyond. Aachen, Germany. Automotive Automation Limited, Croydon, England. pp. 61-71. September 1993.
  74. Washington, S., R. Guensler, and D. Sperling (1993). "Assessing the Emission Impacts of IVHS in an Uncertain Future." Proceedings of the World Car 2001 Conference. pp. 403-414. Department of Civil Engineering. University of California, Riverside. Riverside, CA. June 1993.
  75. Guensler, R., D. Sperling, and S. Washington (1993). "IVHS Technologies and Motor Vehicle Emissions." Proceedings: IVHS America Third Annual Meeting. IVHS America. Washington, DC. April 1993.
  76. Transportation and Air Quality Workgroup (1992). "1992 Air Quality Research Needs Statements. Environmental Research Needs in Transportation." Invitational Conference. National Research Council, Transportation Research Board Circular 389. Washington, DC. March 1992.
  77. Guensler, R. (1992). "A Summary of Research Agenda Break-Out Sessions." Proceedings of the 1992 Summer Meeting of the Transportation Research Board Committee on Transportation and Air Quality (A1F03). Transportation Research Board. Washington, DC. July 1992.
  78. Sperling, D., R. Guensler, D. L. Page, and S. P. Washington (1992). "Air Quality Impacts of IVHS: An Initial Review." Proceedings. IVHS Policy: A Workshop on Institutional and Environmental Issues. pp. 29-45. Gifford, Horan, and Sperling Eds. The Institute of Public Policy, George Mason University. Fairfax, VA. April 1992.

### C3. Edited Proceedings

1. Guensler, R., ed. (1999). Workshop on Microscale Air Quality Impact Assessment for Transportation Projects. Transportation Research Board, Committee on Transportation and Air Quality. January 1999.
2. Guensler, R., ed. (1992). Proceedings of the 1992 Summer Meeting of the Transportation Research Board, Committee on Transportation and Air Quality (A1F03). Published by the Institute of Transportation Studies. University of California Davis. Davis, Ca. July 1992.

### C4. Poster Sessions

1. Chang, C.H., H. Li, Y. Wang, Y. Zhao, H. Liu, and R. Guensler (accepted). Potential Changes in Commute Routes with Construction of Managed Lane Designated Access Points. 99th Annual Meeting of the Transportation Research Board. Washington, DC. January 2020.
2. Kim, D., Y. Zhao, M. Rodgers, and R. Guensler. (2019). Personal Vehicle Ownership and Operating Cost Calculator. Brook Byers Institute Sustainability Showcase. Atlanta, GA. October 28-30, 2019.
3. Xu, X., H. Liu, M. Rodgers, and R. Guensler. (2019). A Sensitivity Analysis of Electric Vehicle Energy Efficiency, Driving Range, and Operating Cost Using Regional-level Household Daily Travel Patterns. Brook Byers Institute Sustainability Showcase. Atlanta, GA. October 28-30, 2019.
4. Xu, X., H. Aziz, H. Liu, M. Rodgers, and R. Guensler. (2019). Assessment of Electric Vehicle Energy Consumption in Regional Transportation Networks. Brook Byers Institute Sustainability Showcase. Atlanta, GA. October 28-30, 2019.

5. Li, H., H. Liu, X. Xu, Y. Wang, M. Rodgers and R. Guensler. (2019). A Framework to Assess Fleet-wide Transit Energy Consumption with Alternative Fuels. Brook Byers Institute Sustainability Showcase. Atlanta, GA. October 28-30, 2019.
6. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, R. F, J. Laval, K. Abdelghany (SMU), H. Liu, and F. Gbologah. TRANSNET-Atlanta: Applications of Space-Time Memory to Reduce Congestion and Energy Use. 7<sup>th</sup> Annual Georgia Department of Transportation and Georgia Transportation Institute Research Expo, One Georgia Center, Atlanta, Georgia. September 13, 2019.
7. Saroj, A., S. Roy, R. Fujimoto, R. Guensler, A. Guin, and M. Hunter (2019). Smart City Digital Twin – Connected Data Driven Traffic Simulation Model. Automated Vehicle Symposium, Orlando, Florida, July 15th-19th, 2019.
8. Grossman, A., M.D. Meyer, K.E. Watkins, C. Ross, J. Schank, and R. Guensler (2019). MPO Performance-based Planning in Response to MAP-21: National Survey Results (19-04713). 98th Annual Meeting of the Transportation Research Board. Washington, DC. January 2019.
9. Liu, H., M.O. Rodgers, and R. Guensler (2019). Impact of Road Grade on Vehicle Speed-Acceleration Distributions, Emissions, and Line Source Dispersion Modeling on Freeways (19-05978). 98th Annual Meeting of the Transportation Research Board. Washington, DC. January 2019.
10. Liu, H., M.O. Rodgers, F. Liu, and R. Guensler (2019). Estimating the Road Grade Impact on Vehicle Speed and Acceleration on Freeways with a Bayesian Hierarchical Model (19-05901). 98th Annual Meeting of the Transportation Research Board. Washington, DC. January 2019.
11. Zhao, Y.; X. Xu, H. Liu, H. Li, C. Wang, A. Guin, M.O. Rodgers, and R. Guensler (2019). Using ABM15, Path Retention, and MOVES-Matrix to Assess Differences in Energy Use across 16 Demographic Groups in Atlanta. TRB ADA10 Fresh Ideas for Advancing Equity. 98th Annual Meeting of the Transportation Research Board. Washington, DC. January 2019.
12. Greenwald, J., D. Boyer, D. Walls, M. Funke, C. Dyess and R. Guensler (2018). Measurement of Sidewalk Quality Data for Cobb County Transit Routes. 6<sup>th</sup> Annual Georgia Department of Transportation and Georgia Transportation Institute Research Expo, One Georgia Center, Atlanta, Georgia. October 6, 2018.
13. Kim, D., A. Guin, M.O. Rodgers, R. Guensler (2018). Energy and Environmental Impact of Truck-Only Lanes: A Case Study of Interstate 75 Between Macon and McDonough, Georgia. 6<sup>th</sup> Annual Georgia Department of Transportation and Georgia Transportation Institute Research Expo, One Georgia Center, Atlanta, Georgia. October 6, 2018.
14. Liu, H., M.O. Rodgers, F. Liu, and R. Guensler (2018). Estimating the Road Grade Impact on Vehicle Speed and Acceleration at Freeways Using Bayesian Hierarchical Mode. 6<sup>th</sup> Annual Georgia Department of Transportation and Georgia Transportation Institute Research Expo, One Georgia Center, Atlanta, Georgia. October 6, 2018.
15. Guensler, R., M.O. Rodgers, M. Hunter, R. Fujimoto, K. Abdelghany, and A. Guin (2018). TRANSNET-Atlanta: STM, Control Architecture, Energy Modeling, and Implementation. ARPA-E 2018 Energy Innovation Summit. Washington, DC. March 13 - March 15, 2018.
16. Li, H., S. Khoeini, J. Cebe, Y. Xu, and R. Guensler (2018). A Semi-Automated Method to Generate GIS-Based Sidewalk Networks for Asset Management and Pedestrian Accessibility Assessment (18-02656). 97th Annual Meeting of the Transportation Research Board. Washington, DC. 2018.
17. Xu, X., H. Liu, H. Li, M.O. Rodgers, R. Guensler (2018). Integrating Engine Start, Soak, Evaporative, and Truck Hoteling Emissions into MOVES-Matrix (18-04825). 97th Annual Meeting of the Transportation Research Board. Consideration for Transportation Research Record. Washington, DC. January 2018.

18. Li, H., Y. Wang, X. Xu, H. Liu, A. Guin, M. Rodgers, M. Hunter, J. Laval, and R. Guensler (2018). Assessing the Time, Monetary, and Energy Costs of Alternative Modes (18-05362). 97th Annual Meeting of the Transportation Research Board. Washington, DC. January 2018.
19. Xu, X., H. Liu, Y. Xu, M. Rodgers and R. Guensler (2018). Regional Emission Analysis with Travel Demand Models and MOVES-Matrix (18-05363). 97th Annual Meeting of the Transportation Research Board. Washington, DC. January 2018.
20. Liu, H., H. Li, M. Rodgers, R. Guensler (2018). Development of Road Grade Data using the USGS Digital Elevation Model (18-03535). 97th Annual Meeting of the Transportation Research Board. Washington, DC. January 2018.
21. Grossman, A., K. Watkins, C. Ross, M. Meyer, R. Guensler (2017). Survey Results on the Development of Voluntary and Mandated Performance Measures at MPOs in the Context of MAP-21. Association of Metropolitan Planning Associations (AMPO) Annual Conference. Savannah, GA. October 20, 2017.
22. Hunter, M., A. Guin, R. Guensler, F. Fujimoto, J. Bolen, S. Roy (2017). Smart Cities Atlanta North Avenue and Special Event Demonstration Project. 5th Annual Georgia Department of Transportation and Georgia Transportation Institute Research Expo, One Georgia Center, Atlanta, Georgia. October 5, 2017.
23. Liu, H., H. Li, M. Rodgers, R. Guensler (2017). "Development of Road Grade Data Based On USGS Digital Elevation Model." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. October 5, 2017.
24. Li, H., S. Khoeini, J. Cebe, Y. Xu, and R. Guensler (2017). "Sidewalk Network Generation: A Semi-Automated Method Using Parcel and Roadway Data." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. October 5, 2017.
25. Boyer, D., C. Dyess, D. Walls, R. Guensler (2017). "Sidewalk Prioritization and Repair Index." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. October 5, 2017.
26. Boyer, D., C. Dyess, D. Walls, R. Guensler (2017). "Sidewalk Asset Management System: A Midtown Case Study." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. October 5, 2017.
27. Boyer, D., C. Dyess, J. Cebe, A. Grossman, R. Guensler (2017). "Profiles of Pedestrian Preferences and Perceptions: Results from the Southeast Region Sidewalk Public Safety." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. October 5, 2017.
28. Boyer, D., J. Cebe, C. Dyess, A. Grossman, and R. Guensler (2017). Community Engagement, Asset Inventory, and Condition Assessment for Pedestrian Infrastructure Project Prioritization. Smart Cities Connect Conference & Expo. Austin, TX. June 25 - June 28, 2017.
29. Guensler, R., M.O. Rodgers, M. Hunter, R. Fujimoto, K. Abdelghany, and A. Guin (2017). TRANSNET Atlanta: Network Performance Monitoring and Distributed Simulation to Improve Transportation Energy Efficiency. ARPA-E 2017 Energy Innovation Summit. Washington, DC. February 27 - March 1, 2017.
30. Liu, H., Y. Xu, A. Akanser, M. Hunter, M. Rodgers, and R. Guensler (2016). "Energy Consumption and Emission Modeling of Individual Vehicles Using MOVES-Matrix." 76th Annual Meeting of the Transportation Research Board. Washington, DC. January 2017. Consideration for Transportation Research Record.
31. Xu, X, H. Liu, Y. Xu, M. Rodgers, R. Guensler (2016). "Regional Emission Analysis using Travel Demand Models and MOVES-Matrix." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 13, 2016.

32. Guensler, R., H. Liu, Xu, X, A. Akanser, D. Kim, M. Rodgers, M. Hunter (2016). "Energy Consumption and Emission Modeling of Individual Vehicles Using MOVES-Matrix" Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 13, 2016.
33. Li, H, S. Khoeini, J. Cebe, Y. Xu, R. Guensler (2016). "Generating Independent Sidewalk Networks: Using Roadway Network and Parcel Data" Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 13, 2016.
34. Cebe, J., A. Grossman, H. Li, A. Akanser, C. Dyess, D. Boyer, R. Guensler. (2016). "Tools for Managing Community Sidewalks." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 13, 2016.
35. Watkins, K., A. Xu, M.O. Rodgers, and R. Guensler (2016). "If Safety Matters, Let's Measure it: Nationwide Survey Results for Bicycle and Pedestrian Treatment Planning and Prioritization." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 13, 2016.
36. Guensler, R., M. Hunter, A. Guin, W. Suh, J. Anderson, K. Colberg, and S. Zinner (2016). "Real-Time Work Zone Travel Time." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 13, 2016.
37. Cebe, J., A. Grossman, H. Li, A. Akanser, C. Dyess, and R. Guensler (2016). Tools for Assessing, Managing, and Repairing Community Sidewalk Assets." 11th Transportation Asset Management Conference, Transportation Research Board. Minneapolis, MN. July 10-12, 2016.
38. Cebe, J., A. Grossman, C. Dyess, A. Akanser, X. Xu, and R. Guensler (2016). Tools for Sidewalk Assessment and Management. American Planning Association 2016 National Planning Conference. Phoenix, AZ. April 2-5, 2016.
39. Cebe, J., A. Grossman, C. Dyess, and R. Guensler (2016). "Survey of Citizen Preferences for use in Developing Sidewalk and Ramp Repair Prioritization Criteria." 2016 University Transportation Center (UTC) Conference for the Southeastern Region, Knoxville, TN. April 1, 2016.
40. Guensler, R., M.O. Rodgers, M. Hunter, Y. Xu, R. Fujimoto, K. Abdelghany, A. Guin, K. Watkins, R. Pendyala (2016). Network Performance Monitoring and Distributed Simulation to Improve Transportation Energy Efficiency. Department of Energy, ARPA-E Energy Summit. Baltimore Harbor, MD. February 29 to March 3, 2016.
41. Dyess, C., A. Grossman, J. Cebe, H. Li, A. Akanser, and R. Guensler (2016). "Pedestrian Access to Bus Stops in Atlanta." STRIDE Reception at the 95th Annual Transportation Research Board Meeting, Washington, DC., January 2016.
42. Sheikh, A., and R. Guensler (2016). "Atlanta's I-85 Express Lanes Carpool Survey Status (P16-0389)." 95th Annual Meeting of the Transportation Research Board. Washington DC. January 2016.
43. Guensler, R., M.O. Rodgers, M. Hunter, Y. Xu, R. Fujimoto, K. Abdelghany, A. Guin, K. Watkins, R. Pendyala (2015). Network Performance Monitoring and Distributed Simulation to Improve Transportation Energy Efficiency. Department of Energy, ARPA-E TRANSNET Kickoff Meeting. San Francisco, CA. November 10, 2015.
44. Grossman, A., A. Akanser, A. Frackelton, C. Toth, and R. Guensler (2015). "Innovative Technologies for Sidewalk Assessment." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 22, 2015.
45. Sheikh, A., A. Misra, and R. Guensler (2015). "High Occupancy Toll Lane Decision Making: Income Effects on Atlanta's I-85 Express Lanes." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 22, 2015.

46. Guensler, R. H. Liu, X. Xu, Y. Xu, and M.O. Rodgers (2015). "MOVES-Matrix: Setup, Implementation, and Application." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 22, 2015.
47. Li, H., Y. Xu, S. Khoeini, V. Elango, R. Guensler (2015). "Generating Sidewalk Networks from Roadway Network and Parcel Data." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 22, 2015.
48. Akanser, A., V. Elango, A. Grossman, Y. Xu, Q. Chu, and R. Guensler (2015). "Sidewalk Scout: Crowdsourcing the Collection of Sidewalk and Ramp Defect Data." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 22, 2015.
49. Akanser, A., Elango, V., R. Sadana; Y. Xu, and R. Guensler (2015). "Commute Warrior Android App for Real-time Travel Monitoring and Electronic Travel Diary Surveys." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 22, 2015.
50. Shaw, A., A. Grossman, P. Pratyaksa, A. Greenwood, Y. Xu, M.P. Hunter, and R. Guensler (2015). "Engaging in Transportation Engineering Initiatives with K-12 Students." Georgia Tech ASEE Expo. Atlanta, GA. February 2015.
51. Li, H., Y. Xu, S., Khoeini, and R. Guensler (2015). "I-85 HOV to HOT Carpool Survey Preliminary Results." P15-6550. 94th Annual Meeting of the Transportation Research Board, Washington DC. January 2015.
52. Toth, C., and R. Guensler (2015). "Lane Choice and HOT Egress Behavior Analysis of Peach Pass Drivers." P15-5756. 94th Annual Meeting of the Transportation Research Board, Washington DC. January 2015.
53. Watkins, K., S. Handy, A. Grossman, and R. Guensler (2014). "Environmental Sustainability through Bicycle and Pedestrian Research." National UTC Poster Session on Bicycle and Pedestrian Research. Research and Innovative Technology Administration. Washington, DC. September 29, 2014.
54. Guensler, R., Y. Xu, V. Elango, A. Grossman, K. Poddar, A. Akanser, and R. Sadana (2014). "Commute Warrior: An Android Application to Collect Longitudinal Travel Survey Data." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
55. Grossman, A., A. Frackelton, R. Guensler (2014). "Benefits of Sidewalk Sentry Android App Data." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
56. Khoeini, S., V. Elango, R. Guensler (2014). "Generating Sidewalk Networks from Roadway Network and Parcel Data." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
57. Xu, Y., H. Liu, R. Guensler (2014). "Emissions Impact of HOV to HOT Lane Conversions on I-85 in Atlanta." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
58. Sheikh, A., A. Misra, R. Guensler (2014). "High Occupancy Toll Lane Decision Making: Income Effects on Atlanta's I-85 Express Lanes." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
59. Khoeini, S., R. Guensler (2014). "HOV-to-HOT Conversion Socioeconomic Assessment: Atlanta I-85 HOV-to-HOT Conversion." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.

60. Toth, C., R. Guensler, J. Laval (2014). "An Empirical Data-Driven Macroscopic Lane Changing Model." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
61. Xu, Y., M. Hunter, R. Guensler, A. Grossman, A. Shaw, P. Pratyaksa, A. Greenwood (2014). "Engaging in Transportation Engineering Initiatives with K-12 Students." Georgia Department of Transportation and Georgia Transportation Institute Research Poster Session. Atlanta, GA. September 23, 2014.
62. Liu, R., R. Guissou, A. Grossman, and R. Guensler (2014). "Sidewalks and Tree Encroachment. 9th Annual Undergraduate Research Symposium." Georgia Institute of Technology. April 2014.
63. Xu, Y., R. Guensler, M. Rodgers, D. Lee, F. Gbologah (2014). "Transit Fleet GHG Management Using the Fuel and Emissions Calculator." Poster presentation at the 24th CRC Real Work Emissions Workshop, San Diego, CA, March 31 to April 2, 2014.
64. Sheikh, A., and R. Guensler (2014). "HOT Lane Decision Making: Operational and Demographic Factors." 2014 University Transportation Center (UTC) Conference for the Southeastern Region, Atlanta, GA. March 24, 2014.
65. Palinginis, E., F. Castrillon, A. Akanser, A. Grossman, V. Elango, and R. Guensler (2014). "A Technology Overview of the Sidewalk Sentry Application." University Transportation Center (UTC) Conference for the Southeastern Region, Atlanta, GA. March 24, 2014.
66. Grossman, A., E. Palinginis, A. Frackelton, F. Castrillon, V. Elango, A. Akanser, and R. Guensler (2014). "Estimation of Sidewalk Data Variables in Development of a Sidewalk Quality Rating." GTRIC 2014 Poster Session. February 11, 2014.
67. Guensler, R., M. Hunter, A. Guin, V. Elango, S. Khoeini, A. Sheikh, et al. (2014). "Atlanta I-85 HOV-to-HOT Conversion: Analysis of Vehicle and Person Throughput." P14-5870. 93rd Annual Meeting of the Transportation Research Board, Washington DC. January 2014.
68. Grossman, A., Frackelton, A. E. Palinginis, A. Akanser, R. Sadana, F. Castrillon, V. Elango, Y. Xu, K. Watkins, Guensler, R. (2014). "Sidewalk Quality Assessment." STRIDE Reception at the 93rd Annual Transportation Research Board Meeting, Washington, DC., January 2014.
69. Khoeini, S., and R. Guensler (2014). "Atlanta I-85 HOV-to-HOT Conversion: Household-Level Sociospatial Impact Assessment." P14-6591. 93rd Annual Meeting of the Transportation Research Board, Washington DC. January 2014.
70. Grossman, A., A. Frackelton, E. Palinginis, A. Akanser, R. Sadana, F. Castrillon, V. Elango, and R. Guensler (2013). "Innovative Technology for Sidewalk Assessment: Development and Field Deployment." Association of Pedestrian and Bicycle Professionals Professional Development Seminar. Best Poster Award. Boulder, CO. September, 2013.
71. Guensler, R., W. Suh, M. Hunter, A. Guin, J. Teizer, J. Anderson, K. Colberg, S. Zinner (2013). "Work Zone Technology Testbed Development." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
72. Akanser, A., F. Castrillon, V. Elango, and R. Guensler (2013). "Estimation of Sidewalk Grade and Roughness using Accelerometers on Wheelchairs." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
73. Khoeini, S., and R. Guensler (2013). "Socio-Economic Study on Atlanta I-85 HOV to HOT Conversion." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
74. Grossman, A., V. Elango, A. Frackelton, and R. Guensler (2013). "The Use of a Sidewalk Quality Assessment Survey in Developing Sidewalk Ratings." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.

75. Sheikh, A., A. Guin, and R. Guensler (2013). "Value of Travel Time Savings: Evidence from Atlanta's I-85 Express Lanes." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
76. Toth, C., and R. Guensler (2013). "Analysis of Variables that Affect HOT Speeds on I-85 Express Lanes in Atlanta." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
77. Palinginis, E., K. Kamiya, J. Laval, I. Brilakis, and R. Guensler (2013). "Full-Body Occlusion Handling and Density Analysis in Traffic Video-Surveillance Systems." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
78. Castrillon, F., M. Roell, S. Khoeini, and R. Guensler (2013). "The I-85 HOT Lane's Impact on Atlanta's Commuter Bus and Vanpool Occupancy." Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session. Atlanta, GA. September, 2013.
79. Khoeini, S., and R. Guensler (2013). "Pricing Impact on Users Characteristics: Socio-economic Study on Atlanta I-85 HOV2+ to HOT3+ Conversion." Transportation Research Board Freeway & Managed Lanes Operations Meeting and Conference. Atlanta, GA. June 2013.
80. Sheikh, A., C. Toth, A. Guin, and R. Guensler (2013). "Weaving and Throughput in the I-85 Express Lanes." Transportation Research Board Freeway & Managed Lanes Operations Meeting and Conference. Atlanta, GA. June 2013.
81. Khoeini, S., R. Guensler, et al. (2013). "Spatial and Demographic Changes of Atlanta I-85 Commutershed for the Managed Lane for the HOV-to-HOT Conversion." P13-6078. 92nd Annual Meeting of the Transportation Research Board, Washington DC. January 2013.
82. Frackelton, A., A. Grossman, K. Kamiya, R. Sadana, F. Castrillon, E. Palinginis, V. Elango, Y. Xu, K. Watkins, Guensler, R. (2013). "Development of an Automated Sidewalk Quality Assessment System." STRIDE Reception at the 92nd Annual Transportation Research Board Meeting, Washington, DC., January 2013.
83. Elango, V., S. Khoeini, S., R. Guensler, et al. (2013). "Evaluation of Changes in Person and Vehicle Throughput for the I-85 Corridor HOV-to-HOT Lane Conversion." P13-6068. 92nd Annual Meeting of the Transportation Research Board, Washington DC. January 2013.
84. Guensler, R., et al. (2012). "Conversion of HOV to HOT Monitoring and Evaluation - Atlanta I-85." 14th International Managed Lanes Conference. Oakland, CA. May 22-24, 2012.
85. Guensler, R., et al. (2012). "Atlanta HOV-to-HOT Corridor Performance Monitoring." P12-5606. 91st Annual Meeting of the Transportation Research Board, Washington DC. January 2012.
86. Guensler, R., M. Hunter, J. Laval, A. Guin, V. Elango, and P. Vu (2011). "Atlanta HOV-to-HOT Corridor Performance Monitoring." P11-0548. 90th Annual Meeting of the Transportation Research Board, Session 559, Road Pricing and Managed Lanes Showcase: Lessons from Projects and Case Studies. Washington, DC. January 2011.
87. Wood, N., R. Guensler, and V. Elango (2011). "Assessing the Marginal Cost of Freeway Congestion for Vehicle Fleets Using Passive GPS Data." P11-0530. 90th Annual Meeting of the Transportation Research Board, Session 560, Road Pricing and Managed-Lane Research: New Tools and Promise for the Future. Washington, DC. January 2011.
88. Toups, D., P. Vu, and R. Guensler, (2011). "Pricing Implications of Combining User Fee and Credit Programs Across Multiple Transportation Modes." P11-0539. 90th Annual



- Meeting of the Transportation Research Board, Session 560, Road Pricing and Managed-Lane Research: New Tools and Promise for the Future. Washington, DC. January 2011.
89. Hunter, M., R. M. Fujimoto, C. Alexopoulos, R. Guensler, and F. Southworth (2009). "Embedded Distributed Simulation for Transportation System Management." 2009 NSF EFRI Annual Grantees Conference. Arlington, VA. March 2009.
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80. Guensler, R. (1989). "Measuring Emissions of Potentially Toxic Organic Compounds from Municipal Wastewater Treatment Plants." Thesis submitted in partial satisfaction of the requirements for the degree of Masters of Science in Civil/Environmental Engineering. Advisor: Daniel Chang. Department of Civil Engineering, University of California, Davis. Davis, CA. December 1989.
81. Guensler, R. (1987). "The Application of Bar Codes to Compliance Inspections." ARB/CD-87-01. California Air Resources Board, Compliance Division, Sacramento, CA. September 1987.

#### C9. Co-Authored California Air Resources Board Reports

1. California Air Resources Board, Office of Air Quality Planning and Liaison (1990). "California Clean Air Act Cost-Effectiveness Guidance." Sacramento, CA. September 1990.
2. California Air Resources Board, Compliance Assistance Program (1990). "Surface Coating Operations, Aerospace Components, Technical Manual." Sacramento, CA. August 1990.
3. California Air Resources Board, Compliance Assistance Program (1990). "Self-Inspection Handbook for Surface Coating of Aerospace Components." Sacramento, CA. August 1990.
4. California Air Resources Board, Office of Strategic Planning (1990). "California Clean Air Act Transportation Requirements Guidance" (CCAA Guidance Paper #2). Sacramento, CA. February 1990.
5. California Air Resources Board, Compliance Division (1989). "An Evaluation of the San Diego County Air Pollution Control District Program." Sacramento, CA. October 1989.
6. California Air Resources Board, Compliance Assistance Program (1989). "Self-Inspection Handbook for Solvent Cleaners." Sacramento, CA. October 1989.
7. California Air Resources Board, Compliance Assistance Program (1989). "Self-Inspection Handbook for Surface Coating of Metal and Plastic Parts and Products." Sacramento, CA. July 1989.
8. California Air Resources Board, Compliance Assistance Program (1989). "Solvent Cleaning Degreasing Applications, Technical Manual." Sacramento, CA. July 1989.
9. California Air Resources Board, Compliance Assistance Program (1989). "Surface Coating Operations, Metal Parts and Products, Technical Manual." Sacramento, CA. July 1989.
10. California Air Resources Board, Compliance Assistance Program (1988). "Self-Inspection Handbook for Gasoline Facilities." Sacramento, CA. July 1988.
11. California Air Resources Board, Compliance Division (1988). "An Evaluation of the Bay Area Air Quality Management District Program." Sacramento, CA 1988.
12. California Air Resources Board, Compliance Division (1987). "An Evaluation of the South Coast Air Quality Management District Program." Sacramento, CA. 1987.
13. California Air Resources Board, Compliance Division (1986). "An Evaluation of the Yolo-Solano County Air Pollution Control District Program." Sacramento, CA. 1986.
14. California Air Resources Board, Compliance Division (1986). "An Evaluation of the San Joaquin County Air Pollution Control District Program." Sacramento, CA. 1986.
15. California Air Resources Board, Compliance Division (1985). "An Evaluation of the Fresno County Air Pollution Control District Program." Sacramento, CA. 1985.

#### D. Presentations (Without Proceedings)

1. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, H. Liu, X. Xu, H. Li, D. Kim, Y. Zhao, Y. Wang, and H. Lu. (2019). Invited. Integrating MOVES-Matrix at Multiple Scales for Transportation Energy and Emissions Assessment (40 attendees). USEPA MOVES Review Work Group. US Environmental Protection Agency. Ann Arbor, MI. October 9, 2019.
2. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, H. Liu, X. Xu, H. Li, D. Kim, Y. Zhao, Y. Wang, and H. Lu (2019). Invited. Integrating Models at Multiple Scales for Transportation Energy and Emissions Assessment (20 attendees). ARC Model Users Group. September 27, 2019.
3. Zhao, Y., and R. Guensler (2019). Invited. Activity-based Modeling with Path Retention (20 attendees). ARC Model Users Group. September 27, 2019.
4. Hunter, M., Saroj, S. Roy, R. Fujimoto, R. Guensler, and A. Guin (2019). North Avenue Smart City Digital Twin (25 attendees). Georgia Power – A Southern Company. Atlanta, Georgia. July 25, 2019.
5. Hunter, M., Saroj, S. Roy, R. Fujimoto, R. Guensler, and A. Guin (2019). Smart City Real-Time Data Driven Simulation – North Avenue Digital Twin (200 attendees). ITE Summer Seminar, St. Simons Island, Georgia, July 21st to July 24th, 2019.
6. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, H. Liu, X. Xu, H. Li, D. Kim, Y. Zhao, Y. Wang, and H. Lu. (2019). MOVES-Matrix for Transportation Energy and Emissions Assessment (8 attendees). Guensler (speaker). Teleconference with Argonne National Laboratory. April 12, 2019.
7. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, H. Liu, X. Xu, H. Li, D. Kim, Y. Zhao, Y. Wang, and H. Lu. (2019). Invited. Integrated Energy and Emissions Modeling Tools for Transportation Assessment (7 attendees). Guensler (speaker). City of Atlanta. Lunch and Learn Seminar. Atlanta, GA. March 27, 2019.
8. Guensler, R., Deep Patel, D. Oswald (2019). Invited. ADA Design Considerations for Sidewalk Infrastructure and Electric Wheelchairs. Presentation to the Westminster High School Engineering Class (10 attendees). February 25, 2019.
9. Grossman, A. M. Meyer, K. Watkins, C. Ross, J. Schank, and R. Guensler (2019). Invited. MPO Performance Based Planning in Response to MAP-21. A Presentation to TRB Committee ADA20; Metropolitan Policy, Planning, and Processes (50 attendees). January 15, 2019.
10. ARPA-E TRANSNET-Atlanta Modeling Overview (2018). Brooks Byers All Minds Meeting. Georgia Tech Scheller College of Business (20 attendees). December 5, 2018.
11. Guensler, R., M.O. Rodgers, H. Liu, and X. Xu (2018). Invited. Georgia Tech and USEPA Meeting - Georgia Tech Systems Research. A Presentation to USEPA OTAQ Staff (12 attendees). Ann Arbor, MI. May 2018.
12. Guensler, R., M.O. Rodgers, H. Liu, and X. Xu (2018). Invited. Georgia Tech and USEPA Meeting - MOVES-Matrix Discussion. A Presentation to USEPA OTAQ Staff (14 attendees). Ann Arbor, MI. May 2018.
13. Guensler, R., M.O. Rodgers, H. Liu, and X. Xu (2018). Invited. Georgia Tech and USEPA Meeting, Follow-up Discussion Topics. A Presentation to USEPA OTAQ Staff (10 attendees). Ann Arbor, MI. May 2018.
14. Guensler, R., M.O. Rodgers, M. Hunter, A. Guin, R. Fujimoto, J. Laval, K. Abdelghany, and F. Gbologah (2018). Invited. TRANSNET-Atlanta Project Overview. ARPA-E and EEMS Smart Mobility Meeting (16 attendees). ARPA-E 2018 Energy Innovation Summit. Washington, DC. March 15, 2018.
15. Sidewalks as Transportation Assets (2018). Invited. Georgia Tech Graduate Student Recruitment Seminar (20 attendees). Georgia Institute of Technology. Atlanta, GA. March 2, 2018.

16. Guensler, R. (2017). An Overview of TRANSNET-Atlanta. Invited. Georgia Tech Transportation Seminar Series (15 attendees). Georgia Institute of Technology. Atlanta, GA. October 27, 2017.
17. Guensler, R. (2017). Atlanta's I-85 HOT Lane: 2011-2012 Occupancy and Person Throughput Assessment. Caltrans Seminar on HOV Vehicle Occupancy Data Collection and Methodology (20 attendees). FHWA California Division. Sacramento, CA. September 6, 2017.
18. Guensler, R. D. Boyer, C. Dyess, J. Cebe, H. Li, A. Akanser, A. Grossman, and D. Walls (2017). Walking Space: Public Participation in Sidewalk Management and Repair Prioritization (25 attendees, recorded and accessible online). STRIDE Webinar Series. Gainesville, FL. June 23, 2017.
19. Guensler, R., J. Cebe, D. Boyer, C. Dyess, A. Li, A. Akanser, and A. Grossman (2017). Strategies and Tools for Inventorying Sidewalks and Developing Transition Plans. Georgia Walks Summit (25 attendees). Augusta, GA. May 5, 2017.
20. Guensler, R., J. Cebe, C. Dyess, D. Boyer, A. Grossman (2017). Managing Sidewalks as Transportation Assets: Care and Feeding of Atlanta's Pedestrian Infrastructure (20 attendees). Atlanta City Hall. April 24, 2017.
21. Cebe, J., C. Dyess, A. Grossman, and R. Guensler (2017). Planning a Pedestrian Paradise: Effective Strategies and Innovative Tools for Inventorying Sidewalk Assets and Developing ADA Transition Plans (20 attendees). Mobile session (participant field experience). Georgia Walking Summit. Augusta, GA. May 4-5, 2017.
22. Guensler, R. (2017). An Introduction to the National Environmental Policy Act. US Environmental Protection Agency Region IV New Employee Seminar (12 attendees). Atlanta, GA. March 9, 2017.
23. Cebe, J., A. Grossman, C. Dyess, and R. Guensler (2017). Using the Georgia Tech Sidewalk Quality and Safety Assessment System to Inventory and Manage Community Sidewalk Assets. Physical Activity & Community Design Networking Webinar (45 attendees, recorded and accessible online). Atlanta, GA. February 23, 2017.
24. Cebe, J., A. Grossman, C. Dyess, and R. Guensler (2017). Sidewalk Scout, Sidewalk Sentry, and the Sidewalk Quality Index: Cost-Effective Tools for Inventorying and Managing Sidewalk Assets and Prioritizing Improvements in Small to Large Communities. Transportation Research Board Annual Meeting. Invited. Session 825, Best Presentations from the Tools of the Trade Conference (60 attendees). Washington, DC. January 11, 2017.
25. Guensler, R. and M.O. Rodgers (2016). "Energy and Emissions Modeling for Supply Chains." Invited Speaker, Spring ISYE Seminar Series (8 attendees). Georgia Institute of Technology, Atlanta, GA. November 2016.
26. Fujimoto, R., M. Hunter, P. Pecher, A. Biswas, B. Chilukuri, R. Fujimoto, R. Guensler, J. Laval, H. Liu, S. Neal, M.O. Rodgers (2016). Energy-Aware Dynamic Data-Driven Distributed Traffic Simulations for Energy and Emissions Reduction. Dynamic Data-Driven Application Systems Conference (50 attendees). 2016.
27. Cebe, J., A. Grossman, C. Dyess, R. Guensler (2016). Using the Sidewalk Scout App in Asset Management. Georgia Walks Summit (30 attendees). Macon, GA. June 17, 2016.
28. Cebe, J., A. Grossman, C. Dyess, A. Akanser, and R. Guensler (2016). "The Costs of Owning and Operating Atlanta Sidewalks." Atlanta Studies Symposium (50 attendees). Emory University. May 11, 2016.
29. Guensler R. and A. Sheikh (2016). "Results from Atlanta's I-85 Express Lanes Carpool Survey." Multimodal Pricing Implementation Joint Subcommittee. 95th Annual Meeting of the Transportation Research Board (30 attendees). Washington DC. January 12, 2016.
30. Xu, Y., H. Li, H. Liu, M.O. Rodgers, and R. Guensler (2016) "Reducing Cost and Emissions with Eco-Driving for Transit Vehicles." National Center for Sustainable Transportation Webinar Series (50 participants). May 5, 2016.

31. Guensler R. (2016). "Managed Lanes 3.0: Applying Research to the Next Generation of Projects and Technologies." Sunday Workshop. Session 1: What's Happening in Research?, 95th Annual Meeting of the Transportation Research Board (80 attendees). Washington, DC. January 10, 2016.
32. Guensler, R., M.O. Rodgers, M. Hunter, Y. Xu, R. Fujimoto, K. Abdelghany, A. Guin, K. Watkins, R. Pendyala (2015). Network Performance Monitoring and Distributed Simulation to Improve Transportation Energy Efficiency. Department of Energy, ARPA-E TRANSNET Kickoff Meeting (58 attendees). San Francisco, CA. November 10, 2015.
33. Guensler, R., J. Cebe, and A. Grossman (2015). Sidewalk Sentry and Sidewalk Scout Infrastructure Assessment Systems (3 attendees). City of East Point, GA. November 9, 2015.
34. Guensler, R. (2015). Sidewalk Sentry and Sidewalk Scout Infrastructure Assessment Systems (7 attendees). City of Palo Alto, CA. November 9, 2015.
35. Grossman, A., Akanser, A., Li, H., Guensler, R. (2015). Atlanta: Crowd Sourced Data Collection with Apps for Sidewalk Quality. Smart Cities Day Conference (35 attendees). Marseille, France. September, 2015.
36. Xu, Y., R. Guensler, J. Cebe, and H. Li (2015). Electric Vehicles in Georgia: Purchase and Ownership Trends. AWMA's Southern Section Conference (50 attendees). Callaway Gardens, GA. August 20, 2015.
37. Xu, Y., and R. Guensler (2015) "Capturing Personal Modality Styles Using Multiday GPS Data." Travel Model Improvement Program (TMIP) Webinar (40 attendees). Federal Highway Administration. July 16, 2015.
38. Grossman, A., A. Shaw, P. Pratyaksa, A. Greenwood, R. Guensler, Y. Xu (2015). "Use of Mobile Technologies in Attracting K-12 to Transportation." ABG20 Webinar: How Mobile Technologies Impact the Transportation Workforce" Webinar (126 attendees). TRB ABG20 Education and Training Committee. July 1, 2015.
39. Guensler, R., Y. Xu, A. Sheikh, H. Li, S. Khoeini, R. Donahey (2015). "Atlanta I-85 HOT Lane Carpool Survey: Initial Analysis of Individual Questions." Presentation to the Managed Lanes Committee at the 94th Annual Meeting of the Transportation Research Board (60 attendees). Washington, DC. January 2015.
40. Guensler, R. (2014). "Transportation and the Five Pillars of Research and Industry." A Virtual Chat with Engineering Students of the South Carolina Governor's School for Science and Math (12 attendees). October 29, 2014.
41. MacFarlane, G, J. Cruz, Y. Xu, and R. Guensler (2014). "Education Development in Sustainable Transportation." TRB Committee for Waste Management and Resource Efficiency in Transportation (ADC60) Summer Workshop (30 attendees). New York, NY. June 18, 2014.
42. Hunter, M. and R. Guensler (2014). "GDOT Partnership with University Transportation Centers." Georgia Department of Transportation Lunch and Learn Series (10 attendees). Atlanta, GA. April 1, 2014.
43. Guensler, R. et al., (2014). "Atlanta's Managed Lane Experience." Congestion Pricing and Managed Lanes: 20 Years of Learning – Where have we been, where are we now, and where are we going? Presentation P14-7024, Workshop 164 (85 attendees). Washington, DC. January 12, 2014.
44. Guensler, R. et al., (2013). "Beyond Average Speeds and Travel Time: ITS and Real-Time High-Resolution Data." University of California, Davis Seminar (15 attendees). September 24, 2013.
45. Guensler, R. et al., (2013). "Atlanta's I-85 HOT Lane: Additional Items for Discussion." Transportation Research Board Congestion Pricing Summer Committee Meeting and Conference (25 attendees). Seattle, WA. July 11, 2013.

46. Guensler, R. et al., (2013). "Atlanta's I-85 HOT Lane: Performance Assessment." Transportation Research Board Congestion Pricing Summer Committee Meeting and Conference (40 attendees). Seattle, WA. July 10, 2013.
47. Guensler, R. (2013). "An Overview of the Automated Sidewalk Quality Assessment Program." Presentation to the CDC Built Environment Workgroup (10 attendees). Atlanta, GA, June 4, 2013.
48. Guensler, R. et al., (2013). "Beyond Average Speeds and Travel Time: ITS and Real-Time High-Resolution Data." Georgia Institute of Technology Transportation Research Seminar (40 attendees). April 3, 2013.
49. Guensler, R. (2013). "An Overview of the Automated Sidewalk Quality Assessment Program." Presentation to the Atlanta Regional Commission (15 attendees). Atlanta, GA, March 15, 2013.
50. Guensler, R. et al., (2013). "I-85 HOV-to-HOT Corridor Performance Assessment." Transportation Research Board Freeway & Managed Lanes Operations Meeting and Conference (40 attendees). Atlanta, GA. June 2013.
51. Guensler, R. (2013). "An Overview of the Automated Sidewalk Quality Assessment Program." Presentation to the Midtown Neighborhood Association (10 attendees). Atlanta, GA, February 11, 2013.
52. Guensler, R. (2013). "An Overview of the Automated Sidewalk Quality Assessment Program." Presentation to Neighborhood Planning Unit F (25 attendees). Atlanta, GA, February 11, 2013.
53. Guensler, R. (2012). "An Update on HOV-to-HOT Research in Atlanta." Presentation to the US Environmental Protection Agency, Region IV (10 attendees). Washington, DC, January 26, 2012.
54. Guensler, R., P. Vu, et al. (2012). "Early Findings from Atlanta's I-85 Managed Lanes (P12-5914)." 91st Annual Meeting of the Transportation Research Board (40 attendees), Washington DC. January 2012.
55. Guensler, R. (2011). "An Update on HOV-to-HOT Research in Atlanta." Presentation to the Federal Highway Administration (20 attendees). Atlanta, GA, September 13, 2011.
56. Guensler, R. (2009). "An Overview of HOV-to-HOT Research in Atlanta." Presentation to the Transportation Research Board, Managed Lanes Committee, Research Subcommittee (15 attendees). Washington, DC, January 24, 2009.
57. Guensler, R. (2009). "Monitoring the Effectiveness of HOV-to-HOT Conversions." Presentation to the University of Minnesota Warren Lecture Series (40 attendees). Atlanta, GA, April 10, 2009.
58. Guensler, R. (2009). "HOT Lanes for Atlanta." Presentation to the Georgia Institute of Technology City Planning Seminar Series (20 attendees). Atlanta, GA, April 10, 2009.
59. Guensler, R. (2008). "Instrumented Vehicle Data for Transportation Planning, Operations, Safety, Emissions, and Health Impact Assessment." Presentation to the Atlanta Regional Commission Model Users Group (50 attendees). Atlanta, GA, May 30, 2008.
60. Guensler, R. (2008). "The Role of Instrumented Vehicle Activity Data in Transportation Planning, Operations, Safety, and Health Impact Assessment." Presentation to the Emory Rollins School of Public Health (50 attendees). Atlanta, GA, January 17, 2008.
61. Zumerchik, J., M. Grace, and R. Guensler (2008). "Improving Freight Terminal Operations to Reduce Emissions." Presentation to the US Environmental Protection Agency SmartWay Program (8 attendees). Washington, DC, January 16, 2008.
62. Guensler, R. (2007). "National Environmental Policy Act Overview." Presentation to the US Environmental Protection Agency Region IV, Permitting, Mobile Sources, and NEPA Sections (20 attendees). Atlanta, GA, September 19, 2007.

63. Guensler, R., V. Elango, and P. Blaiklock (2007). "Intermodal Research Applications of GPS Tracking. Presentation to the Transportation Research Board Intermodal Freight Transport Committee (ATo45) Meeting (40 attendees). Chicago, IL, July 7, 2007.
64. Guensler, R. (2006). "Vehicle Technology and Travel Behavior." Hot Nights in the City: Urban Planning Responses to Climate Change, Atlanta, GA, November 2006.
65. Guensler, R. (2006). "Vehicle and Driver Monitoring in Public and Private Fleets." Oral Testimony Delivered to the Georgia General Assembly, Business Incentives Study Committee. Atlanta, GA. October 25, 2006.
66. Guensler, R. (2006). "Traffic, Traffic, Everywhere - The Commute Atlanta Instrumented Vehicle Program: Emission Rate and Activity Modeling Issues." Air Resources Engineering Center, Georgia Air Quality and Climate Summit, Atlanta, GA, May 4, 2006.
67. Yoon, S. and R. Guensler (2006). "Heavy-Duty Diesel Vehicle Modal Emission Model: Model Development." California Air Resources Board Chairman's Seminar, Sacramento, CA, March 2006.
68. Guensler, R. (2006). "Instrumented Vehicle Data and Modeling Activities in Atlanta." Natural Resources Canada/Office of Energy Efficiency, Windsor, ON, Canada, February 2006.
69. Guensler R. (2005). "Georgia's Transportation and Air Quality Linkage". Georgia Air Policy Symposium, Georgia Department of Natural Resources, Environmental Protection Division, Atlanta, GA, December 19, 2005.
70. Guensler R. (2005). "Commute Atlanta GPS Data". Time-Geography Meeting. Center for Spatially Integrated Social Science, UC Santa Barbara, Santa Barbara, CA, October 10, 2005.
71. Guensler R. (2005). "Commute Atlanta Instrumented Vehicle Value Pricing Study". Georgia Tech School of Civil and Environmental Engineering External Advisory Board. Atlanta, GA, October 6, 2005.
72. Guensler R. (2005). "Commute Atlanta Research Activities". Chi Epsilon Chapter of the Georgia Tech School of Civil and Environmental Engineering. Atlanta, GA, September 22, 2005.
73. Guensler, R., and S. Yoon (2005). "Capture of Transit Bus Operating Data with a GT Trip Data Collector". Gwinnett Transit Advisory Board. Lawrenceville, GA. May 2, 2005.
74. Guensler, R. (2005). "Use of Instrumented Vehicle Data in Insurance Underwriting". Computer Science Corporation's Future Focus Conference for the Insurance Industry. Charleston, SC. October 18, 2005.
75. Li, H., and R. Guensler (2005). "GPS-Based Vehicle Activity Data in the Commute Atlanta Route Choice Study". 10th Annual TRB Transportation Planning Applications Conference, Portland, OR, April 24-28, 2005.
76. Yoon, S, C. Feng, J. Jun, H. Li, V. Elango, and R. Guensler (2005). "Heavy-Duty Diesel Vehicle Modal Emissions Model: Transit Bus Emissions Simulations". ITE Georgia Chapter Monthly Meeting. Georgia Institute of Technology, Atlanta, GA. April 21, 2005.
77. Guensler, R. (2005). "Technology in the Dugout: The Latest in Motor Vehicle Telematics, Commute Atlanta". Property Casualty Insurers Association of America Joint Underwriting Seminar. Saint Petersburg, FL. April 19, 2005.
78. Guensler, R. (2005). "Commute Atlanta Research: Commuter Choice Value Pricing Pilot Program". Association of Metropolitan Planning Organizations Annual Meeting. Atlanta, GA. March 22, 2005.
79. Guensler, R. (2005). "Commute Atlanta Overview: Commuter Choice Value Pricing Pilot Program". Transport Canada. Ottawa. March 8, 2005.
80. Guensler, R. (2004). "Value Pricing in Transportation: The Commute Atlanta Project." Pricing & Revenue Management Initiative Workshop. Georgia Institute of Technology, Business School. Atlanta, GA. November 2004.

81. Guensler, R., and J. Ogle (2004). "Atlanta's Vehicle Instrumentation and Activity Monitoring Programs: 2004 Status Report." sponsor approval not received in time for proceedings publication. 14th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. March 2004.
82. Ogle, J., and Guensler, R. (2004). "Commute Atlanta: Arterial Congestion Modeling Techniques." ITE Georgia Section Summer Seminar. St. Simons Island, GA.
83. Guensler, R., S. Yoon, C. Feng, H. Li, and J. Jun (2004). "Heavy-Duty Diesel Vehicle Load-Based Modeling Framework." USEPA Region IV. Atlanta, GA, October 15, 2004.
84. Guensler, R. (2004). "An Overview of the Model Emissions Modeling Approach for Heavy-Duty Diesel Vehicles." USEPA Region IV. Atlanta, GA, February 2004.
85. Guensler, R. (2003). "The MACOC Mobile Source Control Strategy Delphi Panel." Air Quality Issue Forum. Metropolitan Atlanta Chamber of Commerce. Atlanta, GA. May 2003.
86. Guensler, R. (2003). "Innovations in Transportation: Intelligent Transportation Systems, Variable Speed Limits, and Bus Rapid Transit." Emerging Issues in Mobile Sources Workshop. US Environmental Protection Agency, Region IV. Atlanta, GA. May 2003.
87. Guensler, R., and J. Ogle (2003). "Analytical Potential in the DRIVE-Atlanta Instrumented Vehicle Data Sets." US Environmental Protection Agency. Washington, DC. March 2003.
88. Guensler, R. (2003). "Air Quality and Transportation in Georgia: Where Are We and Where Are We Going?" Georgia Crushed Stone Association Management Workshop. Atlanta, GA. February 2003.
89. Guensler, R. (2002). "Three Technology-Based TCMs: Speed Management, Value Pricing, and Emissions Fees." Atlanta Regional Commission, Air Quality Planning Team. Atlanta, GA. December 2002.
90. Guensler, R., and J. Ogle (2002). "Instrumented Vehicles, Risk, and Pay-as-You-Drive Insurance." ISOTech Conference. Orlando, FL. November 2002.
91. Guensler, R., and J. Ogle (2002). "Drive Atlanta: Instrumented Vehicles Providing a Wealth of Planning Data." Imperial College Seminar Series. London, England. November 2002.
92. Guensler, R. (2002). "The Atlanta Instrumented Vehicle Programs: Providing Critical Data for Driver Behavior, Safety, Travel Demand, and Vehicle Emissions Modeling." UC Davis Transportation Seminar Series. Davis, CA. May 2002.
93. Guensler, R. (2002). "The Atlanta Instrumented Vehicle Programs: Providing Critical Data for Driver Behavior, Safety, Travel Demand, and Vehicle Emissions Modeling." UC Berkeley Transportation Seminar Series. Davis, CA. April 2002.
94. Guensler, R. (2002). "The Atlanta Value Pricing Insurance Initiative." USEPA Pay as You Drive Workshop. Reno, NV. March 2002.
95. Guensler, R. (2002). "GPS Issues in Automated Travel Data Collection." USEPA Pay as You Drive Workshop. Reno, NV. March 2002.
96. Guensler, R. (2002). "Applications of Technology in Future Survey Methods." Workshop on the National Household Travel Survey. Washington, DC. February 2001.
97. Guensler, R. (2001). "The Commuter Choice and Value Pricing Insurance Incentive Program." The GRTA/FHWA Value Pricing Workshop. Atlanta, GA. October 2001.
98. Guensler, R. (2001). "Onboard Diagnostic System Data and Vehicle Emissions Modeling." Meeting of the Truck and Bus Electronic Data Recorder Working Group, National Highway Transportation and Safety Administration. Atlanta, GA. October 2001.
99. Guensler, R and J. Ogle (2001). "The Atlanta Instrumented Vehicle Intensive." Meeting of the Mobile Source Technical Review Subcommittee, Clean Air Act Advisory Committee, US Environmental Protection Agency. Dearborn, MI. October 2001.
100. Guensler, R., W. Bachman, and M. Rodgers (2001). "MOBILE/MEASURE, Meeting of the Mobile Emission Assessment System for Urban and Regional Evaluation." Modeling

- Workgroup, Mobile Source Technical Review Subcommittee, Clean Air Act Advisory Committee, US Environmental Protection Agency. Dearborn, MI. October 2001.
101. Guensler, R. (2001). "New Air Quality Standards and the Mining Industry." Annual Meeting of the Georgia Mining Industry Academic Initiative. Atlanta, GA. March 2001.
102. Guensler, R. (2001). "Using Poster Sessions to Enhance Technical Outreach." Transportation Research Board Annual Meeting, All Chairs Dinner. Washington, DC. January 2001.
103. Wolf, J., R. Guensler, S. Washington, and L. Frank (2000). "The Use of Electronic Travel Diaries and Vehicle Instrumentation Packages in the Year 2000 Atlanta Regional Household Travel Survey: Final Test Results and Implementation Plans." 9th International Association of Travel Behaviour Research Conference. Gold Coast, Queensland, Australia, July 2000.
104. Guensler, R. (1999). "Linking Modal Emissions Models with Vehicle Activity Estimates." Society of Automotive Engineers, Future Technology Topotec. Costa Mesa, CA. August 1999.
105. Guensler, R. (1999). "The Role of TRB Committees in the National Research Agenda." Transportation Research Board, New Committee Chair Orientation Meeting. Washington, DC. January 1999.
106. Guensler, R. (1998). "Considerations in Developing Future Emissions Models." National Research Council. Committee to Review EPA's Mobile Source Emissions Factor (MOBILE) Model. Washington, DC. December 1998.
107. Guensler, R. and J. Wolf (1998). "Travel Behavior and Air Quality." North American Travel Monitoring Exhibition and Conference. Charlotte, NC. May 1998.
108. Guensler, R. (1998). "Future Improvements to Motor Vehicle Emissions Models. EPA State and Local Transportation and Air Quality Planning Meeting." US Environmental Protection Agency, Region IV. Atlanta, GA. March 1998.
109. Guensler, R. (1997). "Evolving Motor Vehicle Emissions Models: Toward Analysis of ITS Impacts." Invited Speaker, Spring Civil Engineering Lecture Series. University of California, Berkeley. May 1997.
110. Guensler, R., W. Bachman, and S. Washington (1997). "Engine Start and Hot Stabilized Components of the GIS-Based Modal Emissions Model." 7th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. April 1997.
111. Grant, C., R. Guensler, K. Dixon and J. Metarko (1997). "Use of Video Systems for Collection of Vehicle Activity Data in Emissions Modeling." 7th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. April 1997.
112. Guensler, R. (1997). "High Emitters and Incremental Engine Starts." World Car Conference '97. University of California, Riverside. January 1997.
113. Guensler, R. (1997). "Overview of the Georgia Tech GIS-Based Modal Emissions Model." World Car Conference '97. University of California, Riverside. January 1997.
114. Guensler, R. (1996). "Air Quality Research Needs Statements. Environmental Research Needs in Transportation." Invitational Conference. National Research Council, Transportation Research Board. Washington, DC. November 1996.
115. Guensler, R. (1996). "Presentation and Discussion of the Draft Subcommittee Report Chapter on the Modeling Workgroup." Office of Mobile Sources Technical Advisory Subcommittee [of the Clean Air Act Advisory Committee] Meeting. US Environmental Protection Agency. Washington, DC. October 1996.
116. Guensler, R. (1996). "Electronic Communications, TransNet Project. Transferring Research Results into Practice: Methods and Tools." A Presentation at the Council of University Transportation Centers Workshop. Gainesville, FL. June 1996.



117. Guensler, R. (1995). "Modeling Efforts of the Georgia Tech Research Partnership." National Academy of Sciences, National Cooperative Research Program, Workshop on "Quantifying Air Quality and Other Benefits and Costs of Transportation Control Measures." La Jolla, CA. October 1995.
118. Guensler, R. (1995). "An Overview of the ASCE Home Page." ASCE Technical Activities Committee. ASCE Transportation Congress. San Diego, CA. October 1995.
119. Guensler, R. (1995). "TREAD: The ASCE Urban Transportation Division Home Page." Annual Meeting of the ASCE Urban Transportation Division. ASCE Transportation Congress. San Diego, CA. October 1995.
120. Guensler, R. (1995). "Time-Based Modeling within a GIS-Based Modal Model Framework." The Emission Inventory: Programs and Progress. A Specialty Conference Sponsored by the US Environmental Protection Agency and the Air and Waste Management Association. Research Triangle Park, NC. October 1995.
121. Ross, C., R. Guensler, S. Washington, and D. LeBlanc (1995). "Temporal Distributions of Engine Starts, Hot Soaks, and Modal Operating Fractions across Three Cities." The Emission Inventory: Programs and Progress. A Specialty Conference Sponsored by the US Environmental Protection Agency and the Air and Waste Management Association. Research Triangle Park, NC. October 1995.
122. Guensler, R. (1995). "Motor Vehicle Emission Inventory Models: Problems and Solutions." Keynote Speaker. Institute of Transportation Engineers, Georgia Section. Spring Meeting. Atlanta, GA. May 1995.
123. Guensler, R. (1995). "Remote Sensing: Perception and Reality." Invited Keynote Speaker. 1995 Annual Meeting of the Alliance Petroleum Corporation. San Francisco, CA. April 1995.
124. Guensler, R. (1995). "Transportation Resources Available through the Internet." Invited Speaker, A Presentation to the Transportation Research Board's Committee on Transportation and Air Quality (A1F03). January 1995.
125. Guensler, R., D. LeBlanc, and S. Washington (1994). "Jekyll and Hyde Emitters." 1994 Air and Waste Management Association International Conference on the Emission Inventory. November 1994.
126. Guensler, R. (1994). "Next Generation Motor Vehicle Emissions Model." Alliance for Transportation Research, Research Associates Conference. New Mexico Engineering Research Institute. November 1994.
127. Guensler, R. (1993). "The Impact of Speed Correction Factors on Uncertainty in the South Coast AQMD Emission Inventory." The Emission Inventory, Perception and Reality. Air and Waste Management Association International Conference. October 1993.
128. Guensler, R., S. Washington, and D. Sperling (1993). "Mobile Source Speed Correction Factors, Phase 1: Evaluation of the EMFAC7F Speed Correction Factors." Preprint Made Available at the 72nd Annual Meeting of the Transportation Research Board. Washington, DC. January 1993.
129. Guensler, R. (1992). "Uncertainty in Estimating Heavy Duty Truck Emissions." Cooperative Clean Air Technology Conference. Air and Waste Management Association International Conference. April 1992.
130. Guensler, R., D. Sperling, and P. P. Jovanis (1992). "Heavy Duty Truck Emissions: Research Agenda." Presented at the Transportation Research Board Transportation/Air Quality Committee Meeting. 71st Annual Meeting of the Transportation Research Board. Washington, DC. January 1992.
131. Guensler, R., D. Sperling, and P. P. Jovanis (1991). "Disaggregate Diesel Emission Database for California." Session 171B. 70th Annual Meeting of the Transportation Research Board. Washington, DC. January 1991.

132. Guensler, R. (1989). "Compliance Perspectives on Transportation Control Measures: South Coast AQMD Regulation XV." 68th Annual Meeting of the Transportation Research Board. Washington, DC. January 1989.

## E. Grants & Contracts

### E1. Grants & Contracts as Principal or Co-Principal Investigator (Funded)

1. Improved Vehicle Emissions and Near-Road Dispersion Modeling Tool for Project Evaluation: Integrating MOVES-Matrix, the FEC, and AERMOD  
Center for Advanced Research in Transportation Emissions, Energy, and Health  
Amount: \$38,000 (2019-2020)  
Co-Principal Investigator with Dr. Haobing Liu
2. MOVES-Matrix Computation for 117 Modeling Regions in the United States  
Theta Supercomputing Cluster (1.35 million core-hours)  
Argonne National Laboratory Director's Discretionary Fund  
Amount: \$94,000 equivalent (2019)  
Co-Principal Investigator with Dr. Haobing Liu
3. Equity Assessment of Plug-In Electric Vehicle Purchase Incentives  
Center for Transportation Equity Decisions and Dollars (CTEDD)  
Amount: \$38,000 (2019)  
Co-Principal Investigator with Dr. Haobing Liu (PI) and Dr. Michael Rodgers
4. Vehicle Occupancy, Vehicle and Person Throughput, and Carpooling Demographics of SRTA's Managed Lane Projects  
State Road and Tollway Authority  
Amount: \$710,000 (2018-2020)  
Principal Investigator
5. Measurement of Sidewalk Quality Data for Cobb County Transit Routes  
Cobb County Transportation Department and Parsons Brinckerhoff  
Subcontractor for WSP  
Amount: \$156,000 (2018-2019)  
Principal Investigator
6. Smart Cities Atlanta - North Avenue and Special Event Demonstration Project  
City of Atlanta, Georgia  
Amount: \$350,000 (2017-2019)  
Co-Principal Investigator with Dr. Michael Hunter (PI) and Dr. Angshuman Guin (PI)
7. National Center for Sustainable Transportation (NCST), 5-Year Renewal  
US Department of Transportation,  
Office of the Assistant Secretary for Research and Technology, National UTC  
Amount: \$14,000,000, \$2,500,000 in CEE (2016-2021)  
Lead University: UC Davis, D. Sperling Executive Director  
Partner Universities: University of Southern California, UC Riverside, University of Vermont, California State University Long Beach  
Associate Directors: S. Handy, R. Guensler, M. Barth, G. Giuliano, L. Aultman-Hall
8. Eisenhower Student Grants  
US Department of Transportation  
Daniel Walls, Chelsea Dyess, and David Boyer  
Amount: \$71,000 (2017-2018)  
Principal Investigator
9. Transportation Network Performance Monitoring and Distributed Simulation for Transportation Energy Efficiency  
U.S. Department of Energy, ARPA-E

- Amount: \$3,417,000, \$2,467,000 in CEE (2016-2018)  
Principal Investigator  
Co-Principal Investigators Dr. Michael Rodgers and Dr. Michael Hunter
10. Measurement of Sidewalk Quality Data for Midtown Atlanta  
Midtown Alliance  
Amount: \$27,000 (2016-2017)  
Principal Investigator
  11. Measurement of Sidewalk Quality Data, Yarmouth Volunteer Coordination  
City of Yarmouth, Maine  
Amount: \$5,000 (2017)  
Principal Investigator
  12. Sidewalk Survey Implementation for the Southeast Region  
STRIDE University Transportation Center and Georgia Department of Transportation  
Amount: \$50,000 (2016-2017)  
Principal Investigator
  13. Eisenhower Student Grants  
US Department of Transportation  
Alice Grossman and Jack Cebe  
Amount: \$67,000 (2016-2017)  
Principal Investigator
  14. City of Northampton Professional Services for a Sidewalk Inventory  
City of Northampton, MA  
Partnered with Alta Planning and Design  
Amount: \$38,000 (2016-2017)  
Principal Investigator
  15. Funding to Support a Teaching Assistant for the CE6625 Flipped Course  
Georgia Institute of Technology Office of the Provost  
Amount: \$9,000 (2016)  
Principal Investigator
  16. Sidewalk Analysis Summer Undergraduate Research Experience  
Georgia Institute of Technology  
Amount: \$1,000 (2016)  
Principal Investigator
  17. PACE Supercomputing Implementation for NCST  
Georgia Institute of Technology, Matching Funds Project  
Amount: \$88,000 (2016)  
Principal Investigator (Co-Principal Investigators Dr. Michael Rodgers and Dr. Yanzhi Xu)
  18. Partnerships in Community Health Fulton County Sidewalk Data Collection  
Atlanta Regional Commission and Centers for Disease Control  
Amount: \$100,000 (2015-2016)
  19. National Center for Sustainable Transportation (NCST), Year 3  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC  
Amount: \$462,000 (2016-2017)  
Co-Principal Investigator with Yanzhi Xu and Michael Rodgers
  20. National Center for Sustainable Transportation (NCST), Year 2  
US Department of Transportation,  
Research Innovation and Technology Administration, National UTC  
Amount: \$473,000 (2015-2016)  
Co-Principal Investigator with Yanzhi Xu and Michael Rodgers

21. HOV-to-HOT Conversion Impacts on Carpooling  
National Center for Transportation Systems Productivity and Management (NCTSPM)  
Amount: \$150,000 (2014-2016)  
Principal Investigator
22. Macro and Micro Modeling Tools for Socioeconomic Evaluation/Pricing of Managed Lanes  
Georgia Department of Transportation and NCTSPM University Transportation Center  
Amount: \$140,000 (2014-2016)  
Principal Investigator
23. National Center for Sustainable Transportation (NCST)  
Professional Education Course Development for Sustainable Transportation  
Georgia Institute of Technology, Office of the Vice President for Research  
Amount: \$255,000 (2014-2016)
24. GHG Calculator for Heavy-Duty Vehicles  
National Center for Sustainable Transportation Jump Start Project 3.2  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC (2014-2015)  
Amount: Included in NCST Totals  
Co-Principal Investigator with Yanzhi Xu and Michael Rodgers
25. Improved Emissions Models for Project Evaluation  
National Center for Sustainable Transportation Jump Start Project 4  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC (2014-2015)  
Amount: Included in NCST Totals  
Co-Principal Investigator with Michael Rodgers, Yanzhi Xu, and Michael Hunter
26. Eco-driving for Transit Vehicles  
National Center for Sustainable Transportation Jump Start Project 2.2  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC (2014-2015)  
Amount: Included in NCST Totals  
Co-Principal Investigator with Vetri Elango and Yanzhi Xu
27. Innovative Data Collection to Improve Transit Service Assessment  
National Center for Sustainable Transportation Jump Start Project 6.1  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC (2014-2015)  
Amount: Included in NCST Totals  
Co-Principal Investigator with Yanzhi Xu, Vetri Elango, and Kari Watkins
28. Sustainable Transportation Education Program Development  
National Center for Sustainable Transportation Jump Start Project 12  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC (2014-2015)  
Amount: Included in NCST Totals  
Co-Principal Investigator with Yanzhi Xu, Adjo Amekudzi, and Catherine Ross
29. National Center for Sustainable Transportation  
US Department of Transportation, Research Innovation and Technology Administration,  
National UTC  
Amount: \$5,656,000, \$488,000 Year 1 in CEE (2013-2017)  
Lead University: UC Davis, D. Sperling Executive Director  
Partner Universities: University of Southern California, UC Riverside, University of Vermont, California State University Long Beach  
Associate Directors: S. Handy, R. Guensler, M. Barth, G. Giuliano, L. Aultman-Hall

30. Sidewalk Quality Assessment Project Undergraduate Summer Research Program  
Georgia Institute of Technology Office of Undergraduate Education  
Amount: \$1,000 (Summer 2013)
31. GRTA/GDOT Real-Time Tracking and Choice Data  
University Transportation Center and Georgia Department of Transportation  
Amount: \$130,000 (2012-2013)
32. Evaluation of Innovative Weave Zone Striping  
Georgia Department of Transportation  
Amount: \$75,000 (2012-2013)  
Co-Principal Investigators (Drs. Michael Hunter and Angshuman Guin)
33. Development of a GHG Emissions Calculator Incorporating Electric Vehicle Options  
Oak Ridge National Laboratory and Federal Transit Administration  
Amount: \$166,000 (2012-2013)  
Co-Principal Investigator (Dr. Michael Rodgers)
34. Automated Sidewalk Quality and Safety Assessment System  
STRIDE University Transportation Center and Georgia Department of Transportation  
Amount: \$400,000 (2012-2013)
35. Southeast Transportation Research, Innovation and Education Center (STRIDE)  
US Department of Transportation, University Transportation Center Program  
University of Florida, Georgia Institute of Technology, Mississippi State, University of  
North Carolina, North Carolina State University, Florida International University,  
University of Alabama Birmingham and Auburn University  
Amount: \$7,000,000, \$1,095,000 in CEE (2012-2014)  
Serving as STRIDE Principal Investigator Representing Georgia Tech
36. Effective Capacity Analysis and Traffic Data Collection for the I-85 HOV to HOT  
Conversion (Supplement)  
Georgia Department of Transportation  
Amount: \$312,000 (2012-2013)  
Co-Principal Investigators (Drs. Michael Hunter and Jorge Laval)
37. Value Pricing Data Analysis Fellowship Program. Phase II: Fellowship Support  
Georgia Department of Transportation  
Amount: \$190,000 (2011-2013)
38. Work Zone Technology Testbed  
Georgia Department of Transportation  
Amount: \$300,000 (2011-2013)  
Co-Principal Investigators (Drs. Michael Hunter and Angshuman Guin)
39. HOT Corridor Manual Traffic Counts  
State Road and Tollway Authority  
Amount: \$22,000 (2011-2012)
40. HOT Corridor Travel Time Data Collection  
State Road and Tollway Authority  
Amount: \$40,000 (2011)
41. Effective Capacity Analysis and Traffic Data Collection for the I-85 HOV to HOT  
Conversion  
Georgia Department of Transportation  
Amount: \$1,986,000 (2010-2012)  
Co-Principal Investigators (Drs. Michael Hunter and Jorge Laval)
42. Cobb County School District School Bus Emissions Control and Anti-Idling Program  
US Environmental Protection Agency, Southeast Diesel Collaborative, ARRA Funds  
Amount: \$1,100,000, \$635,000 in CEE (2010-2011)

43. Value Pricing Data Analysis Fellowship Program. Phase I: Preliminary Data Processing  
Georgia Department of Transportation  
Amount: \$95,000 (2009-2010)
44. Utility Factors for Atlanta Vehicle Activity  
Emmeskay, Inc.  
Amount: \$30,000 (2009)
45. VMT Phase IIb Development Grant  
Georgia Research Alliance  
Amount: \$50,000 (2009)
46. Managed Lane Air Quality and Environmental Justice Issues  
State Road and Tollway Authority  
Amount: \$19,000 (2008-2009)
47. VMT Phase IIa Development Grant  
Georgia Research Alliance  
Amount: \$50,000 (2008)
48. EFRI ARES-CI Embedded Distributed Simulation for Transportation System Management  
National Science Foundation (Grant #0735991)  
Amount: \$1,976,114 (2007-2012)  
Co-Principal Investigator (with Drs. Michael Hunter (PI), Richard Fujimoto, and C. Alexopoulos)
49. Scoping of Potential Congestion Pricing Impacts on Delivery Fleets and Commercial Vehicle Operations  
Georgia Department of Transportation and Federal Highway Administration  
Amount: \$219,000 (2007-2009)
50. Evaluation of Public Acceptance of Atlanta Congestion Pricing Programs  
Georgia Department of Transportation  
Amount: \$501,000, \$240,000 in CEE (2007-2009)  
Co-Principal Investigator (with Dr. Catherine Ross)
51. Managed Lane System Enforcement and Transition Issues  
State Road and Tollway Authority  
Amount: \$25,000 (2007-2008)
52. Commuter Choice and Value Pricing Insurance Incentive Program  
Federal Highway Administration/Georgia Department of Transportation  
Amount: \$2,770,000 (2001-2009)  
Co-Principal Investigator (with Jennifer Ogle)
53. Dynamic, Simulation-Based Management of Surface Transportation Systems  
National Science Foundation, Core Computing Division  
Amount: \$350,000 (2005-2007), \$210,000 in CEE  
Co-Principal Investigator (with Drs. Richard Fujimoto, Karsten Schwan, Michael Hunter, and John Leonard)
54. ITR: Simulation-Based Operations Planning for Regional Transportation Systems  
National Science Foundation  
Amount: \$400,000 (2003-2006), \$200,000 in CEE  
Co-Principal Investigator (with Dr. Richard Fujimoto)
55. Analysis of Start and Soak Distributions in Atlanta  
Georgia Department of Transportation and US Environmental Protection Agency  
Amount: \$45,000 (2005)  
Supplement to the Phase 1 Commuter Choice and Value Pricing Insurance Incentive Program
56. Analysis of Long Trips and Household Travel Space  
Georgia Department of Transportation and Federal Highway Administration

- Amount: \$40,000 (2005)  
Supplement to the Phase 1 Commuter Choice and Value Pricing Insurance Incentive Program  
Co-Principal Investigator (with Dr. Jennifer Ogle)
57. Heavy Duty Diesel Truck Activity Analysis II  
RARE Project. US Environmental Protection Agency  
Amount: \$98,000 (2004-2006)
58. Analysis of Commute Atlanta Speed and Activity Data  
Georgia Department of Transportation and Federal Highway Administration  
Amount: \$147,000 (2004)  
Supplement to the Phase 1 Commuter Choice and Value Pricing Insurance Incentive Program  
Co-Principal Investigator (with Dr. Jennifer Ogle)
59. Preparation and Analysis of Instrumented Vehicle Data  
Sponsor name withheld under a non-disclosure agreement  
Amount: \$35,000 (2004)
60. Heavy Duty Diesel Truck Activity Analysis  
RARE Project. US Environmental Protection Agency  
Amount: \$100,000 (2004)
61. A Simulation-Based Test Bed for Networked Sensors in Surface Transportation Systems  
National Science Foundation  
Amount: \$150,000 (2003-2004), \$50,000 in CEE  
Co-Principal Investigator (with Dr. Richard Fujimoto)
62. Knoxville External Trip Survey  
NuStats International  
Amount: \$40,000 (2000)  
Co-Principal Investigator (with Jim Pearson)
63. Assessing the Air Quality Impacts of Intelligent Transportation Systems in Georgia  
Georgia Department of Transportation  
Amount: \$251,000 (1998-2003)  
Co-Principal Investigator (with Dr. John Leonard)
64. Evaluation of Ramp Metering Impacts on Air Quality  
Georgia Department of Transportation  
Amount: \$439,000 (1998-2000)  
Co-Principal Investigator (with Dr. Karen Dixon)
65. Validation of the MEASURE GIS-Based Modal Emissions Model  
US Environmental Protection Agency  
Amount: \$500,000 (1998-1999)  
Co-Principal Investigator (with Dr. Michael Meyer and Dr. Mike Rodgers)
66. Development of a Comprehensive Vehicle Instrument Package for Monitoring Individual Tripmaking Behavior (Phase I and II)  
Federal Highway Administration and Georgia DOT  
Amount: \$140,000 (1997-1998)  
Principal Investigator
67. Refinement of the MEASURE GIS-Based Modal Emissions Model  
Georgia Tech Research Partnership  
Federal Highway Administration and USEPA  
Amount: \$250,000 (1997-1998)  
Co-Principal Investigator (with Dr. Michael Meyer and Dr. Mike Rodgers)

68. Development of a Multimedia Semester Course in Environmental Impact Assessment  
Faculty Development Grant  
Georgia Institute of Technology  
Amount: \$20,000 (Fall 1996)  
Principal Investigator
69. Development of the Transportation Research, Education, and Development World Wide Web Server  
Georgia Institute of Technology  
American Society of Civil Engineers  
Amount: \$2,000 (1996)  
Principal Investigator
70. Assessment of Motor Vehicle Air Quality Impacts and Development of an Emission Modeling Protocol for Conformity Analysis  
Institute of Transportation Studies, University of California, Davis  
California DOT  
Amount: \$168,000 (1993-1994)  
Principal Investigator
71. Environmental Aspects of IVHS: Air Quality Impacts of IVHS  
Institute of Transportation Studies, University of California, Davis  
Partners for Advanced Transit and Highways  
Amount: \$85,000 (1992-1994)  
Co-Principal Investigator with Simon Washington
72. Evaluating the Air Quality Impacts of Heavy-Duty Trucks  
Institute of Transportation Studies, University of California, Davis  
Amount: \$40,000 (1990-1991)  
Principal Investigator

E2. Grants & Contracts as Principal or Co-Principal Investigator (Submitted)

1. [Title Subject to NDA]  
Macbox I, Inc.  
Amount: [Amount subject to NDA] (2019-2021)  
Principal Investigator
2. Sidewalk Asset Management System: Georgia State Route Implementation, Data Collection, and Community Outreach  
Georgia Department of Transportation  
Research Needs Statement Stage for Agency Review and Invitation  
Amount: \$975,000  
Principal Investigator
3. Applications of Real-Time Data and Space-Time Memory (STM) in Transportation Planning and Operations  
Research Needs Statement Stage for Agency Review and Invitation  
Amount: \$950,000  
Co-Principal Investigator with Dr. Michael O. Rodgers
4. Dynamic Traffic Assignment Capabilities for Regional and Statewide Models  
Georgia Department of Transportation  
Research Needs Statement Stage for Agency Review and Invitation  
Amount: \$460,000  
Co-Principal Investigator with Dr. Jorge Laval



### E3. Grants & Contracts as Investigator (Funded)

1. EPA Clean Air Research Center  
US Environmental Protection Agency  
Amount: \$8,000,000, \$3,400,00 at Georgia Tech, \$1,800,000 in CEE (2011-2016)
2. Blood Marker Analysis of In-Vehicle Driver Exposure to PM  
Centers for Disease Control  
Amount: \$150,000 (2008-2009), \$50,000 in CEE  
Investigator (with Dr. Jeremy Sarnat, Emory University, and Michael Bergin, Georgia Tech)
3. Atlanta Heavy-Duty Vehicle and Equipment Inventory and Emissions Study  
Georgia Regional Transportation Administration  
Amount: \$300,000 (2002-2003)  
Principal Investigator: Dr. Michael O. Rodgers
4. Predictive Diagnostics for Bus Maintenance  
National Research Council  
Amount: \$15,000 in CEE (2002)  
Principal Investigator: Ronald Wagner, GTRI
5. Implementation of MOBILE/MEASURE  
US Environmental Protection Agency  
Amount: \$238,000 (2001-2002)  
Principal Investigator: Dr. Michael O. Rodgers
6. Electronic Travel Diary Applications in the Atlanta Year 2000 Travel Survey Update  
(A Component of the \$1.6M SMARTRAQ Initiative)  
Atlanta Regional Commission, Georgia DOT, FHWA, CDC  
Amount: \$300,000 (1998-2000)  
Co-Principal Investigators: Dr. Larry Frank and Dr. Simon Washington
7. Development of Vehicle Activity Components for the Georgia Tech GIS-Based Modal Emissions Model  
Georgia Institute of Technology  
Federal Highway Administration and USEPA  
Amount: \$380,000 (1995-1996)  
Co-Principal Investigators: Dr. Michael Meyer and Dr. Mike Rodgers
8. Development of the GIS-Based Modal Emissions Model  
Georgia Institute of Technology  
Federal Highway Administration and USEPA  
Amount: \$380,000 (1995-1996)  
Co-Principal Investigator: Dr. Michael Meyer and Dr. Mike Rodgers
9. A Protocol for Developing Representative Facility-Type Driving Cycles  
California Department of Transportation  
Amount: \$239,000 (1994-1996)  
Principal Investigator Simon Washington
10. Analysis of TCMs Designed to Reduce Freeway Congestion  
Institute of Transportation Studies, University of California, Davis  
South Coast Air Quality Management District  
Amount: \$148,000 (1992-1994)  
Principal Investigator Brett Koenig

### F. Other Scholarly & Creative Accomplishments

No data.

## G. Societal & Policy Impacts

No data.

## H. Other Professional Activities

### H1. Advisory Board Service

1. Brook Byers Institute for Sustainable Systems, Georgia Institute of Technology (2015-2021).
2. Institute of Transportation Studies, University of California, Davis (2014-2019).
3. FHWA Office of Operations Congestion Pricing Expert Peer Review Group (2015-2017).
4. Swedish National Road and Transport Research Institute (VTI), Gothenburg, Sweden (2015-2016).
5. Mortenson Center in Engineering for Developing Communities, University of Colorado (2012-2016).

### H2. Technical Committee Activities

1. Transportation Research Board - Member (1991-Date).  
Co-Chair (2014-2018): Managed Lanes Research Needs Subcommittee.  
Committee Member (2014-2019): Managed Lanes (AHB35).  
Committee Member (2014-2016): Congestion Pricing Committee (ABE25).  
Committee Chair (1997-2002): Transportation and Air Quality (A1F03).  
Committee Member (1992-2005): Transportation and Air Quality (A1F03).
2. Air and Waste Management Association - Member (1987-2004).  
Committee Member (1990-1999): Mobile Sources (AS-1).  
Committee Member (1990-1999): Land Use/Transportation Policies (EP-2).
3. American Society of Civil Engineers - Member (1987-2002).  
Member (1992-2000): Environmental and Energy Aspects of Transportation.  
Committee Member (1994-1998): Urban Transportation Division Education Committee.  
Transportation Planning and Air Quality IV Conference Committee (1999), Atlanta, GA.  
Committee Secretary (1994-95): Environmental and Energy Aspects of Transportation.  
Transportation Planning and Air Quality II Conference Committee (1993). Boston, MA.
4. Society of Automotive Engineers – Member (1988-2002).

### H3. Organization and Chairmanship of Technical Sessions and Workshops

1. Guensler, R. (2017). Managed Lanes Transportation Research Circular Development Workshop. Managed Lanes Research Subcommittee. Dallas, TX. July 15-16, 2017.
2. Guensler, R. (2016). "Managed Lanes 3.0: Applying Research to the Next Generation of Projects and Technologies." Sunday Workshop. Session 1: What's Happening in Research? 95th Annual Meeting of the Transportation Research Board. Washington, DC. January 2016.
3. Guensler, R. (2002). "MOBILE6: Case Studies from Selected Urban Areas." Speaker and Moderator for the Specialty Workshop. 81st Annual Meeting of the Transportation Research Board. Washington, DC. January 2002.
4. Guensler, R. (2000). "A Look Inside EPA's MOBILE6 Mobile Source Emission Rate Model." Specialty Workshop. 79th Annual Meeting of the Transportation Research Board. Washington, DC. January 2000.
5. Guensler, R. (2000). "Ten Years after the CAAA of 1990: Where Have We Been; Where Are We Going?" Session 129. 79th Annual Meeting of the Transportation Research Board. Washington, DC. January 2000.

6. Guensler, R. (2000). "Impacts of the 1999 Circuit Court Rulings on Transportation and Air Quality Planning." Session 22. 79th Annual Meeting of the Transportation Research Board. Washington, DC. January 2000.
7. Guensler, R. (1999). "Assessment of Mobile Source Reformulated and Alternative Fuel Emissions." Session D8. 92nd Annual Meeting of the Air and Waste Management Association. Pittsburgh, PA. June 1999.
8. Guensler, R. (1999). "Advances in Mobile Source Emissions and Dispersion Modeling." Session D6. 92nd Annual Meeting of the Air and Waste Management Association. Pittsburgh, PA. June 1999.
9. Guensler, R. (1999). "Workshop on Microscale Air Quality Impact Assessment for Transportation Projects." Specialty Workshop. 78th Annual Meeting of the Transportation Research Board. Washington, DC. January 1999.
10. Guensler, R. (1998). "Heavy-Duty Truck Activity and Emissions." Session 206. 77th Annual Meeting of the Transportation Research Board. Washington, DC. January 1998.
11. Guensler, R. (1998). "One Stop Shopping for Electronic Transportation Resources: Utopia or Attainable Goal?" Specialty Workshop. 77th Annual Meeting of the Transportation Research Board. Washington, DC. January 1998.
12. Guensler, R. (1998). "Workshop on Emerging Transportation Air-Quality Analysis Methodologies." Specialty Workshop. 77th Annual Meeting of the Transportation Research Board. Washington, DC. January 1998.
13. Guensler, R. (1997). "Is Research Meeting Regulatory Needs?" Transportation Planning and Air Quality III. Granlibakken Conference Center. American Society of Civil Engineers. New York, NY. August 1997.
14. Guensler, R. (1997). "Current Emissions Factor Model Evaluations and Improvements." 7th Annual On-Road Vehicle Emissions Workshop, San Diego, CA. Coordinating Research Council. Atlanta, GA. April 1997.
15. Guensler, R. (1997). "Recent Developments in Motor Vehicle Emissions and Dispersion Modeling." Session 300. 76th Annual Meeting of the Transportation Research Board. Washington, DC. January 1997.
16. Guensler, R. (1996). "Air Quality Impact Assessment Studies." Session 114B. 75th Annual Meeting of the Transportation Research Board. Washington, DC. January 1996.
17. Guensler, R. (1995). "Mobile Source Emissions: Modeling. The Emission Inventory: Programs and Progress." Specialty Conference sponsored by the USEPA and the Air and Waste Management Association. Research Triangle Park, NC. October 1995.
18. Guensler, R. (1993). "Land Use/Transportation/Air Quality Modeling." Session 41A. 86th Annual Meeting of the Air and Waste Management Association. Pittsburgh, PA. June 1993.
19. Guensler, R. (1992). "Transportation and Air Quality." Session 140. 71st Annual Meeting of the Transportation Research Board. Washington, DC. January 1992.

#### H4. Invited Panel Discussant

1. Guensler, R. (2018). "ARPA-E Educational Workshop." Georgia Institute of Technology (20 attendees). January 18, 2018.
2. Guensler, R. (2017). "Innovative Transportation Planning and Policy in Smart Cities." Driving into a Sustainable Future, Sustainable Mobility Forum, Transatlantic Dialog, Sustainable Mobility. German American Chambers of Commerce (40 attendees). Georgia Institute of Technology, Institute for People and Technology. Atlanta, GA. July 14, 2017.
3. Guensler, R. (2016). "Trickle Down Science Policy: How Decisions Made at the Federal Level Affect Scientists in the Lab." Scientific Research Today: Solving Problems, Answering Questions, and Informing Decisions. Sigma Xi Annual Meeting and Student Research Conference (40 attendees). Atlanta, GA. November 11, 2016.

4. Guensler, R. et al., (2014). "Congestion Pricing and Managed Lanes: 20 Years of Learning – Where have we been, where are we now, and where are we going?" Discussant. Workshop 164 (60 attendees). Washington, DC. January 12, 2014.
5. Guensler, R. (2011). "Experimental Economics Examination of Congestion Pricing." Discussant. Center for Economic Analysis of Risk / FHWA Panel Review (20 attendees). Georgia State University. Atlanta, GA. December 5, 2011.
6. Guensler, R. (1998). "The Importance of Modal Modeling." Discussant. Workshop on Emerging Transportation Air-Quality Analysis Methodologies. Specialty Workshop. 77th Annual Meeting of the Transportation Research Board. Washington, DC. January 1998.
7. Guensler, R. (1996). "Expanding Metropolitan Highways: Implications for Air Quality and Energy Use (Special Report 245). Panel Member. Session 195. 75th Annual Meeting of the Transportation Research Board. Washington, DC. January 1996.

#### H5. Editorial Board Memberships

1. Transportation Research D: Transport and Environment. Elsevier (1996-2008).

#### H6. Professional Peer Review Panels

1. Member, National Academy of Sciences. ACRP Synthesis on Environmental Assessment of High Speed Rail v. Air Transport (ACRP 11-03/Topic SO2-08), March 2012.
2. Member, National Science Foundation Proposal Review Panel. Resilient and Sustainable Infrastructures (EFRI/RESIN). Washington, DC, December 2007.
3. National Academy of Sciences, National Research Council, Board on Environmental Studies in Toxicology, Modeling Mobile Sources Emissions, January 2000.
4. US Environmental Protection Agency, Office of Transportation and Air Quality, Supplemental Federal Test Procedure Corrections to MOBILE6. February 2000.

#### H7. Other Local, State, and National Service

1. Facilitator. Coordinating Research Council 2016 Air Quality Modeling Research Needs Workshop. February 9, 2016.
2. Member. Steering Committee. Midtown Alliance Transportation Action Plan (2015-2016).
3. Member. Grand Jury. Superior Court of Fulton County. Atlanta Judicial Circuit. January-February, 2007.
4. Member. Clean Air Campaign Advisory Committee. Atlanta, GA (2003, 2000-2001).
5. Member. Committee on Carbon Monoxide Episodes in Meteorological and Topographical Problem Areas. National Academy of Sciences, National Research Council, Board on Environmental Studies and Toxicology (2001-2002).
6. Member. Air Quality Planning Team Technical Subcommittee for the RTP/RDP Update. Atlanta Regional Commission (2001-2002).
7. Co-Facilitator, Environmental Research Needs in Transportation. Invitational Conference. Transportation and Air Quality Workgroup. National Research Council, Transportation Research Board (2002).
8. Member. GRTA Air Quality Blue Ribbon Panel Conference (2001).
9. Member and Co-Chair of the Modeling Working Group, USEPA Office of Mobile Sources Technical Advisory Committee, Sub-Committee to the Clean Air Act Advisory Committee (1995-2001).
10. Member. Committee on Aeronautics Research and Technology for Environmental Compatibility. National Academy of Sciences, National Research Council, Aeronautics and Space Engineering Board (2000).
11. Member, Mobile Source Sector Workgroup for On-Highway Vehicles. Southern Appalachian Mountain Initiative (SAMI) E. H. Pechan, Inc. (1998).

12. Co-Facilitator, Environmental Research Needs in Transportation. Invitational Conference. Transportation and Air Quality Workgroup. National Research Council, Transportation Research Board (1996).
13. Member, FHWA/ORNL Advisory Panel on Emissions Modeling (1993-1994).
14. Member, National Research Council, Transportation Research Board Workgroup: Transportation and Air Quality Research Needs (1991).
15. Member, South Coast AQMD Market Incentives Workgroup (1990).
16. Member, AB2595 Heavy-Duty Truck Technical Advisory Group (1990).
17. Expert Witness Designation, USEPA Headquarters (1990).
18. Member, California Technical Review Group, Subcommittees: Industrial, Aerospace, and Marine Coatings, Transfer Efficiency, VOC Content, and Vapor Pressure (1986-1989).

## V. Teaching

### A. Course Offerings

1. Environmental Impact Assessment (CE4620), Undergraduate (Elective).
2. Boulevard of Broken Sidewalks (CE4803), Undergraduate Honors (Elective).
3. Introduction to Transportation Planning (CE6602/CP6311), Graduate (Required)  
Dual Degree Program in Civil/Environmental Engineering and City/Regional Planning.
4. Transportation Energy (CE6625a), Graduate (Elective).
5. Transportation Air Quality (CE6625b), Graduate (Elective).
6. Master's Seminar - Graduate course (CE8811), Graduate (Required).
7. Policy Tools for Managing the Environment (PUBP 6314), Graduate (Elective).

### B. Individual Student Guidance

#### B1. Ph.D. Students

##### B1.1 Ph.D. Students (In Progress)

1. D. Kim  
Scheduled Completion: Fall 2019  
Starting Semester: Fall 2015  
Research: Large-scale, Dynamic, Microscopic Simulation of Pollutant Concentrations
2. Y. Zhao  
Scheduled Completion: Spring 2020  
Starting Semester: Fall 2014  
Research: Assessing Distributive Justice Impacts Using ABM Path Retention
3. R. Boodhoo  
Co-advisor with Dr. Michael Rodgers  
Scheduled Completion: Spring 2020  
Starting Semester: Fall 2014  
Research: Integration of Managed Lanes Assessment in Activity-based Modeling
4. Hongyu Lu  
Co-advisor with Dr. Michael Rodgers  
Scheduled Completion: Summer 2022  
Starting Semester: Fall 2017  
Research: Modeling Near-road Pollutant Exposures at the Regional Level
5. Diyi Liu  
Co-advisor with Dr. Michael Rodgers

Scheduled Completion: Fall 2022

Starting Semester: Fall 2018

Research: Big Data and Deep Learning for Energy and Emissions

#### B1.2 Ph.D. Students (Graduated)

1. X. Xu

Completed: Fall 2019

Starting Semester: Fall 2014

Research: Integrating Hybrid-Electric and Battery-Electric Vehicles into MOVES

Current Position: Research Engineer, TTI, College Station, TX.

2. H. Li

Completed: Fall 2019

Starting Semester: Fall 2014

Research: A Framework for Optimizing Public Transit Bus Fleet Conversion to Alternative Fuels

Current Position: Data Scientist, Indeed, Austin, TX.

3. H. Liu

Co-advisor with Dr. Michael Rodgers

Completed: Summer 2018

Starting Semester: Fall 2013

Research: Modeling the Impact of Road Grade on Vehicle Operation, Vehicle Energy Consumption, and Emissions

Current Position: Research Engineer II, Georgia Institute of Technology.

4. A. Grossman

Completed: Spring 2017

Starting Semester: Fall 2012

Dissertation: Adoption of Performance Measures in Regional Transportation Planning: Current Practice and Lessons for Future Applications

Current Position: Senior Policy Analyst, Eno Foundation, Washington, DC.

5. A. Sheikh

Completed: Fall 2015

Starting Semester: Fall 2011

Dissertation: Consumer Response to Road Pricing: Operational and Demographic Effects

Current Position: Consultant, Deloitte Consulting

6. F. Castrillon

Co-advisor with Dr. Jorge Laval

Completed: Fall 2015

Starting Semester: Fall 2011

Dissertation: Theoretical Analysis of the Effects of Bus Operations on Urban Corridors and Networks

Current Position: Systems Engineer, Home Depot

7. C. Toth

Co-advisor with Dr. Jorge Laval

Completion: Fall 2014

Starting Semester: Fall 2009

Dissertation: Empirical Study of the Effect of Offramp Queues on Freeway Mainline

- Traffic Flow  
Current Position: Consultant, WSP Parsons Brinckerhoff; Columbus, OH
8. V. Elango  
Co-advisor with Dr. Michael Rodgers  
Completion: Fall 2014  
Starting Semester: Spring 2003  
Dissertation: Methodology to Model Activity Participation using Longitudinal Travel Variability and Spatial Extent of Activity  
Current Position: Systems Engineer, Google; Mountain View, CA.
  9. S. Khoeini  
Co-advisor with Dr. Michael Hunter  
Completion: Spring 2014  
Starting Semester: Spring 2011  
Dissertation: Modeling Framework for Socio-economic Analysis of Managed Lanes  
Current Position: Assistant Research Professor and Assistant Director of the University Transportation Center, Arizona State University.
  10. Y. Xu  
Completion: Spring 2010  
Starting Semester: Fall 2006  
Dissertation: Effective GPS-Based Sample Size for Urban Travel Behavior Studies  
Current Position: Senior Advisor for Technical Assessment and Impact, U.S. Department of Energy, ARPA-E.
  11. C. Feng  
Completion: Spring 2007  
Starting Semester: Fall 2001  
Dissertation: Transit Bus Load-Based Modal Emission Rate Model Development  
Current Position: Transportation Engineer, Massachusetts DOT.
  12. J. Jun  
Completion: Fall 2006  
Starting Semester: Winter 2002  
Dissertation: Potential Crash Exposure Measures Based on GPS-Observed Driver Behavior Activity Metrics  
Current Position: Transportation Engineer, Virginia DOT
  13. J. Ko  
Co-Advisor with Michael Hunter  
Completion: Summer 2006  
Starting Semester: Fall 2001  
Dissertation: Measuring Freeway Traffic Flow Quality Using GPS-Equipped Vehicles  
Current Position: Associate Professor, Graduate School of Urban Studies, Hanyang University, Seoul, Korea. Emeritus Director, Megacity Research Center, Seoul Institute.
  14. S. Yoon  
Co-Advisor with Dr. Michael O. Rodgers  
Completion: Summer 2005  
Starting Semester: Fall 2002  
Dissertation: A New Heavy-duty Vehicle Visual Classification and Activity Estimation Method for Regional Mobile Source Emissions Modeling  
Current Position: Staff Air Pollution Specialist, California Air Resources Board

15. H. Li  
Completion: Fall 2004  
Starting Semester: Fall 2000  
Dissertation: Investigating Morning Commute Route Choice Behavior using Global Positioning Systems and Multi-day Travel Data  
Current Position: Manager, United Parcel Service
16. J. Granell  
Completion: Fall 2002  
Starting Quarter: Winter 1997  
Dissertation: Model Year Distribution and Vehicle Technology Composition of the Onroad Fleet as a Function of Vehicle Registration Data and Site Location Characteristics  
Current Position: Transportation Engineer, Federal Transit Administration
17. H. Ikwut-Ukwa  
Completion: Spring 2001  
Starting Quarter: Fall 1996  
Dissertation: Advances In Vehicle Emissions Modeling: Development of a Methodology for the Kinematic Acquisition of Roadway Grade Data  
Current Position: Director of Transportation, Atlanta Beltline, Atlanta, GA.
18. J. Wolf  
Completion: Summer 2000  
Starting Quarter: Fall 1996  
Dissertation: Using GPS Data Loggers to Replace Travel Diaries in the Collection of Travel Data  
Current Position: President, GeoStats Consulting Inc.
19. M. Thornton  
Completion: Summer 2000  
Starting Quarter: Fall 1996  
Dissertation: Modal Vehicle Activity on Freeways and Freeway On-Ramps: An Assessment of the Oxides of Nitrogen Emissions Impacts Resulting from Changes in Vehicle Operating Mode Due to Ramp Metering Systems  
Current Position: Senior Engineer, National Renewable Energy Laboratory
20. S. Hallmark  
Completion: Fall 1999  
Starting Quarter: Fall 1995  
Dissertation: Analysis and Prediction of Individual Vehicle Activity for Microscopic Traffic Modeling  
Current Position: Professor, Iowa State University
21. D. Ahanotu  
Completion: Summer 1999  
Starting Quarter: Spring 1995  
Dissertation: Heavy-Duty Vehicle Weight and Horsepower Distributions: Measurement of Class-Specific Temporal and Spatial Variability  
Current Position: Principal, Cambridge Systematics, Oakland, CA
22. C. Grant  
Completion: Summer 1998  
Starting Quarter: Fall 1994  
Dissertation: Representative Vehicle Operating Mode Frequencies : Measurement and



Prediction of Vehicle-specific Freeway Modal Activity

Current Position: Professor and Associate Dean, Embry-Riddle University

23. W. Bachman

Co-advisor with Dr. Wayne Sarasua

Completion: Fall 1997

Starting Quarter: Winter 1995

Dissertation: Towards a GIS-based Modal Model of Automobile Exhaust Emissions

Current Position: Principal, GeoStats Consulting Inc.

24. O. Tomeh

Completion: Summer 1996

Starting Quarter: Fall 1994

Dissertation: Spatial and Temporal Characterization on the Vehicle Fleet as a Function of Local and Regional Registration Mix : Methodological Development

Current Position: Consultant, Booz Allen & Hamilton Inc.

B2. Masters Students

B2.1 M.S. Thesis Students

1. B. Cheng, Calibration of Tablets for Sidewalk Vibration Data Collection, Spring 2018.
2. R. Prabhakar, Measuring the Cost-Effectiveness of Idle Reduction Technologies in Heavy Duty Trucks, Fall 2015.
3. Y. Aurora, A Process Flow and Systems Framework Designed for use in the Development of a Lifecycle Energy Model for Lithium-ion Battery Systems, Environmental Engineering, Fall 2014.
4. K. Colberg, Investigating the Ability of Automated License Plate Recognition Camera Systems to Measure Travel Times in Work Zones, Spring 2013.
5. D. Duarte, A Profile of Changes in Vehicle Characteristics Following the I-85 HOV-To-HOT Conversion, Spring 2013.
6. K. Kamiya, A Framework of Vision-Based Detection-Tracking Surveillance Systems for Counting Vehicles, Fall 2012.
7. S. Zinner, A Methodology for Using Bluetooth to Measure Real-Time Work Zone Travel Time, Fall 2012.
8. K. Smith, A Profile of HOV Lane Vehicle Characteristics on I-85 Prior to HOV-to-HOT Conversion, Fall 2011.
9. C. Rome, An Analysis of School Bus Idling and Emissions, Summer 2011.
10. K. D'Ambrosio, Methodology for Collecting Vehicle Occupancy Data on Multi-Lane Interstate Highways: A GA 400 Case Study, Summer 2011.
11. G. Shafi, Development of Roadway Link Screening Criteria for Microscale Carbon Monoxide and Particulate Matter Conformity Analyses through Application of Classification Tree Models, Spring 2008.
12. J. Lee, Comparison of GPS-Equipped Vehicles and its Archived Data for the Estimation of Freeway Speeds, Spring 2007.
13. T. Udell, Reducing Emissions of Older Vehicles through Fuel System Conversion to Natural Gas, Winter 1998.
14. D. Drake, Trip Generation and Parking Duration Characteristics of Eight Strip Malls in Atlanta, Spring 1997.

B2.2 M.S. CEE/CP Dual Degree Thesis Students

1. Ziyi Dai, A Survey to Assess Carpool Incentive Strategies for Managed Lanes, Scheduled Fall 2019.
2. Chris (Chia-Huai) Chang, Energy Use of Alternative Pathways Offered by Managed Lanes, Summer 2019.
3. D. Patel, Economic and Social Sustainability of Sidewalk Infrastructure, Summer 2019.
4. D. Walls, Assessing the Potential of Autonomous Transit Shuttles as a First-and-Last Mile Public Transportation Solution, Summer 2018.
5. C. Dyess, An Assessment of Pedestrian Infrastructure Quality and the Effect on Travel Time and Mobility for Users with Physical Limitations, Spring 2017.
6. E. Sperling, Connecting State DOT Performance and Priorities, Fall 2017.
7. J. Pringle, Parking Management and Smart Parking in Atlanta, Summer 2016.
8. T. Martin, Assessing the Influence of Policy Factors on Alternative Fuel Vehicle Adoption in Georgia, Spring 2016.
9. G. Maier, Forecasting Ridership Impacts of Transit-Oriented Development at MARTA Rail Stations, Spring 2015.
10. G. Li, The Potential of Bus Rapid Transit/Buses with High Level of Service System in Metro Atlanta: A Suitability and Feasibility Study, Summer 2014.
11. A. Frackelton, Pedestrian Transportation Project Prioritization Incorporating App-Collected Sidewalk Data, Fall 2013.
12. M. Roell, The Use of Public Participation in the Design of Effective Internet-Based Advanced Traveler Information Systems, Fall 2012.
13. L. Zuyeva, Equity Issues in HOV-to-HOT Conversion on I-85 North in Atlanta, Spring 2009.
14. D. Kall, Effect of High Occupancy Toll (HOT) Lanes on Mass Vehicle Emissions: An Application to I-85 in Atlanta, Summer 2008.
15. T. Trudell, Issues in Transit and 'Affordable' Housing for Metro Atlanta's Aging Population, Summer 2008.
16. K. Zuehlke, Impossibility of Transit in Atlanta: GPS-Enabled Revealed-Drive Preferences and Modeled Transit Alternatives for Commute Atlanta Participants, Fall 2007.
17. C. Pastore, Impact of School Schedules on Travel Behavior, Spring 2005.
18. R. Hartz, Improving In-Use Vehicle Testing in Mexico: A Case Study Approach, Summer 2001.
19. J. Pritchett, The Old FHWA Noise Model and TNM (Traffic Noise Model), A Comparison, Fall 1999.

#### B2.3 M.S. in Computational Science and Engineering

1. Kim, D. (2018). Personal Vehicle Ownership and Operating Cost Calculator. M.S. Thesis. Georgia Institute of Technology. Atlanta, GA. 2018.

#### B2.4 M.S. CEE/MBA Dual Degree Students

1. M. Funke, Sidewalk Field Management, Spring 2019.
2. D. Boyer, Automation of Sidewalk Repair Pricing, Fall 2018.

#### B2.5 M.S. Special Research Problems

1. B. Liu, Assessment of Pedestrian Flows from Mercedes-Benz Stadium via Social Force Simulation Modeling, Spring 2019.
2. J. Greenwald, Sidewalk Assessment, Fall 2018.
3. J. Cebe, Sidewalk Economic Analysis and Project Prioritization, Spring 2017.
4. X. Xu, MOVES-Matrix Application in Vissim Simulation Modeling, Summer 2016.
5. H. Li, Deadheading Reduction in Local Transit Service: A Real-world Application, Fall 2015.
6. J. Cruz, Sustainable Transportation Curricula Development, Fall 2014.
7. A. Grossman, Sidewalks: Demographic and Land Use Considerations, Summer 2014.
8. A. Wang, Sidewalk Outreach Planning, Spring 2014.
9. G. Cernjul, MOVES-Matrix Emissions Modeling, Fall 2013.
10. J.H. Hong, Estimating Induced Travel Using the SMITE-ML Model, Spring 2011.
11. G. Chu, Potential for Urban Scale Vehicles in Metropolitan Atlanta, Spring 2011.
12. S. Vedala, HOV-to-HOT Changes in Use Demographic Characteristics, Spring 2011.
13. N. Wood, Commercial Instrumented Vehicle Activity, Spring 2010.
14. P. Blaiklock, Design of a Portable Loop Detector, Spring 2010.
15. V. Pandey, CALINE-Grid Module of the Georgia Project Conformity Screening Tool, Spring 2008.
16. J.I. Nelson, Accessibility Analysis of Parking, Transit, and Pedestrian Facilities at Georgia Tech, Spring 2007.
17. S. Lee, Residential Density Effects on Atlanta Tripmaking, MCRP Spring 2003.
18. S. Mergelsberg, Acceptable Commute Times, Fall 2002.
19. J. Williams, Current State Regulatory Support for Pay-as-You-Drive Insurance, Spring 2002.
20. T. Orawan, Consumer Response Issues with OBD Systems, Fall 2001.
21. P. Ovasith, Link Screening in Regional Applications of Microscale Dispersion, Summer 2001.
22. S. Desai, LabVIEW Code for a Comprehensive Vehicle Test Package, Fall 2000.
23. R. Thittai, Spatial and Temporal Accuracy Issues in GPS, Fall 1999.
24. A. Ma, GIS, Spatial Data Analysis, and Wetlands Management, Spring 1998.
25. M. Tai, Video/GPS Integration for Land Use Classification, Spring 1998.
26. B. McHugh, A Comparison of Parking Turnover Data Collection Methods, Spring 1998.
27. A. Ammer, MEASURE Website Development, Winter 1998.
28. C. Heggen, Agency Guidance on Implementing NEPA, Winter 1998.
29. E. Pihl, Integrating Land Use Models into a GIS Framework, Spring 1997.
30. B. Curls, Implementation of the TransNet Service, Fall 1996.
31. A. Pickard, A MOBILE5a Sensitivity Analysis of Bus Emissions, Fall 1996.
32. W. Bain, Weigh-in-Motion Equipment Operations, Spring 1996.
33. D. Kasbo, Parking Turnover Study Methodology, Fall 1995.

#### B2.6 MBA Special Projects

1. R. Langdale Transportation Telematics Market Analysis, Spring 2009.
2. S. Kauffman Transportation Telematics Market Analysis, Spring 2009.

#### B2.7 M.S. and Ph.D. Programmer Support Team

1. R. Walsh. SRTA Data Integration into the Space-Time Memory. 2019

2. Yuanbo (Cody) Wang, Space-Time Memory, TransitSim, RoadwaySim, and Python, 2016-2019.
3. D. Venkitaramanan, Mongo DB, Web and Python Support, 2017-2018.
4. Somdut Roy, Python App Development Support, Spring 2017-2018.
5. Ravikant Gupta, CS Major, Fuel and Emissions Calculator (Python), 2014-2016.
6. Alper Akanser, COC Major, Commute Warrior App (Android), 2014-2016.
7. Komal Poddar, ECE Major, Commute Warrior App (iOS), 2014.
8. Ramik Sadana, COC Major, Commute Warrior App (Android), 2012-2014.

### B3. Undergraduate Students

#### B3.1 Undergraduate Thesis Students

1. K. Edwards, Error Analysis of Undergraduate-Collected Field Data, Spring 2013.

#### B3.2. Undergraduate Research Students

1. P. Patel. Bicycle Safety Assessment for Howell Mill Road. Fall 2019.
2. N. Daugherty. Pedestrian Safety Assessment for Howell Mill Road. Fall 2019.
3. D. Oswald, Comparative Analysis of Sidewalk Assessment Data. Spring 2019.
4. Z. Genet, FEC Updates. Fall 2018.
5. E.M. Cohen, FEC Shuttle Bus Costs and Operating Profiles. Summer 2018.
6. S. Chambliss, FEC Paratransit Bus Costs and Operating Profiles. Summer 2018.
7. T. Patrick, FEC School Bus Costs and Operating Profiles. Summer 2018.
8. R.T. Passmore, FEC Intercity Bus Costs and Operating Profiles. Summer 2018.
9. B. Tyson, Sidewalk Scout Curb Cuts, Fall 2015 - Summer 2016.
10. J. Lizararo, Sidewalk Scout Route Activities. Fall 2015 - Summer 2016.
11. S. Mudrinich, Development of an ADA Transition Plan for the Atlanta Hotel District. Fall 2015 - Spring 2016. Winner of a Georgia Tech Presidents Undergraduate Research Award (PURA).
12. C. Dyess, Sidewalk Scout Crosswalks. Fall 2014 - Fall 2015.
13. H. Chen, Cost Effectiveness of HD Truck Control Strategies. Fall 2014 - Fall 2015.
14. R. Liu, Tree Encroachment (and assistance with Pedestrian Count Methods). Fall 2013 - Spring 2015.
15. C. Paton, Sidewalk Sentry Tablet Testing and Performance Assessment. Spring 2014 - Spring 2014.
16. R. Guissou, Tree Encroachment (and assistance with Pedestrian Count Methods). Fall 2013 -Spring 2014.
17. B. Lempke, Sidewalk Sentry Pedestrian Count Methods and Tree Encroachment. Fall 2013.
18. S. Williams, Sidewalk Sentry Pedestrian Count Methods and Tree Encroachment. Fall 2013.
19. R.J. Daniell, Sidewalk Sentry Pedestrian Count Methods and Tree Encroachment. Fall 2013.
20. V. Kemmegni, Sidewalk Sentry Outreach. Summer 2013.
21. M. Cosner, Sidewalk Sentry Outreach. Summer 2013.
22. R. Thamm, Sidewalk Sentry Machine Shop Activities. Summer 2013 - Fall 2013.
23. K. Randall, Sidewalk Sentry Data Collection Manual Development. Summer 2013.
24. A. Wang, Sidewalk Sentry Survey Data. Fall 2013.
25. G. Amir, Positive Identification of Vehicle Occupancy. Fall 2012.

26. E. Ingles, Automated License Plate Reader Angle and Decoding Accuracy. Fall 2012.
27. M. Thumaty, Bluetooth Technology Assessment. Summer 2012 to Fall 2012.
28. Z. Drakhshandeh, Instrumented Bus Systems Management, Spring 2011 to Spring 2012.
29. G. Rodgers, Vehicle Fleet Turnover in the Commute Atlanta Program. Spring 2008.
30. C. Russell, Water Quality Modeling Lecture Material Development. Summer 2004.
31. J. Davis, CORSIM Model Development for North Atlanta. Summer 2004.
32. M. Williamson, Analysis of Employer Commute Options Survey Data. Fall 2003.
33. D. Changeau, Analysis of Employer Commute Options Survey Data. Summer 2003.
34. J. Swanson, Legal/Privacy Issues in Remote Vehicle ID and Instrumented Vehicle Data. Spring 2003.
35. R. Lund, Web System for Transportation Journal Publications. Spring 2002.
36. E. Cooper, NEPA Permitting Systems Evaluation. Fall 1999.
37. J. Powell, Ramp Metering Speed/Acceleration Profile Research Plan. Spring 1999.
38. K. Seo, Analysis of Douglas County Weigh Station Truck Surveys. Winter 1999.
39. C. Conklin, EIS Multimedia Course Development. Spring 1997.
40. K. Leopard, Annotated Bibliography of EIS Case Law. Spring 1997.
41. A. Morales, Parking Data Collection Strategies. Fall 1996.
42. S. Lopez, Parking Research. Fall 1996.
43. S. Patel, Parking Research. Fall 1996.
44. M. Gooseff, Transportation/Air Quality Conformity. Spring 1996.
45. P. Sepulveda, Transportation/Air Quality Research. Fall 1995.
46. A. Smith, Introduction to GIS and ARC/INFO. Winter 1994.

#### B4. Post-doctoral Researchers

1. G. Macfarlane, Sustainable Transportation Education Program Development, 2014.
2. S. Khoeini, Socio-spatial Analysis of Carpool Activity, 2014.
3. Y. Xu, School Bus Emissions Reductions and Traffic Count Accuracy Assessments, 2011-2012.
4. Z. Peng, Refinement of Parking Turnover Study Methods, 1996.

#### B5. Research Engineer and Research Scientist Supervision

1. H. Liu, Research Engineer II, Energy and Emissions Model Development, 2018-Date.
2. Y. Xu, Research Engineer II, Energy and Emissions Model Development, 2012-2016.
3. V. Elango, Research Engineer I, Vehicle Activity Monitoring, 2007-2014.
4. H. Li, Research Engineer II, Commuter Choice and Value Pricing Insurance Incentive Program (Commute Atlanta), 2004-2007.
5. S. Yoon, Research Engineer II, RARE Heavy Duty Diesel Vehicle Modal Emissions Model (HDDV-MEM), 2005.
6. J. Ogle. Research Engineer II. Commuter Choice and Value Pricing Insurance Incentive Program (Commute Atlanta), 2004-2005.
7. J. Ogle, Research Engineer I, Commuter Choice and Value Pricing Insurance Incentive Program (Commute Atlanta), 2001-2004.

#### B6. Service as a Dissertation Opponent:

1. E. Ericsson. Urban Driving Patterns - Characterisation, Variability, and Environmental Implications. Lund Institute of Technology. Lund, Sweden. September 2000

## C. Other Teaching Activities

### C1. Curriculum Development

1. CE4803H, Boulevard of Broken Sidewalks (2014-Present) - This new undergraduate honors course explores how sidewalks, as transportation infrastructure, affect urban life. The course couples literature review and class discussion with field research and data analysis to explore the importance of sidewalks within the context of planning, engineering, and public policy. Students investigate sidewalk conditions, usage, and accessibility in the City of Atlanta by collecting data on sidewalk conditions and conducting manual and automated pedestrian counts. The class focuses on accessibility and equity in transportation while also learning about trip making and transportation mode choice modeling methods.
2. CE6625, Transportation Energy and Air Quality (1996-Present) - This course focuses on the energy and air quality impacts of transportation, from vehicle activity, fuel consumption, and emissions estimation. Students use case studies to explore relationships between transportation demand, greenhouse gas and pollutant emissions, and air quality and learn to use the latest analytical techniques and models.
3. CE4620, Environmental Impact Assessment (1994-Present) - The Environmental Impact Assessment course offered serves as an undergraduate service course on environmental policy. This course overviews environmental law, agency regulation, and policy-making fundamentals, but also focuses on policy and technical analysis. Students learn fundamental principles and scientific limitations of impact assessment modeling (air quality, noise, etc.).
4. CE8102, Publishing Transportation Research on the Internet (1996-1999) - Drs. Leonard and Guensler developed a two-unit graduate course that provides students with a comprehensive overview on World Wide Web publishing. The course explored basic tools used in Internet publication. Students created their own home pages and published research papers on the Web. The course was discontinued when web development tools advanced to the point where specialized training was no longer necessary.

## VI. Service

### A. Institute Contributions

1. Member. CEE Periodic Peer Review Committee (2018-2020).
2. Brook Byers Fellow. Brook Byers Institute for Sustainable Systems, Georgia Institute of Technology (2015-2021).
3. Chair. CEE Reappointment, Promotion, and Tenure Committee (2017-2018).
4. Member. CEE Reappointment, Promotion, and Tenure Committee (2016-2018).
5. Faculty Mentor. Alice Grossman, Instructor of Record CE6602 (2016-2017).
6. Lead. Transportation Group Graduate Admissions Ad-Hoc Committee (2014-2017).
7. Transportation Affinity Group Leader (2012-2013).
8. Member. School of CEE Construction Program Ad-Hoc Committee (2012-2014).
9. Affinity Group Leader. Transportation Affinity Group, School of CEE (2012-2013).
10. Member. School of CEE Promotion and Tenure Committee (2011-2013).
11. Member. School of CEE Graduate Committee (2012).
12. Co-developer. Transportation Engineering and City Planning Dual Degree (2010, 1996).
13. Member. School of CEE Reappointment, Promotion, and Tenure Committee (2008-2011).
14. Member. School of CEE Statutory Advisory Committee (2007-2010).
15. Member. Georgia Tech Academic Technologies Advisory Committee (2004).
16. Chair. School of CEE Computer Committee (2004, 2000-2001).

17. Member. School of CEE Interdisciplinary Research and International Programs Committee (2003-2004).
18. Chair. School of CEE Transportation Faculty Search Committee (2004).
19. Affinity Group Leader. Transportation Affinity Group, School of CEE (2002-2004).
20. Member. School of CEE Computer Committee (2000-2004).
21. Member. School of CEE Web Committee (2003).
22. Member. Georgia Tech Procurement Focus Group (1996-97).
23. Member. School of CEE Semester Conversion Task Force (1995-96).
24. Member. School of CEE Undergraduate Study Committee (1995-96).

B. Local, State, National and International Contributions

1. Member. Bloomberg American Climate Cities Challenge Proposal Preparation Team. \$2.5 Million Awarded to City of Atlanta . <https://www.bloomberg.org/press/releases/seattle-and-atlanta-first-winners-american-cities-climate-challenge/> (2018-2019).
2. Guensler, R. (2017). "Transatlantic Dialog, Sustainable Mobility." Study Trip to Germany. German American Chambers of Commerce (20 attendees). Frankfurt, Stuttgart, Berlin, and Magdeburg, Germany. November 6-10, 2017.
3. Developer. Basic Ordering Agreement between Georgia Tech and the State Road and Tollway Authority (2007-present).
4. Developer. Basic Ordering Agreement between Georgia Tech and the Georgia Regional Transportation Authority (2014-present).