

Nicholas E. Lownes, Ph.D., P.E.

UTC Associate Professor in Engineering Innovation
Associate Head of Undergraduate Education and Outreach
Department of Civil and Environmental Engineering
University of Connecticut
261 Glenbrook Road, Unit 3037
Storrs, CT 06269-3037

Phone: (860) 486-2717

Email: nicholas.lownes@uconn.edu

Web: <https://nlownes.engr.uconn.edu>

Registration: Professional Engineer, Connecticut #27479

EDUCATION

Ph.D. Civil Engineering (Transportation), The University of Texas at Austin,
August 2007. Dissertation title: The Commuter Rail Circulator Network Design
Problem: Formulation, Solution Methods and Applications.

M.S. Civil Engineering (Transportation), The University of Texas at Austin,
May 2005. Thesis title: Sensitivity Analysis of VISSIM Driver Behavior Parameters on
Simulation Performance in a Bottleneck Scenario.

B.S. with distinction, Civil Engineering, Iowa State University, May 2001.

PROFESSIONAL APPOINTMENTS

- Department of Civil and Environmental Engineering, *Associate Head of Undergraduate Education and Outreach*, August 2016 – present
- Department of Civil and Environmental Engineering, *CE Graduate Program Director*, August 2016 – August 2018
- UTC Professor in Engineering Innovation, May 2016 – June 2019
- Transportation and Urban Engineering, *Group Coordinator*, August 2015 – August 2016
- The University of Texas at Austin, *Visiting Researcher*, Spring 2014
- University of Connecticut, *Associate Professor*, August 2013 – Present
- *F.L. Castleman Professor in Engineering Innovation*, May 2012 – June 2015
- Center for Transportation and Livable Systems, *Director*, March 2010 – August 2016
- University of Connecticut, *Assistant Professor*, Aug 2007 – August 2013
- The University of Texas at Austin, *Graduate Research Assistant*, Aug 2003 – July 2007
- ESA Environmental, *Consultant*, Jan 2002 – Aug 2003
- Iowa State University, *Undergraduate Research Assistant*, Aug 1999 – Nov 2000

- Ehrhart Griffin & Associates, *Engineering Intern*, June - August 1998 & 1999
- City of Ames Traffic Engineering, *Engineering Intern*, September 1998 - May 1999
- Harold Pike Construction, *Engineering Intern*, September 1997 - May 1998
- City of Council Bluffs Public Works, *Engineering Intern*, May - August 1997

REFEREED ARCHIVAL JOURNAL PUBLICATIONS

29. Islam, A. and N.E. Lownes (2019) When to Go Electric? A Parallel Bus Fleet Replacement Study, *Transportation Research Part D*, 72:299-311
28. Bertolaccini, K., Mamun, S. and Lownes, N.E. (2018) Measuring and mapping transit opportunity: an expansion and application of the Transit Opportunity Index, *J. of Transport Geography*, 71:150-160.
27. Basavaraj, V.; Venkateswaran, S. ; Fiondella, L.; Rahman, A. and N.E. Lownes. (2017) Algorithm to Prioritize the Restoration of a Multiple Facility, Multiple Hazard Road Network, *Journal of Risk and Reliability*, 231(3):221-231.
26. Fiondella, L., Rahman, A., Lownes, N. & Basavaraj, V. V. (2016) Optimal Defense of High Speed Rail: An Evolutionary Algorithm guided by Game Theory, *IEEE Transactions on Reliability*, PP(99):1-13.
25. Zhou, H., Lownes, N.E., Ivan, J., Ravishankar, N. and Gårder, P. (2015) Gap Acceptance of Elderly Drivers Making Left Turns at Unsignalized Intersections. *Journal of Transportation Safety and Security*, *Journal of Transportation Safety & Security* 7(4):324-344
24. Osei-Asamoah, A.; and N. E. Lownes (2014) Complex Network Method of Evaluating Resilience in Surface Transportation Networks, *Transportation Research Record*, 2467:120-128.
23. Mamun, S.; and N.E. Lownes (2014) Access and connectivity tradeoffs in public transportation systems, *Transportation Research Record*, 2466:1-11.
22. Islam, S.; Ivan, J.; Lownes, N.E.; Ammar, R.; and S. Rajasekaran (2014) Safety Performance Function for Freeways Considering Interactions between Speed Limit and Geometric Variables, *Transportation Research Record*, 2014:72-81.
21. Doran, D.; Gokhale, S. and N. Lownes (2014) An Analytic Model of Airport Security Checkpoint Screening Times, *Transportation Research Record*, 2400:1-8.
20. Rahman, A.; Fiondella, L.; Lownes, N. (2014) A Bi-Objective Approach to Evaluate Highway Routing and Regulatory Strategies for Hazardous Materials Transportation, *Journal of the Transportation Research Forum*, 53(1):7-22.
19. Conway, A., Cheng, J., Peters, D., and N.E. Lownes. (2013) Characteristics of Multi-modal Conflicts In Urban On-street Bicycle Lanes. *Transportation Research Record*, 2387:93-101.
18. Bertolaccini, K. and N.E. Lownes. (2013) The Effects of Scale and Resolution in Assessing the Equity of Transit Supply Distribution *Transportation Research Record*, 2350:58-64.
17. Osei-Asamoah, A., Bertolaccini, K., Lownes, N.E. and N. Garrick (2013) Urban Street Design in Ghana: A Case Study of Accra, *Int. J. of Society Systems Science*, 5(4):392-410.
16. Hart, N. and N.E. Lownes. (2013) Exploring Access to Low-income Jobs in the Urban Core. *Transportation Research Record*, 2357:58-65.
15. Mamun, S., Lownes, N.E. Bertolaccini, K. and J. Osleeb. (2013) A Method to Define Public Transit Opportunity Space, *J. of Transport Geography*, 28:144-154.
14. Billings, J., Garrick, N. and N.E. Lownes (2012) Changes in Travel Patterns due to Freeway Teardown for Three North American Case Studies, *Urban Design International*, DOI: 10.1057/udi.2012.35.

13. Rahman, A. and Lownes, N.E. (2012) Analysis of rainfall impacts on platoon vehicle spacing and speed, *Transportation Research Part F*, 15(4):395-403.
12. Rajasekaran, S.; Fiondella, L.; Sharma, D.; Ammar, R.; Lownes, N. (2012) Communication and Energy Efficient Routing Protocols for Single-Hop Radio Networks, *Journal of Parallel and Distributed Computing*, 72(6):819-826.
11. Lownes, N.E., Wang, Q., Ibrahim, S., Ammar, R., Rajasekaran, S. and Sharma, D. A. (2011) Many-to-Many Game Theoretic Approach to Measuring Transportation Network Vulnerability, *Transportation Research Record*, 2263:1-8.
10. Mamun, S. and Lownes, N.E. (2011) A composite index of public transportation accessibility, *Journal of Public Transportation*, 14(2): 69 – 87.
9. Mamun, S. and Lownes, N.E. (2011) Measuring Service Gaps: An Accessibility-Based Transit Need Index, *Transportation Research Record*, 2217:153-161.
8. Yannes, C., Lownes, N.E., Garrick, N. and Johnston, R. (2010) Operationalizing placemaking in a choice experiment context, *Transportation Research Record*, 2144: 121-129.
7. Lownes, N.E., Zofka, A and Pantelias, A. (2010) Moving towards transportation asset management, *Public Works Management & Policy*, 15(1): 4-19.
6. Yannes, C. D. and N. E. Lownes. (2010) Driver Behavior Considerations in Calibrating for Capacity, *Int. J. of Society Systems Science*, 2(1): 84-99.
5. Lownes, N.E. and Machemehl, R.B. (2010) Exact and Heuristic Methods for Public Transit Circulator Design, *Transportation Research Part B*, 44(2): 309-318.
4. Fan, W., Machemehl, R.B. and Lownes, N.E. (2008) Carsharing: A Dynamic Vehicle Allocation Decision Making Problem. *Transportation Research Record*, 2063: 97 – 104.
3. Fan, W., Machemehl, R.B. and Lownes, N.E. (2008) Some Computational Insights on the Optimal Bus Transit Route Network Design Problem, *Journal of the Transportation Research Forum*, 47(3): 61-76.
2. Lownes, N.E. and Machemehl, R.B. (2008) Commuter Rail Circulator Network Design and its Implications for Transit Accessibility. *Transportation Research Record*, 2042: 90 – 97.
1. Lownes, N.E. and Machemehl, R.B. (2006) Sensitivity of Simulated Capacity to VISSIM Driver Behavior Parameter Modification. *Transportation Research Record*, 1988: 102 – 110.

REFEREED CONFERENCE PROCEEDINGS (FULL PAPER PEER REVIEW)

47. Wang, Q., Miao, F., Wu, J., Niu, Y., Wang, C. and N.E. Lownes (accepted) Dynamic Pricing for Autonomous Vehicle E-hailing Services Reliability and Performance Improvement, *Proceedings of the 2019 IEEE 15th International Conference on Automation Science and Engineering*, Paper #547.
46. Islam, A. and N.E. Lownes (2019) GLC3: An Open Source Tool for Aiding the Minimization of Carbon Footprint of Transit Agencies, *Proceedings of the 98th Annual Meeting of the Transportation Research Board*, Paper #19-05534.
45. Wang, Q. and N.E. Lownes (2019) All links based e-hailing service surcharge mechanism and performance estimation, *Proceedings of the 98th Annual Meeting of the Transportation Research Board*, Paper #19-05835.
44. Rahman, A. and N.E. Lownes (2018) Two-Stage Hurricane Shelter Location Model with Stochastic Demand and Capacity, *Proceedings of the 97th Annual Meeting of the Transportation Research Board*, Paper 18-05287.

43. Konduri, K., Enam, A., Ritter, C., Lownes, N. and J. Raymond (2017) Exploring the Implications of Item Non Response Treatment on Survey Expansion and Weighting: Experience from the Connecticut Statewide Transportation Study, *Proceedings of the 96th Annual Meeting of the Transportation Research Board*, Paper # 17-06181.
42. Bertolaccini, K. and N. Lownes (2017) Developing and Solving an Equitable Transit Network Design Model with a Genetic Algorithm Solution Approach, *Proceedings of the 96th Annual Meeting of the Transportation Research Board*, Paper # 17-06547.
41. Bertolaccini, K.; N.E. Lownes and S. T. Waller. (2015) Optimizing Transit Route Design for Equity, *Proceedings of the 13th Conference on Advanced Systems in Public Transport*.
40. Fiondella, L., Gokhale, S. and N.E. Lownes (2015) A Smartphone-based System for Automated Congestion prediction, *The 27th International Conference on Software Engineering and Knowledge Engineering*, DOI: 10.18293/SEKE2015-183.
39. Bertolaccini, K.; Lownes, N.E.; and S. T. Waller (2015) Equity Modeling for Public Transportation Networks, *Proc. 94th Annual Meeting of the Transportation Research Board*, Paper #15-1173.
38. Bertolaccini, K.; and N.E. Lownes (2015) Using General Transit Feed Specification Data to Measure and Map Transit Accessibility, *Proc. 94th Annual Meeting of the Transportation Research Board*, Paper #15-6045.
37. Rahman A.; and N.E. Lownes (2014) Risk assessment of hazardous materials transportation routes, *Proc. 93rd Annual Meeting of the Transportation Research Board*, Paper #14-3036.
36. Mamun, S.; and N.E. Lownes (2014) Access and connectivity tradeoffs in public transportation systems, *Proc. 93rd Annual Meeting of the Transportation Research Board*, Paper #14-5672.
35. Osei-Asamoah, A.; and N. E. Lownes (2014) Examining the resilience of biomemtic transportation networks, *Proc. 93rd Annual Meeting of the Transportation Research Board*, Paper #14-4426.
34. Islam, S.; Ivan, J.; Lownes, N.E.; Ammar, R.; and S. Rajasekaran (2014) Safety Performance Function for Freeways Considering Interactions between Speed Limit and Geometric Variables, *Proc. 93rd Annual Meeting of the Transportation Research Board*, Paper #14-2933.
33. Doran, D.; Gokhale, S. and N. Lownes (2014) An Analytic Model of Airport Security Checkpoint Screening Times, *Proc. 93rd Annual Meeting of the Transportation Research Board*, Paper #14-0480.
32. Conway, A., Cheng, J., Peters, D., and N.E. Lownes. (2013) Characteristics of Multi-modal Conflicts In Urban On-street Bicycle Lanes. *Proc. 92nd Annual Meeting of the Transportation Research Board*, Paper #13-4545.
31. Bertolaccini, K. and N.E. Lownes. (2013) The Effects of Scale and Resolution in Assessing the Equity of Transit Supply Distribution *Proc. 92nd Annual Meeting of the Transportation Research Board*, Paper #13-5142.
30. Hart, N. and N.E. Lownes. (2013) Exploring Access to Low-income Jobs in the Urban Core. *Proc. 92nd Annual Meeting of the Transportation Research Board*, Paper #13-5046.
29. Conway, A., Thuillier, O., Dornhelm, E. and N.E. Lownes. (2013) Commercial Vehicle-Bicycle Conflicts: A Growing Urban Challenge. *Proc. 92nd Annual Meeting of the Transportation Research Board*, Paper #13-4299.
28. Tolba, S., L. Fiondella, R. Ammar, N. Lownes, S. Rajasekaran, and J. Ivan. (2012) VDPA: A WSN Deployment and Analysis Tool for Road Network Security. *In Proc. of 2012 IEEE International Conference on Technologies for Homeland Security*, pp. 495-500.
27. Liu, J., L. Fiondella, R. Ammar, S. Rajasekaran, N.E. Lownes, and J. Ivan. (2012) Smart Phone Assisted City-scale Wireless Sensor Network Deployment for Transportation System

- Monitoring. *In Proc. of 2012 IEEE International Conference on Technologies for Homeland Security*, pp. 411-416.
26. Fiondella, L., S. Gokhale, N. Lownes, M. Accorsi. (2012) Security and Performance Analysis of Passenger Screening for Mass-transit Systems. *In Proc. of 2012 IEEE International Conference on Technologies for Homeland Security*, pp. 312-318. Best Paper Award, Attack and Disaster Preparation, Recovery and Response Track.
 25. Fiondella, L., A. Rahman, J. Liu, S. N.E. Lownes, Tolba, S. Rajasekaran, R. Ammar, and J. Ivan. (2012) Game Theoretic Vulnerability Analysis for the Optimal Defense of High Speed Rail. *In Proc. of 2012 IEEE International Conference on Technologies for Homeland Security*, pp. 305-311.
 24. Rahman, A., Lownes, N.E., Fiondella, L., Ivan, J.N., Rajasekaran, S., & Ammar, R. (2012) A Game Theory Approach to Identify Alternative Regulatory Frameworks for Hazardous Materials Routing. *In Proc. of 2012 IEEE International Conference on Technologies for Homeland Security*, pp. 489-494.
 23. Osei-Asamoah, A., Bertolaccini, K., Lownes, N. and N. Garrick (2012) Urban Street Design in Ghana: A Case Study of Accra, *Proceedings of the 91st Annual Meeting of the Transportation Research Board*.
 22. Hart, N., Lownes, N. and E. Jackson (2012) Analysis of a Method for Bias Reduction in Electronic Surveys, *Proceedings of the 91st Annual Meeting of the Transportation Research Board*.
 21. Mamun, S. and N. Lownes (2012) Integrating Public Transit Accessibility and Connectivity, *Proceedings of the 91st Annual Meeting of the Transportation Research Board*.
 20. Tolba, S., Ammar, R., Lownes, N.E., Rajasekaran, S., Fiondella, L. (2011) Modeling Attacker-Technology System Interaction in Transportation Networks: P2I3-Model. *Proc. 2011 IEEE International Conference on Technologies for Homeland Security*, pp. 306-312.
 19. Wang, Q., Lownes, N., Ammar, R., Rajasekaran, S., and Fiondella, L. (2011) Integrating equilibrium assignment in game-theoretic approach to measure many-to-many transportation network vulnerability. *Proc. 2011 IEEE International Conference on Technologies for Homeland Security*, pp. 351-357.
 18. Lownes, N., Ammar, R., Rajasekaran, S., Fiondella, L. and Q. Wang (2011) Securing America's Future Transportation Infrastructure: Network Vulnerability and High-Speed Rail. *Journal of Homeland Security, Catastrophes and Complex Systems: Transportation*, April 2011 Issue, <http://www.homelandsecurity.org/ReportList.htm>
 17. Ibrahim, S., Ammar, R., Lownes, N. and Rajasekaran, S. (2011) An Efficient Heuristic for Estimating Transportation Network Vulnerability, *IEEE Proceedings of the 16th Symposium on Computers and Communications*, pp. 1092-1098.
 16. Mamun, S. and Lownes, N.E. (2011) Measuring Service Gaps: An Accessibility-Based Transit Need Index, *Proceedings of the 90th Annual Meeting of the Transportation Research Board*, Washington, DC.
 15. Lownes, N.E., Wang, Q., Ibrahim, S., Ammar, R., Rajasekaran, S. and Sharma, D. A. (2011) Many-to-Many Game Theoretic Approach to Measuring Transportation Network Vulnerability, *Proceedings of the 90th Annual Meeting of the Transportation Research Board*, Washington, DC.
 14. Osei-Asamoah, A., Bolella, G., Lownes, N.E., Johnston, R., Garrick, N. and Jackson, E. (2011) Contingent Valuation of Built Environment Elements Using Personalized Scenarios, *Proceedings of the 90th Annual Meeting of the Transportation Research Board*, Washington, DC.
 13. Rahman, A. and Lownes, N.E. (2011) Rainfall Impacts on Traffic Parameters and Benefits of Implementing Weather Responsive Signal Timing, *Proceedings of the 90th Annual Meeting of the Transportation Research Board*, Washington, DC.

12. Rajasekaran, S., Ammar, R., Sharma, D. and Lownes, N.E. (2010) Efficient Randomized Protocols for Single-Hop Radio Networks, *IACC Proc. International Conference on Parallel Processing 2010*, San Diego, CA.
11. Sharma, D., Rajasekaran, S., Ammar, R., Lownes, N.E. and S. Ibrahim. (2010) Multi-level Sensor Deployment Algorithm for Wireless Sensor Networks, *Proc. 1st International Conference on Advanced Computing and Communication*, September 15-17, Orlando, Florida, 2010.
10. Mamun, S. and Lownes, N.E. (2010) An Aggregated Public Transit Accessibility Measure. *Proceedings of the 51st Annual Transportation Research Forum*, Washington, DC, <http://www.trforum.org/pubs/proceed.php>.
9. Zhou, H., Lownes, N.E., Ivan, J., Ravishankar, N. and Gårder, P. (2010) Gap Acceptance of Elderly Drivers Making Left Turns at Unsignalized Intersections. *Proceedings of the 89th Annual Meeting of the Transportation Research Board*, Washington, DC.
8. Rahman, A. and Lownes, N.E. (2010) Spatially Compatible Rainfall-Speed Analysis. *Proceedings of the 89th Annual Meeting of the Transportation Research Board*, Washington, DC.
7. Yannes, C., Lownes, N.E., Garrick, N. and R. Johnston. (2010) Operationalizing Placemaking in a Choice Experiment Context. *Proceedings of the 89th Annual Meeting of the Transportation Research Board*, Washington, DC.
6. Yannes, C. and Lownes, N.E. (2009) Identifying Interactions in Simulated Driver Behavior Impact on Capacity. *Proceedings of the 88th Annual Meeting of the Transportation Research Board*, Washington, DC.
5. Lownes, N.E. and Machemehl, R.B. (2008) Commuter Rail Circulator Route Design and its Implications for Transit Accessibility. *Proceedings of the 87th Annual Meeting of the Transportation Research Board*, Washington, DC.
4. Fan, W., Machemehl, R.B. and Lownes, N.E. (2008) Carsharing: A Dynamic Vehicle Allocation Decision Making Problem. *Proceedings of the 87th Annual Meeting of the Transportation Research Board*, Washington, DC.
3. Lownes, N.E. and Machemehl, R.B. (2006) VISSIM: A Multi-Parameter Sensitivity Analysis. *IEEE Proceedings of the 2006 Winter Simulation Conference*. Piscataway, New Jersey: Institute of Electrical and Electronics Engineers, pp. 1406 - 1413.
2. Lownes, N.E. and Machemehl, R.B. (2006) Sensitivity of Simulated Capacity to VISSIM Driver Behavior Parameter Modification. *Proceedings of the 85th Annual Meeting of the Transportation Research Board*, Washington, DC, January 2006.
1. Lownes, N.E. and Machemehl, R.B. (2005) Procedure for Evaluating Impact of Transit Signal Priority Implementation on Corridor Person Delay. *Proceedings of the 84th Annual Meeting of the Transportation Research Board*, Washington, DC, January 2005.

REFEREED ARCHIVAL JOURNAL PUBLICATIONS (ACCEPTED AND IN PRESS)

1. Wang, Q. and N.E. Lownes (in press) All links based e-hailing service surcharge mechanism and performance estimation, *Transportation Research Record*.

REFEREED PUBLICATIONS (IN REVIEW & IN PREP)

4. Decker, B. and N. E. Lownes (in review) Emergency Shelter Resource Allocation and Location Analysis, *Natural Hazards Review*.
3. Mamun, S. and Lownes, N.E. (in review) A randomized feature selection algorithm for bus stop location problem, *Transportation Letters*.
2. Enam, A., Konduri, K. and N.E. Lownes (in prep) Exploring the Relationship between Perceived Quality of Service and Frequency of Transit Ridership: Evidence from Metropolitan-North Railroad Customer Satisfaction Survey, *TBD*.
1. Noor, A., Konduri, K. and N.E. Lownes (in review) Market Segmentation of Travel Mode Choice with an Alternative Source of Travel Time Data, *Transportation Research Part A*.

MAJOR FINAL REPORTS

14. Lownes, N., Cohen, J., Islam, A. and D. Larsen (2018) Sustainability Strategies to Minimize the Carbon Footprint for Connecticut Bus Operations, Connecticut Academy of Science and Engineering (CASE), Report No. CT-2304-F-17-9, Hartford, CT, February 2018.
13. Rahman, A. and N. Lownes. (2013) Risk assessment of hazardous transportation routes in the City of New Haven, Final Report, October 2013, CTI Report Number 1-2013.
12. Konduri, K.; Lownes, N.; and J. Angueira (2013) *Analyzing the Economic Impacts of Transportation Projects*. Connecticut Academy of Science and Engineering (CASE), Report No. CT-2279-F-13-13, Hartford, CT, September 2013.
11. Conway, A.; LaMondia, J. and Lownes, N.E.; (2013) *Investigation of Curb Management Strategies to Minimize Freight/Cyclist Conflicts in the Urban Core*, Center for Transportation and Livable Systems (CTLS), Storrs, CT, Report No. CTLS 10-05, August 2013.
10. Osei-Asamoah, A. and Lownes, N.E.; (2013) *A Complex Network Analysis of Surface Transportation Networks*, Center for Transportation and Livable Systems (CTLS), Storrs, CT, Report No. CTLS 10-05, August 2013.
9. Lownes, N.E.; Osleeb, J.; Becker, T.; Denton, C.; Hart, N.; Bertolaccini, K.; Jackson, E. and D-G Shin (2013) *t-HUB: The Public Transport Data Center of Connecticut*, Center for Transportation and Livable Systems (CTLS), Storrs, CT, Report No. CTLS 12-01, September 2013.
8. Lownes, N.E.; Hart, N.; Osleeb, J.; Becker, T.; Denton, C.; Bertolaccini, K.; Mamun, S.; Jackson, E. (2013) *The Connecticut Title VI Workshop: Building a Coordinated Strategy*, Connecticut Transportation Institute, Report No. CTI-1-2013, Storrs, CT, March 2013.
7. Jackson, Eric and Nicholas Lownes. (2012) *Alternative Methods for Safety Analysis and Intervention of Contracting Commercial Vehicles and Drivers in Connecticut*. Connecticut Academy of Science and Engineering (CASE), Report No. CT-2272-F-12-5, Hartford, CT, June 2012.
6. Bertolaccini, K. and Lownes, N. (2012) *Benchmarking Connecticut's Transportation Infrastructure Capital Program with Other States*, Connecticut Academy of Science and Engineering (CASE), Report No. CT-2276-F-12-6, Hartford, CT, October 2012.
5. Lownes, N.E., Johnston, R., Garrick, N., Jackson, E., Bolella, G., Osei-Asamoah, A. (2011) *Public Transit Design for Smart Growth: Using Choice Experiments to Quantify Tradeoffs, Values and Funding Implications*. Center for Transportation and Livable Systems (CTLS), Storrs, CT, Report No. CTLS 08-04-3, March 2011.

4. Lownes, N. and A. Zofka. (2008) *Applying Transportation Asset Management in Connecticut*. Connecticut Academy of Science and Engineering (CASE), Report No. CT-2258-F-08-9, Hartford, CT, 2008. <http://www.ctcase.org/reports/asset_mgmt.pdf>
3. Lownes, N.; Machemehl, R. (2007) *The Commuter Rail Circulator Network Design Problem: Formulation, Solution Methods, and Applications*. Southwest Region University Transportation Center (SWUTC), Report No. SWUTC/07/473700-00077-1, College Station, TX, 2007. <<http://swutc.tamu.edu/publications/technicalreports/473700-00077-1.pdf>>
2. Machemehl, R.; Prozzi, J.; Matthews, R.; Lownes, N.; Baker, R.; DeFries, T.; Ezekoye, O.A.; Hall, M.; Kishan, S.; and H. Wheat. (2005) *Diesel Emissions Testing, Performance, Evaluation, and Operational Assessment: Project Extension to Examine an Ultra-Low Sulfur Diesel Fuel: TxLED*, TxDOT Report No. 0-4576-4, Center for Transportation Research, The University of Texas at Austin, July 2005. <http://www.utexas.edu/research/ctr/pdf_reports/0_4576_4.pdf>
1. Lownes, N.; Machemehl, R.; and R. Harrison. (2005) *Construction Expediting and Work Zone Traffic Control Concepts for Dallas TxDOT District*, TxDOT Research Report IAC 00-0027, Center for Transportation Research, The University of Texas at Austin, May 2005.

RESEARCH GRANTS (SINCE AUGUST 2007)

Total Grant Funding: \$7.1 million

Total Approximate Lownes Share: \$4.9 million

- Principal Investigator: "Center for Advanced Multimodal Mobility Solutions and Education (CAMMSE)", USDOT University Transportation Center (UNC-Charlotte Lead), \$1,045,000.
- Principal Investigator: "Sustainability Strategies for Connecticut's Public Transportation System - Achieving a Zero Carbon Footprint for Bus Operations", Connecticut Academy of Science and Engineering, \$105,182.
- Principal Investigator: "The 2016 UConn National Summer Transportation Institute", Federal Highway Administration, \$20,000.
- Co-Principal Investigator: "The Development and Execution of a Statewide Household Travel Survey", Connecticut Department of Transportation, \$1,543,000.
- Principal Investigator: "Clustering algorithms for transit network design" New England University Transportation Center, \$118,000.
- Principal Investigator: "UConn Transportation Fellowship Program" New England University Transportation Center, \$195,720.
- Principal Investigator: "Title VI and Equity in Public Transportation Workshop: A one-day training workshop" Federal Highway Administration, \$14,535.
- Principal Investigator: "Assessing Service Equity in Connecticut's Large Public Transportation Systems" Connecticut Department of Transportation, \$864,500.
- Principal Investigator: "Storrs Center Intermodal Center Living Laboratory" Town of Mansfield, CT, \$23,250.
- Principal Investigator: "HS-STEM: Transportation Security in Cyber-Physical Systems" Department of Homeland Security, \$400,000.
- Principal Investigator: "NEUTC Education and Outreach" New England University Transportation Center, \$220,301.

-
- Principal Investigator: "t-HUB: Title VI Monitoring and Reporting Workshop", Connecticut Department of Transportation, \$58,410.
 - Co-Principal Investigator: "Economic Impact of Transportation Projects: Assessing the Economic Development Value as a Result of Transportation Projects and Systems" Connecticut Academy of Science and Engineering, with K. Konduri, \$28,460.
 - Co-Principal Investigator: "Transportation System Modeling in the Information Era" New England University Transportation Center, with K. Konduri, \$80,229.
 - Co-Principal Investigator: "Automated Congestion Prediction with Smart Phones" New England University Transportation Center, with S. Gokhale & L. Fiondella, \$107,313.
 - Principal Investigator: "Benchmarking Connecticut's Transportation Infrastructure Capital Program with Other States" Connecticut Academy of Science and Engineering, with E. Jackson, \$31,365.
 - Co-Principal Investigator: "Alternative Methods for Safety Analysis and Intervention of Contracting Vehicles and Drivers in Connecticut." Connecticut Academy of Science and Engineering, with E. Jackson, \$29,554.
 - Principal Investigator: "Investigation of Curb Management Strategies to Minimize Freight/Cyclist Conflicts in the Urban Core." Center for Transportation and Livable Systems, 2011 - 2012, with A. Conway and J. LaMondia, \$101,601.
 - Principal Investigator: "Hypernetwork Generation for Multi-modal Transportation System Modeling." New England University Transportation Center, 2010 - 2012, with S. Rajasekaran, \$70,000.
 - Principal Investigator: "Risk, Resilience and Response Models with Applications to High-speed Rail Transportation Corridors." Department of Homeland Security, 2010 - 2012, with R. Ammar, S. Rajasekaran, and J. Ivan, \$200,000.
 - Principal Investigator: "Center for Transportation and Livable Systems Year Four", U.S. Department of Transportation, 2010 - 2011, \$463,400.
 - Principal Investigator: "Transportation System Sustainability and Adaptation with *Physarum Polycephalum*", Center for Transportation and Livable Systems, 2010 - 2011, \$70,499.
 - Principal Investigator: "The Influence of Real-time Rural Transit Tracking on Traveler Perception", New England University Transportation Center, 2009-2011, with A. Zofka, \$66,577.
 - Principal Investigator: "Public Transit Design for Smart Growth: Using Choice Experiments to Quantify Tradeoffs, Values and Funding Implications Year 2", Center for Transportation and Urban Planning, 2009 - 2010, with N. Garrick, E. Jackson and R. Johnston, \$115,464.
 - Co-Principal Investigator: "Sensor Deployment for Real-Time Monitoring of Transportation Vulnerability", University of Connecticut Transportation Security Center of Excellence, 2009 - 2010, with R. Ammar and S. Rajasekaran, \$100,000.
 - Principal Investigator: "Design and Feasibility Study: Connecticut Transportation Planning Data Phase II", Connecticut Department of Transportation, 2009 - 2010, with E. Jackson, \$63,003.
 - Co-Principal Investigator: "Case Studies of the Access and Mobility Impact of Freeway Removal", New England University Transportation Center, 2009-2010, with N. Garrick, \$97,950.

- Principal Investigator: "Driver Response to Adverse Weather: Impacts on Time Headway", University of Connecticut Research Foundation, 2009, \$17,851.
- Principal Investigator: "Public Transit Design for Smart Growth: Using Choice Experiments to Quantify Tradeoffs, Values and Funding Implications", Center for Transportation and Urban Planning, 2008 - 2009, with N. Garrick, E. Jackson and R. Johnston, \$93,000.
- Co-Principal Investigator: "Assessing the impact of Light Rail Transit on land values and tax revenues Year 2", Center for Transportation and Urban Planning, 2009 - 2010, with C. Atkinson-Palombo, R. Cromley and J. Clapp, \$60,000.
- Co-Principal Investigator: "Assessing the impact of Light Rail Transit on land values and tax revenues", Center for Transportation and Urban Planning, 2008 - 2009, with C. Atkinson-Palombo, R. Cromley and J. Clapp, \$90,000.
- Principal Investigator: "Assessing and Quantifying Public Transportation Access", Connecticut Cooperative Highway Research Program, 2008 - 2010, \$81,095.
- Principal Investigator: "Connecticut Transportation Asset Management and Life-Cycle Cost Analysis", Connecticut Academy of Science and Engineering, 2007 - 2008, with A. Zofka, \$19,000.

OTHER GRANTS (SINCE AUGUST 2007)

- Principal Investigator: "Advanced Technologies for Sustainable Transportation: An Interdisciplinary Colloquium", FY 2013 Interdisciplinary Seminar Series, University of Connecticut, Office of the Vice President for research, 2012, \$2,000.
- Principal Investigator: "Australian Experiences in Promoting Sustainable Transportation Systems", Faculty Development Abroad Grant Competition, University of Connecticut, Office of the Provost, 2011, \$4,000.
- Principal Investigator: "Innovative Recruitment Initiatives at UConn", University of Connecticut Graduate School, 2008 - 2010, \$8,750 with N. Garrick, J. Ivan, A. Zofka and C. Atkinson-Palombo.

GRADUATE DEGREE SUPERVISIONS

- 15 COMPLETED MS [12 PLAN A, 3 PLAN B]
 - 3 COMPLETED PHD
 - 1 MS & 5 PHD IN PROGRESS
-

Bertolaccini, Kelly, "Assessing the equity of transit supply distribution in metropolitan areas using Lorenz curves and Gini coefficients", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, August 2013.

Bertolaccini, Kelly, "Designing Transit Networks for Equity and Accessibility", Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, December 2015.

Bolella, Garrett, "Contingent Valuation of Aspects of Public Transit - Land Use Interaction", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, May 2011.

Decker, Brett, "Emergency Shelter Resource Allocation and Location Analysis", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, May 2016.

- Hart, Nicholas, "Environmental Justice Impacts of Electronic Travel Surveys and Transit Accessibility", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, May 2012.
- Islam, Adrita, "Minimization of Carbon Footprint of Transit Agencies by Adopting Alternative Fuel Technologies", Master of Science in Engineering, University of Connecticut, May 2018.
- Kahrobaei, Sina, "Spatial and Temporal Measures of Mismatch between Transit Supply and Employment for Low Income and Auto Dependent Populations", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, August 2015.
- Kowalczyk, Michael, "Master's Project: Extending the Transit Opportunity Index to Consider Origin-Destination Travel Demand", Master of Science in Engineering (Plan B), University of Connecticut, Storrs, Connecticut, May 2016.
- Krar, Andrew, "Master's Project: Gasoline Prices and Mass Transit Ridership", Master of Science in Engineering (Plan B), University of Connecticut, Storrs, Connecticut, May 2009.
- Mamun, Sha, "Multi-objective Approaches in Transit Stop Location Problem", Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, January 2014.
- Mamun, Sha, "Quantifying Transit Accessibility and Need", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, May 2011.
- Mantri, Sruthi, Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, anticipated August 2022.
- Noor, Albab, "Market Segmentation of Travel Mode Choice with an Alternative Source of Travel Time Data", Master of Science in Engineering, University of Connecticut, May 2018.
- Osei-Asamoah, Abigail, "Characterizing Surface Transportation Network Structure and Resilience", Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, May 2014.
- Rahman, Ashrafur, "Weather Impacts on Traffic Parameters and Signal Timing Performance", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, December 2010.
- Rahman, Ashrafur, "Two-stage stochastic models of emergency shelter planning", Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, anticipated August 2020.
- Rezwana, Saki, Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, anticipated May 2022.
- Smith, Robert, Master of Science in Engineering, University of Connecticut, Anticipated May 2020.
- Tanvir, Asadul, Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, anticipated May 2021.
- Wang, Qixing "Equilibrium-based Transportation Network Vulnerability", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, December 2011.
- Wang, Qixing "Network effects of e-hailing pricing policy", Doctor of Philosophy, University of Connecticut, Storrs, Connecticut, Anticipated August 2019.
- Wong, Eric, "Modern Roundabouts in Connecticut: An Evaluation of Real World Operation versus Common Macroscopic and Microscopic Models", Master of Science in Engineering (Plan B), University of Connecticut, Storrs, Connecticut, December 2010.
- Yannes, Craig, "Quantifying the Public Value of Transit", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, May 2009.
- Zygo, Angelika, "Measuring and Improving Seniors' Access to Medical Facilities", Master of Science in Engineering, University of Connecticut, Storrs, Connecticut, May 2017.

HONORS AND AWARDS

- TRB Blue Ribbon Committee Award (AP025), 2018
- UTC Term Professor in Engineering Innovation, 2016 - 2019
- Provost's Award for Excellence in Public Engagement, 2013
- UConn School of Engineering Outstanding Faculty Advisor, 2012
- UConn Castleman Term Professor in Engineering Innovation, 2012 - 2015
- Provost's Faculty Development Abroad Grant Competition Winner, 2011
- University of Connecticut C.R. Klewin, Inc. Excellence in Teaching Award, 2009
- William J. Harris SWUTC Outstanding Ph.D. Student of the Year, 2007
- Talbot S. Huff, Sr. Highway Engineering Graduate Fellowship, 2006
- Eno Transportation Fellow, 2006
- Dwight David Eisenhower Graduate Fellowship, 2005
- Featured Advisor for UConn's *The Currents*, March 2010.
- Nominated for UConn Outstanding Undergraduate Student Advisement and Advocacy Award, 2009
- ITE District 9 (TexITE) Student Paper of the Year, 2004
- University of Texas Advanced Institute Fellowship, 2003-2007
- Iowa State University Pak-Liu Fung Scholarship, 2000
- Chi Epsilon, inducted 2000
- Tau Beta Pi, inducted 1999

TEACHING ACTIVITIES

Undergraduate Teaching

CE 4210: *Operations Research for Civil and Environmental Engineers*
Spring 2013 (enrollment = 51), Spring 2016 (71), Spring 2017 (44), Spring 2018 (48), Spring 2019 (58).

CE 2710: *Transportation Engineering*, Spring 2012 (60), 2015 (98)

CE 2211: *Engineering Economics*, Spring 2018 (68)

CE 2210/ENVE 2330: *Decision Analysis in Civil & Environmental Engineering*
Fall Semester 2007 (enrollment = 95), 2008 (74), 2009 (78), 2010 (91)

GE 208L: *Supplementary Instruction for Physics 303L*: UT-Austin, Spring 2007

GE 208L: *Supplementary Instruction for Physics 303L*: UT-Austin, Fall 2006

Graduate Teaching

CE 6735: *Transportation Network Analysis*: Spring 2008, 2011, Fall 2013, 2015

CE 5735: *Public Transportation Systems*: Spring 2010, 2012, Fall 2014, 2016, 2018

CE 6740: *Traffic Engineering Operations*: Spring 2009

REFEREE SERVICES

Archival Journals

- Accident Analysis and Prevention: 2013(1)
- Computer-Aided Civil and Infrastructure Engineering: 2014 (1), 2011 (1), 2010 (1)
- HKIE Transactions: 2009 (1)
- IEEE Transactions on Intelligent Transportation Systems: 2016(1), 2012(1), 2011 (1), 2009 (2), 2008 (1)
- Int. J. of Society Systems Science: 2010 (1), 2009 (2)
- International Journal of Mass Emergencies and Disasters: 2012(1)
- Journal of Advances in Transportation Studies: 2010 (1)
- Journal of Public Transportation: 2016(7)
- Journal of the Transportation Research Forum (JTRF): 2007 (1), 2006 (4), 2005 (2)
- Journal of Transport and Land Use: 2010 (2)
- Journal of Transportation Engineering: 2013 (1), 2012(1), 2011(1), 2010 (1), 2009 (2)
- Journal of Transportation Geography: 2015(1)
- Natural Hazards Review: 2013(1)
- Transportation Research Part A: 2013 (1)
- Transportation Research Part E: 2010 (1)
- Transportation Research Record: 2018 (AP025 coordinator), 2017(AP025 coordinator), 2016 (6), 2015(9), 2014(7), 2013 (6), 2012 (8), 2011 (4), 2010 (5), 2009 (4), 2008 (3), 2006 (1), 2005 (2)
- Transportation Science: 2013 (1), 2009 (1)
- Transportation: 2013 (1)

Proposals

- Proposal Reviewer for Israel Science Foundation: 2011, 2013
- Proposal Reviewer for University of Vermont TRC: 2011(3)
- Proposal Reviewer for Transportation Northwest (TransNow): 2009
- Proposal Reviewer for University of Massachusetts - Amherst UTC: 2010, 2008

Other

- Innovations in Travel Demand Forecasting: 2014
- PhD Thesis Examiner, University of New South Wales: 2013, 2018
- 2010 Highway Capacity Manual, 2009 (2 chapters)
- American Society for Engineering Education: 2009 (2)

SERVICE

Leadership

- Chair, ASCE *Public Transportation Committee*, October 2018 - present
- Paper Review Coordinator, *TRB AP025*, 2017 - present

- Organizer, *Innovations in Public Transportation Planning and Modeling Utilizing General Transit Feed* webinar, National Academy of Science, TRB, April 2016.
- Co-organizer, *Analyze This! Workshop @ 2016 TRB*, January 2016
- Group Leader, *Transportation and Urban Engineering Program*, 2015 - 2016
- Appointee, *Connecticut Public Transportation Commission*, 2014 - 2016
- Organizing Committee, *New England Transportation Workforce Development Summit*, 2013
- Cluster Chair, *Transportation Science and Logistics (TS&L)*, INFORMS 2013-2014.
- Women's Transportation Seminar, CT Chapter, Advisory Board Member: 2012 - 2017
- Co-organizer of 2012 NEITE Student Symposium: Storrs, CT - April 12, 2012.
- Associate Editor *Journal of Transport and Land Use*, 2011, WSTLUR Call.
- Co-organizer of 2010 NEITE Student Symposium: Storrs, CT - April 7, 2010.
- Session Organizer & Chair, INFORMS, 2008 - Present.
- Editorial Board of *International Journal of Society Systems Science*, 2008 - Present
- UConn ITE Student Chapter Advisor, 2008 - 2013
- UConn Chi Epsilon Chapter Advisor, 2008 - 2017
- ITS-CT Board of Directors, 2007 - 2013
- UT Austin Chapter of the Intelligent Transportation Society (ITS), President, 2006
- UT Austin Student Chapter ITS, Vice President, 2005
- UT Austin Chapter of the Institute of Transportation Engineers (ITE), Secretary, 2004
- Triangle Development Non-Auto Travel Study, CE 392M - Public Transportation, Project Coordinator, Spring 2004
- Chi Epsilon Iowa State Chapter, President Fall 2000
- Chi Epsilon Iowa State Chapter, Vice President Spring 2000
- Iowa State University Transportation Student Association (TSA), Vice President Fall 2000
- Transportation Student Association (TSA), Treasurer, Spring 2000

Professional Committees

- ASCE *Public Transportation Committee*
- Member of TRB *Public Transportation Planning and Development Committee AP025* (Appointed November 2014)
- Friend of TRB *Traffic Simulations Applications Subcommittee AHB40(1.2)*
- Member of TRB *Transit, Freight and Logistics Modeling Subcommittee ADB30(1)*
- Friend of TRB *Bicycle Committee ANF20*
- Friend of TRB *Pedestrian Committee ANF10*
- Friend of TRB *Transportation Network Modeling Committee ADB30*

Outreach

- National Summer Transportation Institute, *Director*, Summer 2016
- Transportation Undergraduate Research Fellowship (TURF) supervisor, summer 2011, 2012, 2013, 2014, 2015, 2016
- Engineering 1000 Lecturer, Fall 2008, Fall 2009, Fall 2016, Spring 2017
- Workshop for underrepresented incoming freshmen in *BRIDGE* program, summer 2009

- Workshop for high school students in *Explore Engineering*, summer 2009, 2013, 2017

UConn Committees

- UConn Graduate Faculty Council, 2017 - 2018
- SoE Courses and Curriculum, 2016 - 2019
- CEE CE&M Search Committee, 2016 - 2017 (Chair)
- CEE Courses and Curriculum Committee, 2015 - 2016, 2016 - 2017 (Chair), 2018 - 2019 (ex officio)
- CEE Merit and Equity Review Committee, 2014 - 2015
- CEE Promotion, Tenure and Reappointment Committee, 2014 - 2018
- School of Engineering Outstanding Service Award Committee, 2014
- School of Engineering General Council, 2012 - 2013
- School of Engineering Committee to expand Master in Engineering Program, 2014
- School of Engineering Committee to develop Undergraduate Program in Systems Engr., 2014
- CEE Department Head Advisory Council, 2009-2012, 2014-2017
- CEE TSP&L Search Committee 2011 - 2012 (Chair)
- CEE WRMCC Search Committee 2012 -2013
- CEE Undergraduate Advising Committee, 2011-2012
- CEE Website Committee, 2007-2008; 2009-2012; 2016 - 2017
- CEE Undergraduate Curriculum Committee, 2008-2010
- CEE Seminar Committee, 2009-2010
- CEE Computing Committee, 2007-2008

Other Committees

- Dean's Student Advisory Council, (DSAC), Graduate Student Assembly, The University of Texas, 2006-2007.

PRESENTATIONS & CONFERENCE PARTICIPATION

98. *Session Chair*, Big Data and Analytics for Rail and Public Transit, ASCE International Conference on Transportation and Development, June 11, 2019.
97. Smith, R. and N.E. Lownes (2019) A Method for Assessing Transit Access of Specific Populations to Basic Services Utilizing the Transit Opportunity Index, *ASCE International Conference on Transportation and Development*, June 10, 2019.
96. Zhang, B. and N.E. Lownes (2019) Impacts of accessibility to public transportation on residential property values in Connecticut, *ASCE International Conference on Transportation and Development*, June 10, 2019.
95. Smith, R., Bertolaccini, K and N.E. Lownes (2019) Scoring Public Housing Locations: Using Developer Data to Measure Transit Access to Basic Services, ITE Northeastern District Annual Meeting, May 10, 2019.
94. Wang, Q., Miao, F., Wu, J., Niu, Y., Wang, C. and N.E. Lownes (accepted) Dynamic Pricing for Autonomous Vehicle E-hailing Services Reliability and Performance Improvement,

- Proceedings of the 2019 IEEE 15th International Conference on Automation Science and Engineering, Vancouver, B.C., Paper #547.*
93. Islam, A. and N.E. Lownes (2019) GLC3: An Open Source Tool for Aiding the Minimization of Carbon Footprint of Transit Agencies, *Proceedings of the 98th Annual Meeting of the Transportation Research Board*, Paper #19-05534.
 92. Wang, Q. and N.E. Lownes (2019) All links based e-hailing service surcharge mechanism and performance estimation, *Proceedings of the 98th Annual Meeting of the Transportation Research Board*, Paper #19-05835.
 91. Rahman, A. and N.E. Lownes (2018) Two-Stage Hurricane Shelter Location Model with Stochastic Demand and Capacity, *Proceedings of the 97th Annual Meeting of the Transportation Research Board*, Paper 18-05287.
 90. Konduri, K., Enam, A., Ritter, C., Lownes, N. and J. Raymond (2017) Exploring the Implications of Item Non Response Treatment on Survey Expansion and Weighting: Experience from the Connecticut Statewide Transportation Study, *96th Annual Meeting of the Transportation Research Board*.
 89. Bertolaccini, K. and N. Lownes (2017) Developing and Solving an Equitable Transit Network Design Model with a Genetic Algorithm Solution Approach, *96th Annual Meeting of the Transportation Research Board*.
 88. Lownes, N.E. and K. Bertolaccini (2016) Transit Planning Web Application Development Using GTFS, *Innovations in Public Transportation Planning and Modeling Utilizing General Transit Feed Specification (GTFS) Webinar*, The National Academies, TRB, May 12, 2016. <http://www.trb.org/ElectronicSessions/Blurbs/174385.aspx>
 87. Bertolaccini, K. and Lownes, N.E. (2016), Optimizing Transit Networks for Equity, *95th Annual Meeting of the Transportation Research Board*.
 86. Bertolaccini, K. and Lownes, N.E. (2015), Optimizing Transit Networks for Equity, *INFORMS Annual meeting*, November 1, 2015.
 85. Decker, B. and Lownes, N.E. (2015), Hierarchical Emergency Shelter Location Optimization, *INFORMS Annual meeting*, November 2, 2015.
 86. "Integrated public transportation system measurement and analysis", Invited seminar, University of Nebraska-Lincoln, April 9, 2015.
 84. "UCONN Transportation", Invited presentation, *CT-ITE/APA Joint Annual Spring Meeting*, Manchester Country Club, April 8, 2015.
 83. "A Public Transportation System Performance Measurement Web Application", Region 2 UTC Transportation Technology Symposium, New York, NY, November 19, 2014
 82. "UCONN Transportation", Invited presentation, *Connecticut Public Transportation Commission*, Hartford Legislative Office Building, September 4, 2014.
 81. "Leveraging open data for measuring and optimizing equity and efficiency in public transportation systems", Invited seminar, *Bruce Podwal Seminar Series*, The City College of New York, April 8, 2014.
 80. "Leveraging open data for measuring and optimizing equity and efficiency in public transportation systems", Invited Seminar, Network Modeling Center, The University of Texas at Austin, February 14, 2014.
 79. "Future Cites and Transportation Research at UConn", Invited Panelist, UK-US Future Cities Knowledge Exchange Project: New York City, February 6, 2014.
 78. "Preparation for a public speaking event", Invited Seminar, UConn CEE Graduate Student Association, Storrs, CT, November 1, 2013.
 77. "Interactive Web-Based Mapping for Title VI Analysis and Public Transit System Data Management", GIS in Transit Conference, Washington, DC, October 16, 2013.

76. *Session Chair*, Public Transit System Routing and Assignment, INFORMS Annual Conference, Minneapolis, MN, October 6, 2013.
75. Osei-Asamoah, A., and Lownes, N. E., A Complex Network Analysis of Resiliency in Surface Transportation Networks, Presented at INFORMS Annual Meeting, Minneapolis, MN, October 7, 2013.
74. Rahman, A., and Lownes, N. E., A Minimum Risk Equitable Hazardous Materials Flow Model, Presented at INFORMS Annual Meeting, Minneapolis, MN, October 7, 2013.
73. Bertolaccini, K., and Lownes, N. E., Incorporating Equity Concerns into Vehicle Routing Problem for Bus Route Design, Presented at INFORMS Annual Meeting, Minneapolis, MN, October 8, 2013.
72. Mamun, S. and Lownes, N. E. A Tabu Search-based Heuristic Method for a Multi-objective Bus Stop Location Problem, Presented at INFORMS Annual Meeting, Minneapolis, MN, October 6, 2013.
71. Doran, D., Gokhale, S. and Lownes, N. E, Flexible, Analytical Modeling of Airport Security Checkpoints, Presented at INFORMS Annual Meeting, Minneapolis, MN, October 8, 2013.
70. "Leveraging big data for equity and efficiency in public transportation systems", Invited Lecture, University of New South Wales Transportation Seminar Series, Sydney, Australia, June 3, 2013.
69. "Leveraging big data for equity and efficiency in public transportation systems", Invited Lecture, Monash University Transportation Seminar Series, Melbourne, Australia, May 31, 2013.
68. "Leveraging big data for equity and efficiency in public transportation systems", Invited Lecture, University of Queensland Transportation Seminar Series, Brisbane, Australia, May 30, 2013.
67. Conway, A., Thuillier, O., Dornhelm, E. and N.E. Lownes. "Commercial Vehicle-Bicycle Conflicts: A Growing Urban Challenge." *92nd Annual Meeting of the Transportation Research Board.*
66. Conway, A., Cheng, J., Peters, D., and N.E. Lownes. "Characteristics of Multi-modal Conflicts In Urban On-street Bicycle Lanes." *92nd Annual Meeting of the Transportation Research Board.*
65. Bertolaccini, K. and N.E. Lownes. "The Effects of Scale and Resolution in Assessing the Equity of Transit Supply Distribution" *92nd Annual Meeting of the Transportation Research Board.*
64. Hart, N. and N.E. Lownes. "Exploring Access to Low-income Jobs in the Urban Core. *Proc. 92nd Annual Meeting of the Transportation Research Board.*"
63. *Session Chair*, INFORMS Annual Conference, Phoenix, AZ, October 15, 2012.
62. Mamun, S. A., Lownes, N. E., Spatial and Temporal Tradeoffs in Transit Stop Location Problems, Presented at INFORMS Annual Meeting, Phoenix, AZ, October 15, 2012.
61. Osei-Asamoah, A., Bertolaccini, K., Lownes, N. and N. Garrick. "Urban Street Design in Ghana: A Case Study of Accra", *91st Meeting of the Transportation Research Board.*
60. Hart, N., Lownes, N. and E. Jackson. "Analysis of a Method for Bias Reduction in Electronic Surveys", *91st Meeting of the Transportation Research Board.*
59. Mamun, S. and N. Lownes. "Integrating Public Transit Accessibility and Connectivity, *91st Meeting of the Transportation Research Board.*
58. *Session Chair*, INFORMS Annual Conference, Charlotte, NC, November 14, 2011.
57. Mamun, S. and Lownes, N.E. "A Combined Optimization Problem for Public Transit Stop Locations and Service Coverage." INFORMS Annual Conference, Charlotte, NC, November 14, 2011.

56. Tolba, S., Ammar, R., Lownes, N.E., Rajasekaran, S., Fiondella, L. "Modeling Attacker-Technology System Interaction in Transportation Networks: P2I3-Model." *2011 IEEE International Conference on Technologies for Homeland Security*, November 16, 2011.
55. Wang, Q., Lownes, N., Ammar, R., Rajasekaran, S., and Fiondella, L. "Game-theoretic Approach to Measure Many-to-Many Transportation Network Vulnerability." *2011 IEEE International Conference on Technologies for Homeland Security*, November 16, 2011.
54. "National and International Case Studies on Livability" TRANSPLEX 2011, October 2011.
53. *Moderator*, World Symposium on Transport and Land Use Research, Whistler, BC, July 29, 2011.
52. "Contingent Valuation of New Transit Service and Community Design", Invited Lecture, GeoSeminar, UConn Department of Geography, April 22, 2011.
51. "Network Vulnerability and High-Speed Rail", Fifth Annual Department of Homeland Security University Network Summit, April 1, 2011.
50. Al Mamun, S. and Lownes, N.E. "Measuring Service Gaps: An Accessibility-Based Transit Need Index," The 90th Annual Meeting of the Transportation Research Board, Washington, DC, January 2011.
49. Lownes, N.E., Wang, Q., Ibrahim, S., Ammar, R., Rajasekaran, S. and Sharma, D. A. "Many-to-Many Game Theoretic Approach to Measuring Transportation Network Vulnerability," The 90th Annual Meeting of the Transportation Research Board, Washington, DC, January 2011.
48. Osei-Asamoah, A., Bolella, G., Lownes, N.E., Johnston, R., Garrick, N. and Jackson, E. "Contingent Valuation of Built Environment Elements Using Personalized Scenarios," The 90th Annual Meeting of the Transportation Research Board, Washington, DC, January 2011.
47. Rahman, A. and Lownes, N.E. "Rainfall Impacts on Traffic Parameters and Benefits of Implementing Weather Responsive Signal Timing," The 90th Annual Meeting of the Transportation Research Board, Washington, DC, January 2011.
46. *Session Chair*, "Public Transit I: Transit Network Design, Assignment and Access", INFORMS Annual Conference, Austin, TX, November 8, 2010.
45. *Session Chair*, "Joint Session TSL/SPPSN: Risk and Recovery of Transportation Networks to Disaster", INFORMS Annual Conference, Austin, TX, November 10, 2010.
44. Al Mamun, S. and Lownes, N.E. "Optimization of Public Transit Stop Locations and Demand Coverage ." INFORMS Annual Conference, Austin, TX, November 8, 2010.
43. Wang, Q. and Lownes, N.E. "Many-to-many Transportation Network Risk Assessment.", INFORMS Annual Conference, Austin, TX, November 10, 2010.
42. "Transportation Network Risk Modeling" *The First Franco-American Symposium on Linear Infrastructures Security*, Troyes, France, November 4, 2010.
41. Osei-Asamoah, A., Bolella, G. and Lownes, N.E. "Value of Transit: Paying for Placemaking", *Transportation for Livable Communities: Charting a Research Agenda*, Washington DC, October 18, 2010.
40. Rahman, A. and Lownes, N.E. "The Impacts of Precipitation on Time Headway and Following Distance." The ITE District 1 Annual Meeting, Portland, ME, May 2010.
39. Al Mamun, S. and Lownes, N.E. "A Composite Public Transit Accessibility Measure." The ITE District 1 Annual Meeting, Portland, ME, May 2010.

38. "Transportation Research: UConn's Role in a National Challenge", Invited Address, ITE-CT Spring Meeting, April 7, 2010.
37. Sharma, D., Rajasekaran, R., Ammar, R. and Lownes, N.E. "Estimating Transportation Network Vulnerability Using a Graph Theory Model." The 6th Annual New England ITE Student Research Symposium, Storrs, CT, April 2010.
36. Ibrahim, S., Ammar, R., Lownes, N.E. and Rajasekaran, R. "Estimating Transportation Network Vulnerability Using a Graph Theory Model." The 6th Annual New England ITE Student Research Symposium, Storrs, CT, April 2010.
35. Rahman, A. and Lownes, N.E. "The Impacts of Precipitation on Time Headway and Following Distance." The 6th Annual New England ITE Student Research Symposium, Storrs, CT, April 2010.
34. Al Mamun, S. and Lownes, N.E. "A Composite Public Transit Accessibility Measure ." The 6th Annual New England ITE Student Research Symposium, Storrs, CT, April 2010.
33. Al Mamun, S. and Lownes, N.E. "An Aggregated Public Transit Accessibility Measure ." The 51st Annual Transportation Research Forum, Washington, DC, March 2010.
32. Zhou, H., Lownes, N.E., Ivan, J., Ravishankar, N. and Gårder, P. "Gap Acceptance of Elderly Drivers Making Left Turns at Unsignalized Intersections." The 89th Annual Meeting of the Transportation Research Board, Washington, DC, January 2010.
31. Rahman, A. and Lownes, N.E. "Spatially Compatible Rainfall-Speed Analysis." The 89th Annual Meeting of the Transportation Research Board, Washington, DC, January 2010.
30. Yannes, C., Lownes, N.E., Garrick, N. and R. Johnston. "Operationalizing Placemkaing in a Choice Experiment Context." The 89th Annual Meeting of the Transportation Research Board, Washington, DC, January 2010.
29. Transportation Seminar, "Social Considerations in Public Transit Network Design", University of Connecticut, Storrs, CT, October 26, 2009.
28. "The Social Accessibility of Transit Network Design", INFORMS Annual Conference, San Diego, CA, October 11, 2009.
27. *Session Chair*, "Public Transit II: Equity, Availability and Assignment", INFORMS Annual Conference, San Diego, CA, October 11, 2009.
26. "Transportation design for Safety and Sustainability", Engineering 1000 Lecture, University of Connecticut, September 25, 2009.
25. "Public Transportation ITS", Invited Talk, Psychology 3601W - Human Factors in Design, Storrs, CT, April 7, 2009.
24. "MUTCD Update". New England ITE & Connecticut ITE Joint Annual Meeting, Manchester, CT, March 24, 2009.
23. Yannes, C. and Lownes, N.E. "Identifying Interactions in Simulated Driver Behavior Impact on Capacity". 5th Annual New England ITE Student Research Symposium, Lowell, MA, February 20, 2009.
22. Yannes, C. and Lownes, N.E. "Identifying Interactions in Simulated Driver Behavior Impact on Capacity". The 88th Annual Meeting of the Transportation Research Board, Washington, DC, January 2009.
21. "Transportation design for Safety and Sustainability", Engineering 1000 Lecture, University of Connecticut, November 21, 2008.

20. "Measuring Rural Transit Availability", 18th National Conference on Rural Public and Intercity Bus Transportation, Omaha, NE, October 21, 2008.
19. *Session Chair*, "Public Transit II", INFORMS Annual Conference, Washington, D.C., October 13, 2008.
18. Lownes, N.E. and Fan, W. "Connecting a Fixed Guideway System to the Network", INFORMS Annual Conference, Washington, D.C., October 13, 2008.
17. *Moderator*, "Developments in Road Pricing and Toll Technology", Intelligent Transportation Society of Connecticut, Berlin, CT, May 22, 2008.
16. Lownes, N.E.. "Performance of Exact and Heuristic Methods for Public Transit Circulator Design." INFORMS Southwest Regional Conference, College Station, TX, April 18, 2008.
15. Lownes, N.E. and Machemehl, R.B. "Commuter Rail Circulator Route Design and its Implications for Transit Accessibility." The 87th annual meeting of the Transportation Research Board, Washington, D.C., January, 2008.
14. Fan, W., Machemehl, R.B. and Lownes, N.E. "Carsharing: A Dynamic Vehicle Allocation Decision Making Problem." The 87th annual meeting of the Transportation Research Board, Washington, D.C., January, 2008.
13. "Tenure Track: The First 100 Days", The University of Texas Student ITS Chapter, Austin, TX, December 13, 2007.
12. Invited Seminar, "The Commuter Rail Circulator Network Design Problem: Formulation, Solution Methods, and Applications", SWUTC Research Program Showcase, College Station, TX, December 11, 2007.
11. Fan, W., Machemehl, R.B. and Lownes, N.E. "Carsharing: A Dynamic Vehicle Allocation Decision Making Problem." 2007 INFORMS Annual Meeting, Seattle, WA, October 2007.
10. Fan, W., Machemehl, R.B. and Lownes, N.E. "How Warm is the Warm Start? Some Computational Insights on the Optimal Bus Transit Route Network Design Problem." 2007 INFORMS Annual Meeting, Seattle, WA, October 2007.
9. Transportation Seminar, "Transportation Networks - Mathematics in Motion", University of Connecticut, Storrs, CT, October 15, 2007.
8. Invited Seminar, "The Commuter Rail Circulator Network Design Problem", University of Connecticut, Storrs, CT, June 6, 2007.
7. Invited Seminar, "The Commuter Rail Circulator Network Design Problem", The University of Massachusetts Amherst, Amherst, MA, March 30, 2007.
6. *Session Chair*, "Rail Simulation", 2006 Winter Simulation Conference, Monterey, CA, December 4, 2006.
5. Lownes, N.E. and Machemehl, R.B. "VISSIM: A Multi-Parameter Sensitivity Analysis", 2006 Winter Simulation Conference, Monterey, CA, December 4, 2006.
4. Lownes, N.E. and Machemehl, R.B. "Sensitivity of Simulated Capacity to VISSIM Driver Behavior Parameter Modification", Center for Transportation Research Symposium 2006, Austin, TX, April, 2006.
3. Lownes, N.E. and Machemehl, R.B. "Sensitivity of Simulated Capacity to VISSIM Driver Behavior Parameter Modification", The Institute of Transportation Engineers 2006 Technical Conference and Exhibit, San Antonio, TX, March, 2006.

-
2. Lownes, N.E. and Machemehl, R.B. "Sensitivity of Simulated Capacity to VISSIM Driver Behavior Parameter Modification", *The 85th annual meeting of the Transportation Research Board*, Washington, D.C., January, 2006.
 1. Lownes, N.E. and Machemehl, R.B. "Procedure for Evaluating Impact of Transit Signal Priority Implementation on Corridor Person Delay", *The 84th annual meeting of the Transportation Research Board*, Washington, D.C., January, 2005.

AFFILIATIONS

- Institute of Transportation Engineers (ITE), 1999 - present
- American Society of Civil Engineers (ASCE), 1999 - present
- Transportation Research Board (TRB), 2004 - present
- Intelligent Transportation Society of America (ITS-A), 2004 - 2013
- American Society for Engineering Education (ASEE), 2007 - 2013
- Institute for Operations Research and the Management Sciences (INFORMS), 2008 - present
- Engineers Without Borders (EWB), 2012