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EDUCATION

Ph.D. in Civil Engineering (Transportation), 2004, University of Massachusetts – Amherst
M.S. in Civil Engineering (Transportation), 2002, University of Massachusetts – Amherst
B.S in Civil & Environmental Engineering, 1999, University of Massachusetts – Dartmouth

ACADEMIC APPOINTMENTS

University of Massachusetts – Amherst. Amherst, MA, 01003

Associate Dean for Research & Graduate Affairs, College of Engineering, 2021-present
Professor, Department of Civil & Environmental Engineering, 2018-present
Associate Professor, Department of Civil and Environmental Engineering, 2011-2018.
Assistant Professor, Department of Civil and Environmental Engineering, 2005 to 2011.
Director, UMass Transportation Center, 2014-present.
Director, University of Massachusetts Traffic Safety Research Program (UMassSafe), 2006-2018
Co-Director, Arbella Insurance Human Performance Laboratory, 2005-present

ACADEMIC AWARDS AND ACHIEVEMENTS

- ADVANCE Faculty Peer Mentor Award, College of Engineering, 2021
- James L. Tighe Distinguished Teaching Award, 2011 & 2019
- New England ITE – Transportation Engineer of the Year, 2017
- Outstanding Research Award, Civil & Environmental, UMass-Amherst, 2015
- College of Engineering – Outstanding Teacher Award, 2013
- Team-Based Learning Fellow, UMass-Amherst, 2011-2012
- Harvey B. Boutwell Award, Northeastern District of ITE, 2011
- William P. McNamara Distinguished Service Award, New England ITE, 2010
- UMass ASCE – Teacher of the Year, 2010, 2015, 2018
- New England ITE Service Award, 2009
- Civil & Environmental Engineering Advisory Council Faculty Service Award, 2006
- Young Engineer of the Year Award, New England ITE, 2005
- Nominated for the University Distinguished Teaching Award (4 times)
- University Transportation Center Fellowship, 2001
- Thomas Desjardins Memorial Scholarship, New England ITE, 2000
- Eno Foundation, Leadership Development Conference Fellow, 2000
- Foster Award, Outstanding Civil & Environmental Engineering Student, University of Massachusetts – Dartmouth, 1999

PROFESSIONAL REGISTRATION

Engineer-in-Training in Massachusetts, No. 18602

SELECTED SPONSORED RESEARCH

As Principal Investigator or Co-PI (Awarded, Active or Completed)

(from more than \$36 million as PI and \$3 million as Co-PI)

1. Knodler, M. and R. Riessman (2021) "Statewide Safety Belt Observation Survey" Massachusetts Executive Office of Public Safety & Security (\$131,379)
2. Knodler, M. and R. Riessman (2020) "CMV-HP - Promoting Safety, Compliance and Business: Advancing Best Practices for Improved Safety through Partnerships between Law Enforcement, Licensing Agencies and Industry" Federal Motor Carrier Safety Administration (\$306,902)
3. Knodler, Michael, Riessman, Robin and Cole Fitzpatrick (2020) "Crash E-Manual Phase Two: Further Improvements to Data Quality Control Program By Providing Crash Reporting Resources for Law Enforcement" Massachusetts Executive Office of Public Safety & Security (\$184,899)
4. Knodler, M & C. Ahmadjian (2019) "UMTC/MassDOT Center" Massachusetts Department of Transportation (\$11,429,386)
5. Ai, Chengbo and Michael Knodler. (2019) "Collecting Model Inventory Road Element (MIRE) Fundamental Data Elements (FDEs) for Intersections in Massachusetts" Massachusetts Department of Transportation (\$150,000)
6. Knodler, Michael and Robin Riesman (2019) "Web-Based Decision Management: Project Training, Dissemination & Implementation" Massachusetts Executive Office of Public Safety & Security (\$239,170)
7. Knodler, Michael and Robin Riesman (2019) "Web-Based Decision Management and Predictive Crash Tool" Massachusetts Executive Office of Public Safety & Security (\$239,338)
8. Knodler, Michael and Robin Riesman (2019) "UMassSafe Development and Monitoring of Commercial Vehicle Safety Plan and Ongoing Crash Data Analysis" Massachusetts State Police (\$124,525)
9. Pradhan, A., Knodler, M. and S. Roberts (2019) "Safer Sim Cooperative Agreement" AAA Foundation for Traffic Safety (\$107,000)
10. Knodler, Michael A. and Christopher Ahmadjian (2019) "2019/20 On the Job Supportive Services Program" Massachusetts Department of Transportation (\$180,632)
11. Knodler, Michael A. and Christopher Ahmadjian (2019) "On the Job Supportive Services – Asphalt Program" Massachusetts Department of Transportation (\$279,765)
12. Knodler, Michael A, Riessman, R. and C. Fitzpatrick (2018) "Tools for Improving Crash Report Reviews" Massachusetts Executive Office of Public Safety and Security (\$132,321)
13. Knodler, Michael A, and R. Riessman (2018) "Data Quality Review of Crash Reports Accepted without Warning" Massachusetts Executive Office of Public Safety and Security (\$80,319)
14. Knodler, M., Ni, D and M. Plotnikov (2018) "The Application of Unmanned Aerial Systems in Surface Transportation" Massachusetts Department of Transportation (\$399,998)
15. Knodler, M., Schweik, C., Boutt, D. and L. Fiondella (2017) "UMassAir – A Research and Educational Collaborative" UMass President's Office Science & Technology Fund (\$100,000)
16. Knodler, Michael A. Jr. (PI) (2017) "Evaluation of Change and Clearance Intervals Prior to the FYA Permissive Left-Turn Indication" National Cooperative Highway Research Program Project 03-125 via the University of Wisconsin. (\$27,913 to UMass for Phase 1)
17. Knodler, Michael A. Jr and Robin Riessman. (2017) "Massachusetts Strategic Highway Safety Plan-2018 Update." Massachusetts Department of Transportation. (\$719,144)
18. Knodler, Michael A. Jr. and Robin Riessman (2017) "2017 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security via the UMass Donahue Institute. (\$89,053)
19. Samuel, Siby, Knodler, Michael and Song Gao (2017) "Using the New SHRP2 Naturalistic Driving Study Safety Databases to Examine Safety Concerns for Older Drivers" New England Transportation Consortium Project 15-2 (\$150,000)
20. Knodler, Michael and Robin Riesman (2017) "Web-Based Decision Management and Predictive Crash Tool" Massachusetts Executive Office of Public Safety & Security (\$239,338)
21. Knodler, Michael A. and Christopher Ahmadjian (2017) "2017 On the Job Supportive Services Program" Massachusetts Department of Transportation (\$105,539)

22. Knodler, Michael A. Jr. and Robin Riessman. (2017) "Toolkit & Mapping for the Commercial Vehicle Safety Plan" Massachusetts State Police. (\$50,000)
23. Knodler, Michael A. Jr. (2016) "Summer Transportation Institute" Massachusetts Department of Transportation. (\$64,785)
24. Knodler, M. Christofa, E. Fitzpatrick, C. Ai, C. Roberts, S. and A. Pradhan (2016) "Safety Research Using Simulation (Safer-Sim) UTC led by Univ. of Iowa (\$1,013,348 to UMass)
25. Knodler, Michael A. Jr. and Robin Riessman (2016) "2016 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security via the UMass Donahue Institute. (\$89,055)
26. Knodler, Michael A and C. Ahmadjian (2016). "One Center" Massachusetts Department of Transportation (\$9,961,432)
27. Knodler, Michael A. and Christopher Ahmadjian (2016) "On the Job Supportive Services Program" Massachusetts Department of Transportation (\$138,000)
28. Knodler, Michael A and R. Riessman (2016) "Massachusetts Revised Crash Report Form E-Manual and Evaluation" Massachusetts Executive Office of Public Safety and Security (\$118,019)
29. Knodler, Michael A. Jr. and Robin Riessman. (2015) "CMV Data Quality Audit Review and Planning" Massachusetts State Police. (\$34,100)
30. Knodler, Michael A. Jr. and Robin Riessman (2015) "Improving CMV Safety and CDL Compliance Through University Partnerships: The FMCSA Eastern Service Center Regional Safety Summit and Technical Assistance Center" Federal Motor Carrier Safety Administration (\$365,048)
31. Knodler, Michael A. Jr. and Robin Riessman. (2015) "CMV Driver Distraction Demonstration Project" Massachusetts State Police. (\$102,259)
32. Fisher, Donald. L., Knodler, Michael A. Jr and Siby Samuel (2015) "Accelerating Teen Driver Learning: Anywhere, Anytime Training". AAA Foundation for Traffic Safety (\$130,001)
33. Christofa, Eleni and Michael Knodler (2015) "Operational and Emission Analyses of Roundabouts under Varied Vehicle and Pedestrian Demands" New England University Transportation Center (\$164,323)
34. Knodler, Michael A. Jr. and Robin Riessman. (2015) "Development & Monitoring of the Commercial Vehicle Safety Plan" Massachusetts State Police. (\$50,000)
35. Christofa, Eleni and Michael Knodler (2015) "Operational and Emission Analyses of Roundabouts under Varied Vehicle and Pedestrian Demands" New England University Transportation Center (\$164,323)
36. Knodler, Michael and Donald Fisher (2015) "A Driving Simulator Evaluation of Driver Distraction and Traffic Control Device Comprehension for At-Grade Railroad Crossings" New England University Transportation Center (\$124,976)
37. Knodler, Michael A and R. Riessman (2015) "Crash Data Audit" Massachusetts Executive Office of Public Safety and Security (\$123,648)
38. Fisher, Donald and Michael Knodler (2015) "Evaluating the Effect of Google Glass on Driver Distraction" New England University Transportation Center (\$159,762)
39. Knodler, Michael A. Jr. and Robin Riessman (2015) "2015 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$90,065)
40. Collura, John and Michael Knodler (2014) "Models of Commercialization for Transportation Technology and Data Sources" National Science Foundation I-Corps Program (\$50,000)
41. Knodler, Michael A. Jr. and Robin Riessman. (2014) "Commercial Vehicle Technical Assistance Center" Massachusetts State Police. (\$99,999)
42. Knodler, Michael A. Jr and Robin Riessman. (2014) "Massachusetts Strategic Highway Safety Plan." Massachusetts Department of Transportation. (\$199,167).
43. Knodler, Michael A. Jr. and Robin Riessman. (2014) "Development & Monitoring of the Commercial Vehicle Safety Plan" Massachusetts State Police. (\$50,000)
44. Knodler, Michael A. Christofa, E., Samuel, S (2014). "University Transportation Center for Safety Research Using Simulation (Safer Sim) – Years 1 to 3". U.S. Department of Transportation via University of Iowa (\$844,464 to UMass).
45. Fisher, Donald and Michael Knodler (2014). "University Transportation Center for Human Systems Integration for Safety in an Autonomous Vehicle World: Impending Collisions – Years 1 to 3". U.S. Department of Transportation via Ohio State University (\$372,285 to UMass).

46. Knodler, Michael A. Jr. and Robin Riessman. (2014) "Traffic Crash Quality Assurance Project" Massachusetts State Police. (\$84,835)
47. Knodler, Michael and John Collura (2014) "Region 1 University Transportation Center – Admin, Outreach & Education" U.S. Department of Transportation via MIT (\$758,887 to UMass).
48. Knodler, Michael A. Jr. (2014) "2015 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security (\$90,015)
49. Knodler, Michael A and R. Riessman (2014) "Investigation of an Improved Linkage Strategy for Crash Data" Massachusetts Executive Office of Public Safety and Security (\$124,209)
50. Knodler, Michael A. Jr. and Robin Riessman. (2013) "CMV Technical Assistance Center" Massachusetts State Police. (\$149,993)
51. Knodler, Michael (2013) "Creating an Education ASSET" New England University Transportation Center (\$14,580)
52. Knodler, Michael A. Jr. (2013) "Evaluation of the FYA Permissive Left-Turn and Yellow Arrow Change Indications in PPLT Control" National Cooperative Highway Research Program via the University of Wisconsin. (\$20,867)
53. Knodler, Michael A. Jr. (2013) "2013 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$99,961)
54. Knodler, Michael, Fisher, Donald and Matthew Romoser (2012) "Evaluating the Effects of Integrated Training on Minimizing Driver Distraction" New England University Transportation Center (\$60,054)
55. Romoser, Matthew, Fisher, Donald and Michael Knodler (2012) "Reducing Older Driver Crashes: Technology, Training and Livable Communities" New England University Transportation Center (\$60,054)
56. Knodler, Michael A. Jr. and Robin Riessman. (2012) "CMV Technical Assistance Center" Massachusetts State Police. (\$149,992)
57. Knodler, Michael A. Jr. and Robin Riessman (2012) "Commercial Driver s License Traffic Enforcement Training and Technical Assistance Toolkit" Federal Motor Carrier Safety Administration (\$299,782)
58. Knodler, Michael (2012) "CMV Work Zone Enforcement Evaluation" Massachusetts State Police (\$38,378)
59. Collura, John and Michael Knodler (2012) "Massachusetts Cooperative Research Program" Massachusetts Department of Transportation (\$904,319).
60. Knodler, Michael A. Jr. and Robin Riessman. (2011) "CMV Technical Assistance Center" Massachusetts State Police. (\$149,749)
61. Knodler, Michael A. Jr. (2011) "2012 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$125,000)
62. Knodler, Michael and Robin Riessman (2011) "Commercial Motor Vehicle Crash Data Quality Improvement Project – Parts 1 to 3" Massachusetts Registry of Motor Vehicles (\$178,477)
63. Knodler, Michael A. Jr. (2011) "Commercial Motor Vehicle Safety Belt Use Survey & Project Evaluation" Massachusetts State Police. (\$207,201)
64. Knodler, Michael and Robin Riessman (2011) "Commercial Motor Vehicle Crash Data Quality Improvement Project with MSP" Massachusetts State Police (\$90,447)
65. Knodler, Michael A. Jr. (2011) "An Evaluation of Traffic Operations and Safety Impacts Related to Gap Acceptance" University of Massachusetts Transportation Center (\$75,000).
66. Knodler, Michael A. Jr. (2011) "2011 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$75,000)
67. Knodler, Michael A. Jr. (2010) "Summer Transportation Institute" Massachusetts Department of Transportation. (\$34,440)
68. Knodler, Michael A. Jr., (2010) "2010 Statewide Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety. (\$70,000)
69. Knodler, Michael A. Jr. (2010) "Commercial Motor Vehicle Crash Data Quality Improvement Project" Massachusetts Registry of Motor Vehicles. (\$140,049)
70. Knodler, Michael A. Jr. and John Collura. (2009) "Coping with the Older Driving Population" Massachusetts Executive Office of Transportation and Public Works. (\$185,854).

71. Knodler, Michael A. Jr. and Robin Riessman. (2009) "Development of Commercial Motor Vehicle Toolkit" Massachusetts State Police. (\$292,816)
72. Knodler, Michael A. Jr. (2009) "2009 Summer Transportation Institute" Massachusetts Executive Office of Transportation and Public Works (\$38,095).
73. Fisher, Donald and Michael A. Knodler Jr (2009) "User Interfaces: Audio Versus Visual Feedback" Mitsubishi Electronics Research Lab. (\$50,709)
74. Knodler, Michael A. Jr. (2009) "Massachusetts Crash Outcome Data Evaluation System (CODES)" National Highway Traffic Safety Administration. (\$91,000)
75. Knodler, Michael A. Jr. (2009) "2009 Statewide and Sub-Sample Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$100,000).
76. Knodler, Michael A. Jr. and John Collura. (2009) "Development of a Transportation Safety Technical Assistance Center for Integrated Analyses" University of Massachusetts Transportation Center (\$79,962)
77. Knodler, Michael A. Jr. and Donald Fisher. (2008) "Development and Evaluation of an Attention Maintenance Training Program" University of Massachusetts Transportation Center (\$74,965)
78. Knodler, Michael A. Jr. (2008) "Development of a Crash Prediction Model for Older Drivers" New England University Transportation Center. (\$81,370)
79. Knodler, Michael A. Jr. (2008) "2008 Summer Transportation Institute" Massachusetts Executive Office of Transportation and Public Works (\$36,655)
80. Knodler, Michael A. Jr. (2008) "2008 Statewide and Sub-Sample Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$92,158)
81. Fisher, Donald and Michael A. Knodler Jr (2008) "User-Paced vs. System-paced Voice User Interfaces" Mitsubishi Electronics Research Lab. (\$49,919)
82. Knodler, Michael (2008) "Utilizing Data Linkage for Data Quality Improvement and Crash Causation Determination in Massachusetts" Massachusetts Registry of Motor Vehicles (\$98,087)
83. Knodler, Michael A. Jr. (2007) "Massachusetts Technical Assistance – Phase 2" Massachusetts Highway Department (\$38,442)
84. Knodler, Michael A. Jr. (2007) "2007 Summer Transportation Institute" Massachusetts Executive Office of Transportation via UMass-Boston. (\$24,357)
85. Knodler, Michael A. Jr. (2007) "Follow-up Speed Data Collection for Rational Speed" Federal Highway Administration (\$15,000)
86. Fisher, Donald and Michael A. Knodler Jr (2007). "Distraction and New In-vehicle Technologies: Evaluation Using an Advanced Driving Simulator" Mitsubishi Electronics Research Lab. (\$38,995)
87. Knodler, Michael A. Jr., and John Collura. (2007) "Development of a Traffic Safety Toolbox" Massachusetts Executive Office of Transportation and Public Works. (\$53,133)
88. Fisher, Donald and Michael A. Knodler Jr (Co-PI) (2007) "An Evaluation of Back-up Camera Systems in Vehicles" Children's Hospital of Philadelphia, Nissan, and NSF. (\$71,423).
89. Knodler, Michael A. Jr. (2007) "Massachusetts Police Surveys" Massachusetts Executive Office of Public Safety and Security. (\$54,716)
90. Knodler, Michael A. Jr. (2007) "2007 Statewide and Sub-Sample Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety. (\$74,849)
91. Ni, Daiheng and Michael A. Knodler Jr (2007) "Development of a Conceptual Framework toward and Integrated Transportation System" New England University Transportation Center. (\$63,732)
92. Knodler, Michael A. Jr. (2007) "Massachusetts Commercial Motor Vehicle Data Quality" Massachusetts State Police. (\$201,758)
93. Knodler, Michael A. Jr. (2006) "Development and Pilot of Web-Based Police Crash Report Training" Massachusetts Governor's Highway Safety Bureau. (\$68,954)
94. Knodler, Michael A. Jr. (2006) "Improving Massachusetts Crash Data Quality" Massachusetts Executive Office of Transportation. (\$123,449)
95. Knodler, Michael A. Jr. (2006) "An Application of Pavement Weather Sensors for the Tobin Memorial Bridge" Massachusetts Executive Office of Transportation. (\$42,000)
96. Knodler, Michael A. Jr. and Donald L. Fisher. (2006) "An Evaluation of Driver Comprehension Related to Solid Yellow Change Indications & the Potential Impact of the Flashing Yellow Arrow Permissive Indication" New England University Transportation Center. (\$49,011)

97. Fisher, Donald L. and Michael A Knodler Jr (Co-PI) (2006) “Driver-Eye-Movement-Based Investigation for Improving Work-Zone Safety” New England Transportation Consortium. (\$75,000)
98. Knodler, Michael A. Jr. (2006) “Scenic Roads – Phase II” Massachusetts Executive Office of Transportation. (\$53,920)
99. Ni, Daiheng and Michael A. Knodler Jr (2006) “Understanding the Potential Safety and Mobility Benefits for Elderly Drivers by Simulation and Sensor Technology” New England University Transportation Center. (\$41,683)
100. Knodler, Michael A. Jr. (2005) “Massachusetts Technical Assistance” Massachusetts Highway Department (\$25,000)
101. Fisher, Donald L., Pollatsek, Aleksander, Knodler, Michael A. Jr. (Co-PI) and David A. Noyce. (2005/2006) “Simulator Evaluation of countermeasures for Left-Turn-Across-Path/Opposite Direction (LTAP/OD) conflicts” Calspan (\$121,637)
102. Knodler, Michael A. Jr. (2005) “An Evaluation of Dilemma Zone Protection Practices for Signalized Intersection Control” Vermont Agency of Transportation. (\$53,234)
103. Knodler, Michael A. Jr. (2005) “Statewide and Sub-Sample Observational Safety Belt Surveys” Massachusetts Executive Office of Public Safety. (\$63,656)
104. Knodler, Michael A. Jr. (2005) “Interdisciplinary Traffic Safety Curriculum” New England University Transportation Center. (\$30,000) (original PI: Kathleen Hancock).
105. Collura, John, Knodler, Michael A. Jr. and Daiheng Ni. (2005) “Modeling Traffic Flow Impacts in Work Zones” New England Transportation Consortium. (\$100,000)
106. O’Conner Barbara and Michael A. Knodler Jr. (2005) “Cooperative Agreement for Pedestrian Enforcement Programs” National Highway Traffic Safety Administration. (\$75,000)

Student Fellowships (Awarded to UMass as PI)

1. Dwight D. Eisenhower Graduate Fellowship – William Lyons (2020/2021) – Federal Highway Administration (\$35,500)
2. Dwight D. Eisenhower Graduate Fellowship – Alyssa Ryan (2019/2020) – Federal Highway Administration (\$35,500)
3. Dwight D. Eisenhower Graduate Fellowship – Francis Tainter (2019/2020) – Federal Highway Administration (\$35,500)
4. Dwight D. Eisenhower Graduate Fellowship – William Lyons (2019/2020) – Federal Highway Administration (\$5,000)
5. Dwight D. Eisenhower Graduate Fellowship – Francis Tainter (2018/2019) – Federal Highway Administration (\$11,500)
6. Dwight D. Eisenhower Graduate Fellowship – William Lyons (2018/2019) – Federal Highway Administration (\$11,500)
7. Dwight D. Eisenhower Graduate Fellowship – Alyssa Ryan (2018/2019) – Federal Highway Administration (\$5,000)
8. Dwight D. Eisenhower Graduate Fellowship – Cole Fitzpatrick (2017/2018) – Federal Highway Administration (\$31,900)
9. Dwight D. Eisenhower Graduate Fellowship – Cole Fitzpatrick (2016/2017) – Federal Highway Administration (\$11,500)

REFEREED PUBLICATIONS

Refereed Journal Publications

1. Ryan, A., Barchers, C., Christofa, E., and Knodler, M. (in press) Equitable resource allocation for municipal safety: A data envelopment analysis. *Transportation Research Part D: Transport and Environment*.
2. Ryan, A. and M. Knodler. (in press) What Type of Crash Can We Expect? Designing for Safety at Common Traffic Control Devices. *ITE Journal*

3. Zafian, T., Ryan, A., Agrawal, R., Samuel, S., and Knodler, M. (2021) Using SHRP2 NDS Data to Examine Infrastructure and Other Factors Contributing to Older Driver Crashes during Left Turns at Signalized Intersections. *Accident Analysis & Prevention*, 156, 106141.
4. Ryan, A., Christofa, E., Barchers, C., and Knodler, M. (2021) The relationship between municipal highway expenditures and socio-demographic status: Are safety investments equitably distributed? *Transportation Research Interdisciplinary Perspectives*. Vol 9 - doi.org/10.1016/j.trip.2021.100321
5. Ryan, A., Ai, C., Knodler, M., and Fitzpatrick, C. (2021) Evaluation of small unmanned aerial system highway volume and speed-sensing applications. *IET Intelligent Transportation Systems*, 15(1):84–97
6. Pai, G., Widrow, S., Radadiya, J., Fitzpatrick, C. D., Knodler, M., & Pradhan, A. K. (2020). A Wizard-of-Oz experimental approach to study the human factors of automated vehicles: Platform and methods evaluation. *Traffic Injury Prevention*, 1-5.
7. Ryan, A., Tainter, F., Fitzpatrick, C., Gazzillo, J., Riessman, R. and M. Knodler (2020) The impact of sex on motor vehicle crash injury outcomes, *Journal of Transportation Safety & Security*, DOI: 10.1080/19439962.2020.1834478
8. Schneider, C. A., Hajiseyedjavadi, F., Tainter, F., Knodler, M., Zhang, J., Romoser, M., Samuel, S and D. Fisher, D. (2020). Measuring the Applicability of Intersection-Based Older Driver Training Programs. *Transportation Research Record*. <https://doi.org/10.1177/0361198120932566>
9. Alyssa Ryan, Mitchell Page, Eleni Christofa, Cole Fitzpatrick & Michael Knodler (2020) Linking geospatial crash and citation data to inform equitable enforcement decisions, *Journal of Transportation Safety & Security*, DOI: 10.1080/19439962.2020.1774020
10. Ryan, A., Fitzpatrick, C., Christofa, E., and Knodler, M. (2020) Driver performance due to small unmanned aerial system applications in the vicinity of roadways. *Transportation Research Part F: Psychology and Behaviour*, 68:118–131.
11. Tainter, F., Fitzpatrick, C., Gazillo, J., Riessman, R., Knodler, M. (2020). Using a Novel Data Linkage Approach to Investigate Potential Reductions in Motor Vehicle Crash Severity – An Evaluation of Strategic Highway Safety Plan Emphasis Areas. *Journal of Safety Research*, Vol. 74, pp. 9-15.
12. Fournier, N., Bakhtiari, S., Valluru, K, Campbell, N., Christofa, E., Roberts, S., and Knodler, M. (2020). Accounting for Drivers’ Bicycling Frequency and Familiarity with Bicycle Infrastructure Treatments when Evaluating Safety. *Accident Analysis and Prevention*, 137, 105410.
13. Deliali A., Campbell, N., Knodler, M., and Christofa E. (2020) Understanding the safety impacts of protected intersections design elements-A driving simulation approach. *Transportation Research Record*, 2674(3), pp.179-188, DOI: 10.1177/0361198120909382.
14. Pradhan, A. K., Pai, G., Radadiya, J., Knodler Jr, M. A., Fitzpatrick, C., & Horrey, W. J. (2020). Proposed Framework for Identifying and Predicting Operator Errors When using Advanced Vehicle Technologies. *Transportation Research Record*, 0361198120938778.
15. Tainter, F., Christofa, E., Knodler, M. (2020). All-Red Clearance Intervals for Use in the Left-Turn Application of Flashing Yellow Arrows. *Journal of Transportation Engineering, Part A: Systems*, Vol. 126(4).
16. Ryan, A., Casola, E., Fitzpatrick, C., and Knodler, M. (2019) Flashing yellow arrows for right turn applications: A driving simulator study and static evaluation analysis. *Transportation Research Part F: Psychology and Behaviour*, 66:324–338.
17. Tainter, F., Gongalla, B., Fitzpatrick, C., Knodler, M. (2019). Evaluating the Effects of Cross Sectional Roadway Design Elements and the Impact on Driver Performance Using a Driving Simulator. *Advances in Transportation Studies*, Issue 49, pp. 103-116.
18. Fournier, N., Christofa, E., and Knodler, M.A. (2019). “A Mixed Method Investigation of Bicycle Exposure in Crash Rates” *Accident Analysis & Prevention*, Vol. 130, pp. 54-61.
19. Mangalore, G. P., Ebadi, Y. Samuel, S., Knodler, M. and DL Fisher (2019). The Promise of Virtual Reality Headsets: Can They be Used to Measure Accurately Drivers’ Hazard Anticipation Performance? *Transportation Research Record*, doi:10.1177/0361198119847612.
20. Bakhtiari, S., Zhang, T., Zafian, T., Samuel, S. Knodler, M. and C. Fitzpatrick (2019) Effect of Visual and Auditory Alerts on Older Drivers’ Glances toward Latent Hazards while Turning Left at Intersections. *Transportation Research Record*, doi:10.1177/0361198119844244.

21. Ryan, A., Bouchard, C., Fitzpatrick, C., Knodler, M. and C. Ahmadjian. (2019) "Analytical Comparison of Core Competencies across Civil Engineering Positions within New England Department of Transportation Agencies". *Transportation Research Record*. doi:10.1177/0361198118822296.
22. Hajiseyedjavadi, F., Zhang, T., Agrawal, R., Knodler, M., Fisher, D.L., & Samuel, S (2018). Effectiveness of Visual Warnings on Young Drivers Hazard Anticipation and Hazard Mitigation Abilities. *Accident Analysis & Prevention*. Vol., 116, pp. 41-5.
23. Park, H., Haghani, A., Gao, S., Knodler, M., and S. Samuel. (2018). Anticipatory sensor location problem in connected vehicle environment. *Transportation Science* Vol. 52 (6), pp. 1299-1326.
24. Tainter, F., Ryan, A., Fitzpatrick, C., Christofa, E., and M. Knodler (2018). Evaluation of Downstream Merge Behaviors Resulting from Driver Lane Choice: A Driving Simulator Study. *Transportation Research Record*., Vol. 2672(37), pp. 123-131.
25. Park, H., Haghani, A., Knodler, M. and S. Samuel. (2018) Real-time crash prediction and avoidance under unexpected traffic congestion. *Accident Analysis and Prevention*, vol 112, pp. 39-49.
26. Agrawal, R, Knodler, M., Fisher, D and S. Samuel. (2018) Virtual Reality Headset Training: Can It be Used to Improve Young Drivers' 1 Latent Hazard Anticipation and Mitigation Skills. *Transportation Research Record*, Vol 2672(33), pp. 20-30.
27. Keklikoglou, A. Fitzpatrick, C. and M Knodler. (2018) Investigation of Time and Speed Perception Using a Driving Simulator. *Transportation Research Record*. Vol 2672(37), pp. 132-140.
28. Fitzpatrick, C., Samuel, S., and M. Knodler (2017) The Use of Driving Simulation to Determine how Perception of Time Impacts Driver Aggressiveness. *Accident Analysis & Prevention*, Vol 108, pp. 131-138.
29. Valdés, D., Colucci, B. Knodler, M., Fisher, D., Ruiz, B., Ruiz, J., García, R., Colón, E., and F. Hajiseyedjavadi (2017). A Comparative Analysis of Toll Plazas Safety Features in Puerto Rico and Massachusetts Using a Driving Simulator *Transportation Research Record*, Vol 2663, pp. 1-11.
30. Fournier, N., Christofa, E., and Knodler, M.A. (2017). A Sinusoidal Model for Seasonal Bicycle Demand Estimation. *Transportation Research Part D: Transport and the Environment*, 50:154–169.
31. Fitzpatrick, C., Rakasi, S., and M. Knodler (2017) An investigation of the speeding-related crash designation through crash narrative reviews sampled via logistic regression *Accident Analysis & Prevention*. Volume 98, pp 57-63.
32. Fitzpatrick, C., Samuel, S. and M. Knodler. (2016) Evaluating the Effect of Vegetation and Clear Zone Width on Driver Behavior Using a Driving Simulator *Transportation Research Part F*.
33. Fitzpatrick, C., Gomez, R., Pires, M., & Knodler, M. A. (2016) The Prevalence of Distracted Walking and its Effect on Driver Behavior *Advances in Transportation Studies*. Issue 39, pp 89-98.
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Manuscripts Under Review

1. Ryan, A. and Knodler, M. (Under Review) Influential crash conditions leading to injury differences experienced by female and male drivers. *Accident Analysis & Prevention*.
2. Mehrotra, S., Parthasarthy, A.R., Fitzpatrick, C., Roberts, S., Christofa, E., Knodler, M. (In Revision) Driver Behavior and Performances on In-Vehicle Display Based Speed Compliance. *Accident Analysis and Prevention*.
3. Ebadi, Y., Roberts, S. C., Knodler, M., Fisher, D. L. (Under Review) Designing an Informative Interface for Transfer of Control in Level 2 Automated Driving System. Submitted to *International Journal of Human-Computer Studies*.
4. Ebadi, Y., Roberts, S. C., Knodler, M., Fisher, D. L. (Under Review) Design and Evaluation of a PC-based training program for Transfer of Control Situations in a Level 2 Automated Driving System. Submitted to *Transportation Research Part F: Psychology and Behaviour*

Refereed Conference Proceedings

1. Agrawal, R., Knodler, M., Fisher, D., & Samuel, S. (Accepted). "Advanced Virtual Reality Based Training to Improve Young Drivers' Latent Hazard Anticipation Ability." In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*.
2. Park, H., Knodler, M., & Samuel, S. (Accepted). "Explicit Forward Glance Duration Hidden Markov Model for Inference of Hazard Detection". In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*.
3. Ryan, A., Hennessy, E., Ai, C., Fitzpatrick, C., and Knodler, M. (Accepted) Driver performance at horizontal curves: Bridging critical research gaps to increase safety. Podium. Paper Number 7. *Road Safety & Simulation International Conference*, 22–24 September, Athens, Greece.
4. Pai, G., Widrow, S., Radadiya, J., Fitzpatrick, C. D., Knodler, M., & Pradhan, A. K. (2021). A Comparison of Simulation Approaches to evaluate Driver Behaviors at Transfer-of-Control Situations during Automated driving. In *Proceedings of the Institute of Industrial and Systems Engineers Annual Conference*. 22-25, May, Virtual Conference.
5. Ryan, A., Page, M., Christofa, E., Fitzpatrick, C., and Knodler, M. (2020) Linking Geospatial Crash and Citation Data to Optimize the Deployment of Enforcement Resources in Speed Management. Paper

Number 20-05266. *Transportation Research Board 99th Annual Meeting*, 12–16 January, Washington, D.C.

6. Pai Mangalore, G., Ebadi, Y., Samuel, S., Knodler, M., & Fisher, D. (2019). Can virtual reality headsets be used to measure accurately drivers' anticipatory behaviors?. In *Proceedings of the international driving symposium on human factors in driver assessment, training and vehicle design* (Vol. 2019, pp. 342-348). University of Iowa Public Policy Center.
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9. Deliali, A., Tainter, F., Campbell, N., Christofa, C., & Knodler, M. (2019). “*Assessing the Impact of Protected Bicycle Infrastructure on Driver Behavior*” *ASCE International Conference on Transportation and Development*, June 10-12, Alexandria, VA.
10. Gomez, R., Campbell, N., & Tainter, F. (2019). “*An Evaluation of Traffic Control Devices and Driver Distraction at Grade Railroad Crossings*” *Transportation Research Board of the National Academies, 98th Annual Meeting Conference Proceedings*, January 13-17, Washington, D.C.
11. Ryan, A. and Knodler, M. (2019) Evaluating Crash Type Likelihood at Various Traffic Control Devices: A Multinomial Logistic Regression Approach Using HSIS Data. Paper Number 20-04710. Poster. *Transportation Research Board 99th Annual Meeting*, 12–16 January, Washington, D.C.
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13. Ryan, A., Tainter, F., Fitzpatrick, C., Gazzillo, J., Riessman, R., and Knodler, M. (2019) The impact of sex on injury outcomes associated with motor vehicle crashes through a linked analysis of crash and EMS data. Podium. *6th International Conference on Women's Issues in Transportation*, 10–13 September, Irvine, CA.
14. Tainter, F., Christofa, E., & Knodler, M. (2018). “*Investigating Driver Comprehension of All-Red Clearance Intervals with Permissive Left-Turn Indications*” *European Transport Conference*, October 9-11, Dublin, Ireland.
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19. Sabhanayagam, A., Knodler, Jr., M.A., Christofa, E., Hajiseyedjavadi, F., and Khalighi, F. 2017. Impact of S-Curves on Speed in a Modern Roundabout. *2017 Road Safety & Simulation International Conference*, 17–19 October, The Hague, Netherlands.
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32. Harrington, C., Fitzpatrick, C. and M. A. Knodler Jr. (2015) A Conceptual Framework for Identification of Locations for Variable Speed Limit Implementation. 94th Annual Meeting of the Transportation Research Board, Washington DC.
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34. Tainter, F., Fitzpatrick, C., Knodler, M., and E. Christofa (2015) Analysis of Driver Performance and Operations at Intersection Auxiliary Lanes. Road Safety & Simulation Conference, Orlando, Florida.
35. Roach, D., Christofa, E., and Knodler Jr., M.A. (2015). Roundabout Safety Assessment through Microsimulation. 2015 Road Safety & Simulation International Conference, Orlando, FL
36. Dube, C., Fitzpatrick, C., and M. Knodler (2015) “An Observation Evaluation of Safety Resulting from Driver Distraction” Road Safety & Simulation Conference, Orlando, Florida.
37. Berliner, R. Swansen, E, Knodler, M. Tupper, T., Peabody, D. and J. Collura. (2014) The Complex Web of Senior Mobility. 93rd Annual Meeting of the Transportation Research Board, Washington DC
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43. Tupper, S., Knodler, M. A., Fitzpatrick, C. D. and D. S. Hurwitz (2013). Estimating Critical Gap: Comparison of Methodologies Using Robust, Real-World Data Set. 92nd Annual Meeting of the Transportation Research Board, Washington DC.
44. Hurwitz, D. S., Tuss, H., Olsen, M. J., Roe, G. and M. A. Knodler (2013). Transportation Applications for Mobile Lidar: State-of-the-Practice Questionnaire. 92nd Annual Meeting of the Transportation Research Board, Washington DC.
45. Rothenberg, H., Knodler, M. A., Kennedy, J. R. and D. L. Fisher (2013). Evaluation of Motorcyclist Responsibility in Crash Causation as a Function of Behavior and Age. 92nd Annual Meeting of the Transportation Research Board, Washington DC.
46. Hurwitz, D.S., Knodler, M. A., Tuss, H., Swake, J. and D. Moore, Derek (2012). Evaluation of Effects Associated with Advanced Vehicle Detection Systems on Dilemma-Zone Protection. 91st Annual Meeting of the Transportation Research Board, Washington DC.
47. Peabody, D. and M. Knodler (2012) Application of Spatial Crash Analyses and Road Safety Investigations to Increase Older Driver Safety: A Segment Based Analysis. 91st Annual Meeting of the Transportation Research Board, Washington DC
48. Swansen, E. and M. Knodler (2012). An Analysis of Linked Crash and Citation Data for use in Determining Causation for Work Zone Crashes. 91st Annual Meeting of the Transportation Research Board, Washington DC.
49. Swansen, E., Knodler, M. A. and J. Kennedy (2012) Determining Work Zone Crash Causation using Linked Crash and Citation Data. Institute of Transportation Engineering: Technical Conference, Pasadena, CA.
50. Dutta, N., Peabody, D. and M. A. Knodler (2011) Spatial System for the Identification and Analysis of High Crash Roadway Segments. Institute of Transportation Engineers Annual Meeting. Orlando, FL.
51. Gomez, R., Samuel, S., Roman, L.G., Romoser, M.R.E., Collura, J., Knodler, M. & Fisher, D.L. (2011) - Do advanced yield markings increase safe driver behaviors at unsignalized, marked midblock crosswalks: A Simulator Study. 90th Annual Meeting of the Transportation Research Board.
52. Hurwitz, D., Knodler, M., Nabae, S., & Tuss, H. (2011) Driver Comprehension of the Circular Yellow Indication: Implications of Regional Variability. 90th Annual Meeting of the Transportation Research Board.
53. Tupper, S., Knodler, M. and D. Hurwitz (2011) Connecting Gap Acceptance Behavior with Crash Experience. Proc. 3rd International Conference on Road Safety and Simulation Conference, Indianapolis, IN
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55. Muttart, J., Hurwitz, D., Pradhan, A., Fisher, D and M. A. Knodler (2010). Backing Acceleration and Response Time to an Audible Warning in a Field Test. 89th Annual Meeting of the Transportation Research Board, Washington DC
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57. Garay-Vega, L. Fisher, D. and M. Knodler (2008) Drivers' Performance in Response to Sight-Limited Crash Scenarios at Midblock Crosswalks: Evaluation of Advance Yield Markings and Symbolic Signage. Proceedings of the Human Factors and Ergonomics Society Annual Meeting
58. Chan, E., Pradhan, A. K., Knodler Jr., M. A., Pollatsek, A. and D. L. Fisher (2008). Empirical Evaluation on a Driving Simulator of the Effect of Distractions Inside and Outside the Vehicle on Drivers' Eye Behaviors. 87th Annual Meeting of the Transportation Research Board, Washington DC

59. Knodler, M., Hurwitz, D. and H. Rothenberg (2008). An Evaluation of Rationally Implemented Speed Limits on Collector Roadway. 87th Annual Meeting of the Transportation Research Board, Washington DC
60. Moriarty, K., Collura, J., Knodler, M., Ni, D. and K. Heaslip (2008). Using Simulation Models to Assess the Impacts of Highway Work Zone Strategies; Case Studies along Interstate Highways in Massachusetts and Rhode Island. 87th Annual Meeting of the Transportation Research Board, Washington, DC
61. Rothenberg, H. and M. A. Knodler Jr. (2008). Beyond Crash Data: Applications of Multiple Data Sets for Traffic Safety Analyses. Institute of Transportation Engineers Technical Conference, Miami, FL.
62. Hurwitz, D., Chase, M. and M. Knodler, M. (2007). Development of a Traffic Impact and Access Study Decision Matrix. Institute of Transportation Engineers Annual Meeting and Exhibition, Pittsburgh, PA.
63. Benavente, M. Knodler Jr., M. A. and H. Rothenberg. (2007). Analysis of the Relationship between Aggressive Driving and Roadway Characteristics Using Linked Data. Institute of Transportation Engineers Annual Meeting and Exhibition, Pittsburgh, PA.
64. Langone, M., Knodler, M. A. and D. L. Fisher (2007). A Simplified Methodology for Location-Based Crash Analysis. Institute of Transportation Engineers Annual Meeting and Exhibition, Pittsburgh, PA.
65. Rothenberg, H., Knodler, M. A., Kennedy, J. Metzger, S. A., and M. Benavente (2007). Evaluation of the impact of congestion on crash frequency, severity, and crash characteristics. Institute of Transportation Engineers Technical Conference and Exhibit, San Diego, CA.
66. Noyce, D. A. and M. A. Knodler Jr. (2007). Implementation of the Flashing Yellow Arrow Permissive Left-Turn Indication in Signalized Intersections. Road Safety on 4 Continents, Bangkok, Thailand.
67. Fernandez, W., Rothenberg, H. and M. Knodler (2007). Prevalence and correlates of self-reported safety belt non-use among US high school students. Society of Academic Emergency Medicine Annual Meeting; abstract published in Academic Emergency Medicine.
68. Hurwitz, D. and M. Knodler (2007). Static and Dynamic Evaluation of the Driver Speed Perception and Selection Process. Driving Assessment, Olympia, WA.
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70. Louisell, W; Collura, J., Knodler, M. and K. Heaslip (2006). A Simplified Algorithm to Assess the Impacts of Driver Behavior on Delay and Safety in Work Zone Areas, Annual Meeting of the Transportation Research Board, Washington, DC
71. Pradhan, A. K., Fisher, D. L., Knodler, M., Pollatsek, A. and M. Langone (2006). Field Evaluation of a Risk Awareness and Perception Training Program for Younger Drivers. Human Factors and Ergonomics Society 50th Annual Meeting, San Francisco, CA.
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76. Knodler Jr., M. A. and Noyce, D. A. (2005). Tracking Driver Eye Movements at Permissive Left-Turns. Driving Assessment, Rockport, ME.
77. Bonney, A. K., Knodler Jr., M. A. and C. Sicinski (2004). Evaluation of a Rational Speed Limit Setting and Enforcement Demonstration Project on Collector Roadways. Institute of Transportation Engineers Annual Meeting and Exhibit, Lake Buena Vista, FL.
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80. Knodler Jr., M. A., Noyce, D. A., Kacir, K. C. and C. L. Brehmer (2001). Driver Understanding of the Green Ball and Flashing Yellow Arrow Permitted Indications: A Driving Simulator Experiment. Institute of Transportation Engineers Annual Meeting, Chicago, IL.

Book Chapters

1. Noyce, David A., Michael A. Knodler, Jr., and Jeremy R. Chapman. In Handbook of Driving Simulation for Engineering, Medicine, and Psychology. Chapter 35, Traffic Signals. Applications in Engineering, CRC Press, Taylor and Francis Group, 2011. Research Reports

Selected Reports

1. Knodler, M., Fitzpatrick, C., Pradhan, A., Samuel, S., Tainter, F., & Mangalore, G. P. (submitted). Minimum Time to Situational Awareness During Transfer of Control Under Varying Levels of Task Load. Safety Research using Simulation (SAFER-SIM) University Transportation Center Report.
2. Valdes, D., Knodler, M., Colucci, B., Figueroa, A., Rojas, M., Colon, E., Rosario, R., Campbell, N., & Tainter, F. (2019). Evaluation of Safety Enhancements in School Zones with Familiar and Unfamiliar Drivers. Safety Research using Simulation (SAFER-SIM) University Transportation Center Report.
3. Fitzpatrick, C., Knodler, M., Ryan, A., and Christofa, E. (2020) *The Influence of Unmanned Aerial Systems on Driving Performance*. Final Report. Safety Research Using Simulation, University Transportation Center.
4. Ahmadjian, C., Knodler, M., Ryan, A., and Bouchard, C. (2018) *Measuring the Effectiveness of Competency Models of Job-Specific Professional Development of Engineers & Engineering Technicians: A Comparison of Core Competencies Across Civil Engineering Positions of Department of Transportation Agencies. using Competency Models*. Final Report 14-1. New England Transportation Consortium.
5. Knodler, M., Christofa, E., Hajiseyedjavadi, F., Tainter, F., & Campbell, N. (2018). To Trust or Not to Trust? A Simulation-based Experimental Paradigm. Safety Research using Simulation (SAFER-SIM) University Transportation Center Report.
6. Knodler, M., Santiago-Chaparro, K., Christofa, E., Bill, A., Tainter, F., & Noyce, D. (2018). A Field and Simulator Evaluation of All-Red Clearance Intervals for Use in Left-Turn Applications. Safety Research using Simulation (SAFER-SIM) University Transportation Center Report.
7. Knodler, M., Christofa, E., & Tainter F. (2016). Analysis of Driver Behavior and Operations at Intersection Short Lanes. Safety Research using Simulation (SAFER-SIM) University Transportation Center Report.
8. Donald Fisher, Jared Young, Lisa Zhang, Michael Knodler and Siby Samuel (2017) Accelerating Teen Driver Learning: Anywhere, Anytime Training. AAA Foundation for Traffic Safety, Washington DC.
9. Noyce, David, Bill, Andrea and Michael Knodler (2014) Evaluation of the Flashing Yellow Arrow (FYA) Permissive Left-Turn and Yellow Arrow Change Indications in Protected/Permissive Left-Turn Control: The Impact of Separate and Shared Yellow Signal Sections and Head Arrangements. National Cooperative Highway Research Program Project No. 20-07 / Task 283.
10. Olsen, J., Roe, G., Glennie, C., Persi, F., Reedy, M., Hurwitz, D., Williams, K., Tuss, H., Sequellati, A., Knodler, M. (2013) Final Report 748 Guidelines for the Use of Mobile LIDAR in Transportation Applications. National Cooperative Highway Research Program, Washington, D.C, 194p.
11. Thomas, Dennis, Blomberg, Richard, Knodler, Michael and Matthew Romoser (2013) Licensing Procedures for Older Adults. National Highway Traffic Safety Administration, Report No: DOT HS 811 833, 211.7-1, Washington DC

12. Knodler, Michael A. Jr., Heather Rothenberg and Robin Riessman (2011). "Improving Crash Data Quality in Massachusetts" Massachusetts Executive Office of Transportation & Public Works, Boston
13. Knodler, Michael A. Jr. and John Collura (2009). "Massachusetts Traffic Safety Toolbox" *Report UMTC 08-1* Massachusetts Executive Office of Transportation & Public Works, Boston, MA.
14. Fisher, D., Hurwitz, D., Pradhan, A., & Knodler, M. (2008) "Impact of Rear Mounted Camera on Backing Collisions," The Center for Injury Research and Prevention at the Children's Hospital of Philadelphia, Philadelphia, PA.
15. Knodler, Michael A. Jr. and Heather Rothenberg (2008). "Development of a Scenic Roads Database in Massachusetts" *Report UMTC 07-9* Massachusetts Executive Office of Transportation & Public Works, Boston, MA.
16. Knodler, M., & Hurwitz, D. (2008) Dilemma Zone Issues at High-speed Signalized Intersections. Vermont Agency of Transportation, Montpelier, VT, 55p.
17. Knodler, Michael A. Jr. and Jeffrey Muttart (2008). "Pavement Sensors for Monitoring Winter Roadway Conditions along the Maurice J. Tobin Bridge" *Report UMTC 07-4* Massachusetts Executive Office of Transportation & Public Works, Boston, MA.
18. Hymoff, Caroline, Michael Knodler, David Hurwitz, and Heather Rothenberg (2007). "Rational Speed Limit Demonstration Project". Massachusetts Governor's Highway Safety Bureau and Federal Highway Administration.
19. Noyce, David A., Michael A. Knodler, Jr., Andrea R. Bill, Kristal Metro and Christine M. Sicinski (2001). "An Evaluation of Driver Behaviors at Blood Alcohol Concentrations of 0.00 to 0.08" *Report 2002-01*; Massachusetts Safety Highway Research Program (MassSAFE), Governor's Highway Safety Bureau, Boston, MA.
20. Noyce, David, A., Christine M. Sicinski, Michael A. Knodler Jr., Matthew C. Blume and Anne L. Roberts (2001). "The Effects of Enforcement Strategies on Safety Belt Use and Vehicle Operating Speeds." *Report 2001-01; Project Number 5-22319* Massachusetts Safety Highway Research Program (MassSAFE), Governor's Highway Safety Bureau, Boston, MA 2001.
21. Hawkins, H.G. Jr., Dale L. Picha, Deborah C. Kreis, and Michael A. Knodler (1999). "Evaluation of Alternative Traffic Signs for Use in Texas Border Areas." *Research Report 1274-3*, Texas Transportation Institute, College Station, TX.

STUDENT RESEARCH SUPERVISED

Ph.D. Students (Committee Chair)

1. William Lyons, PhD, In Progress
2. Alyssa Ryan, PhD, In Progress
3. Francis Tainter, PhD, Ph.D. Civil Engineering 2021
Understanding the Safety Impacts of Left-Turn Infrastructure on the Vulnerable Driving Population
4. Foroogh Hajiseyedjavadi, Ph.D. Civil Engineering, 2020
Evaluation of Drivers' Trust in Automation
5. Somaye Garmroudi Dovirani, Ph.D. Civil Engineering, 2019
Applications of Machine Learning Methods in Macroscopic Crash Analysis for Transportation Safety Management
6. Radhameris Gomez, Ph.D. Civil Engineering, 2017
An Evaluation of Traffic Control Device and Driver Distraction on Driver Behavior at Railway Grade Crossings
7. Cole Fitzpatrick, Ph.D. Civil Engineering, 2017
Estimating the Impacts of Driver Behavior in the Speed Selection process and the Related Outcomes,
8. Heather Rothenberg, Ph.D. Civil Engineering, 2009
Formulating Older Driver Licensing Policy: An Evaluation of Older Driver Crash History and Performance
9. David S. Hurwitz, Ph.D. Civil Engineering, 2009.
Application of Driver Behavior and Comprehension to Dilemma Zone Definition and Evaluation,

10. Lisandra Garay-Vega, Ph.D. Civil Engineering, 2008. (Co-Chair with Donald Fisher of MIE)
Drivers' Performance in Response to Sight Limited and Multi-threat Crash Scenarios at Mid-block Crosswalks: An Evaluation of Advance Yield Markings and Sign Prompts

M.S. Students (Thesis Track, Committee Chair)

1. Sahana Hariram, MSCE, In Progress
2. Aamani Ramanathan Parthasarthy, Driver Behavior and Performance on In-Vehicle Display Based Speed Compliance, MSCE, 2019
3. Alyssa Ryan, Driver Performance Due to Unmanned Aerial System Applications in the Vicinity of Surface Transportation, MSCE, 2019
4. Rohith Prakash, Modeling the Surrogate Safety of Various Left-Turn Phase Sequences, MSCE, 2019
5. Nicholas Campbell, Dissecting the Safety Benefits of Protected Intersection Design Features, MSCE, 2019
6. Elizabeth Casola, Driver Understanding of the Flashing Yellow Arrow and Dynamic No Turn on Red Sign for Right Turn Applications, MSCE, 2018
7. Francis Tainter, All-Red Clearance Intervals for Use in the Left-Turn Application of Flashing Yellow Arrows, MSCE, 2018
8. Akshaey Sabhanayaga, Impact of S-Curve on Speed in a Modern Roundabout, MSCE, 2018
9. Bhavana Gongalla, Evaluating Roadway Cross-Sectional Design Elements and the Impact on Driver Behavior Using a Driving Simulator, MSCE, 2017
10. Chelsea Bouchard, Evaluating Variances Between DOTs in New England to Create a Strategic Transportation Workforce, MSCE, 2017
11. Balazs Martai, The Impacts of Ramp Configuration on Commercial Motor Vehicle Rollover Crashes, MSCE, 2017
12. Foroogh Hajiseyedjavadi, Investigation of Safety at Toll Plazas through Microsimulation and Driving Simulation Approaches, MSCE, 2016
13. Craig Schneider, Older Driver Simulator Based Intersection Training: The Evaluation of Training Effectiveness & Simulator Sickness, MSCE, 2015
14. Elsa Chan, Attention Maintenance of Novice and Experienced Drivers: An Evaluation of Driver Performance with In-Vehicle and Out-of-Vehicle Tasks, MSCE, 2015
15. Jonathon Freeman, An Investigation of Driver Performance as a Function of Entry Deflection Angle at Roundabouts, MSCE, 2014
16. Curt Harrington, Driver Behavior Evaluation of Variable Speed Limits and a Conceptual Framework for Optimal VSL Location Identification, MSCE 2015
17. Christina Dube, An Observational Evaluation of Safety Resulting from Driver Distraction, MSCE, 2015
18. Hugo Rivera, Innovating Railroad Design and Operations, MSCE, 2014
19. Keith Wenners, An Evaluation of Drivers' Cell Phone Use Prevalence and Safety Related Impacts, MSCE, 2013
20. Ian McKinnon, Operational and Safety-Based Analyses of Varied Toll Plaza Configurations, MSCE, 2013
21. Cole Fitzpatrick, The Effect of Roadside Elements on Driver Behavior and Run-off-the-road Crash Severity, MSCE 2013
22. Natalia Landron Rodriguez, An Application of Engineering, Education, and Enforcement Strategies for Improved Pedestrian Safety at Midblock Crosswalks, MSCE, 2013
23. Jeff Young, Community Based Assessment of Older Driver Mobility and Safety, MSCE 2012
24. Radhameris Gomez, Evaluating the Effect of Advance Yield Markings and Symbolic Signs on Vehicle-Pedestrian Conflicts at Stop-Controlled T-Intersections Across Multilane Roads, MSCE, 2012
25. Manuel Pires, An Analysis of Pedestrian's Behavior at Crosswalks along with Different Crosswalk Treatments, MSCE, 2012
26. Nancy Dutta, Quantification of Segment Length and Size Selection for Spatially Based Safety Analysis, MSCE 2012
27. Katrina Hecimovic, A Quantitative Analysis of the Impacts from Selected Climate Variables upon Traffic Safety in Massachusetts, MSCE, 2012

28. Erica Swansen, Varied Applications of Work Zone Safety Analysis Through the Investigation of Crash Data, Design, and Field Studies, MSCE, 2011
29. Steven Tupper, Safety and Operational Assessment of Gap Acceptance Through Large Scale Field Evaluation, MSCE, 2011
30. Deanna Peabody, An Application of Spatially Based Crash Analyses and Road Safety Audits to Increase Older Driver Safety, MSCE, 2011
31. Samuel Gregorio, A Quantitative Analysis of the Impacts from Selected Variables Upon Safety Belt Usage in Massachusetts, MSCE 2010.
32. Arianna Mickee, A Comparative Evaluation of Crash Data Quality Identification Methods, MSCE, 2008.
33. Stacy Metzger, The Application of Traffic Calming and Related Strategies in an Urban Environment, MSCE, 2008.
34. George Gadiel, An Analysis of the Safety Effects of Crosswalks with In-Pavement Warning Lights, MSCE, 2007.
35. Aleksander Loncarevic, An Analysis of Pedestrian Comprehension of Traffic Control Devices and Crosswalk Behavior, MSCE, 2006.
36. Michelle Langone, Methodologies and Applications of Location-based Analyses for Younger Driver Crashes in Massachusetts, MSCE, 2006.
37. David S. Hurwitz, Static and Dynamic Evaluation of the Driver Speed Perception and Selection Process, MSCE, 2006.
38. Adam Kwartowitz, Evaluation and Creation of Design Criteria for Vehicles Access to Planned Special Events, MSCE, 2006
39. Kwame Mbroh Aidoo, A Comprehensive Analysis of Safety Belt Use in the Commonwealth of Massachusetts, MSCE 2006
40. Matthew Blume, Effectiveness of a Community Speed Management Program, MSCE, 2005.
41. Marta Benavente-Macaya, Analysis of Crash Compatibility and Injury Patterns Using the Massachusetts Crash Outcome Data Evaluation System, MSCE, 2005.

TEACHING EXPERIENCE -

University of Massachusetts –Amherst Courses

CEE 310 – Transportation Systems

Designed for junior level undergraduates and is a required course in the Civil Engineering curriculum. The course introduces students to transportation operations, planning, and design with an emphasis on the highway mode. Topics include: vehicle, operator, and roadway characteristics; traffic control; capacity; geometric design objectives and plan formulation; and demand forecasting.

CEE 450 – Highway Location & Geometric Design and CEE 516 - Transportation Design

Designed for senior level undergraduates and transportation graduate students and taught fundamental principles of highway location and geometric design for streets and highways with emphasis on safety.

CEE 511 - Traffic Engineering

Designed for senior level undergraduates and transportation graduate students and taught fundamental principles of traffic flow and intersection traffic operations including traffic data collection methods, traffic control devices, traffic signal design, and analysis techniques. Emphasizes quantitative and computerized techniques for designing and optimizing intersection signalization.

CEE 614 (CEE 497L & 597L) – Advanced Concepts in Traffic Safety

Designed for transportation graduate students and focused on the science of transportation safety. Course curriculum included traditional approaches to highway safety engineering, transportation safety statistics, road safety reviews/audits, and crash reconstruction practices.

CEE 121 – Engineering Measurements

Designed for first year engineering students, the objectives of this class are to introduce students to the principles and techniques of various types of measurements commonly used in Civil and Environmental

Engineering, The course is split into approximately three equal parts including laboratory measurements, programming and surveying

ENGIN 111 – Introduction to Civil & Environmental Engineering

Designed for newly incoming students to the university and major. This course provides an overview of the environmental, geotechnical, structural and transportation areas within the discipline while developing core skills required throughout the curriculum. Civil and environmental engineering projects and problems are presented; students use written, oral, and computing skills to derive and present solutions.

CEE 275 – AutoCAD in Civil Engineering

This course is an introduction of AutoCAD as applied to Civil Engineering, combining hands-on application of techniques. Topics include two-dimensional lines and shapes, drawing aids, layers, editing techniques, dimensioning, groups and blocks, viewports, three-dimensional drawing, and editing and combining AutoCAD with the internet and databases. I restructured this as an online course in 2012.

CEE 690T – Advanced Concepts in Transportation Design

Designed for transportation graduate students and focused on high level concepts in design of the transportation system. Course curriculum included traditional and innovative approaches to system design across all modes as well as the introduction of technology.

Honors 391A and FFYS 197 – The Societal Impacts of Gasoline Prices

This one-credit seminar-style course is intended to inspire a love of learning, and to help prepare students for future courses and projects. This course offering encourages thought about the societal benefits and detriments associated with increased gas prices and transportation costs. During the seminar students will explore the actual impacts of fluctuating prices and the resulting impacts.

Short Courses and Workshops

- **Speed Management**
Connecticut Transportation Institute, April 2021
- **Traffic Signal Warrants**
Developed an online workshop – summer 2019
- **Collecting, Accessing and Using Highway Safety Data**
Transportation Training Institute. Springfield, MA, July 2016
- **Speed 101**
Transportation Safety Institute - Albany, NY (9/16); Richmond, VA (11/15); Phoenix, AZ (8/15); Baton Rouge, LA (7/10)
- **Speed Management**
NHTSA, FHWA & FMCSA – Taught at 12 U.S. locations between 2007 & 2008
- **Traffic Calming and Speed Management**
Connecticut Transportation Institute, Wethersfield, CT – 3 events in 2013-2014
- **Engineering for Classroom Teachers – “Civil & Environmental Engineering in Our World”**
EDUC 791J University of Massachusetts – Amherst, MA, Summer 2005-2007
- **Transportation Data Collection**
Bay State Roads Program – Summer 2007
- **Low Cost Safety Improvements**
Bay State Roads Program – Summer 2006
- **Design & Operational Elements of Roundabouts**
New England Section of ITE, Amherst, MA April 2005
- **Timing Clearance Intervals**
New England Section of ITE, Waltham, MA September 2004

- **Traffic Signal Needs Determination Workshop**
Bay State Roads Program – Spring 2004

PROFESSIONAL AFFILIATIONS AND SERVICE

Professional Affiliations & Service

- Director, ARTBA Research & Education Division (2018-present)
 - Director, CUTC Executive Committee (2019-2021)
 - NCHRP Project 20-5 (Synthesis Topic 44-14) Panel Member (2012-2013)
 - Transportation Research Board – Affiliate (2002-present)
 - Member, Task Force of Safety Workforce and Development (2005-2014)
 - Member, Traffic Control Devices Committee (2006-present)
 - Chair, Doctoral Student Session in Trans. Operations / Traffic Control (2007-present)
 - Institute of Transportation Engineers – Member (2004-present)
 - Officer, New England Section & Northeastern District (2006-2016)
 - Officer (Past: Chair), Transportation Education Council (2006-present)
 - Member, Professional Development Task Force (2019-present)
 - Co-Chair, Student Member Committee (2019-present)
 - Member, Technical Program Committee (2006-present)
 - Secretary, Bicycle and Pedestrian Council (2002-2005)
 - University of Massachusetts Student Chapter Advisor (2005-present)
 - Chair, Northeastern ITE Annual Meeting (2013)
 - Coordinator, District Traffic Bowl (2011-2017)
 - Exec. Committee, Council on University Transportation Centers (2019-present)
 - Chair, FMCSA Commercial Vehicle Safety Summit (2016 & 2019)
 - American Society of Engineering Education, Member (2017-present)
 - ITS America - University Member (1999-present)
 - American Society of Civil Engineers – Associate Member (2005-present)
 - Region 1 New England UTC Policy Committee, Member (2014-2019)
 - Chair, New England Railroad Club Scholarship Committee (2004-present)
 - Scientific Steering Committee – Road Safety and Simulation (2014-present)
 - Massachusetts Traffic Records Coordinating Committee Member (2009-present)
 - Reviewer, Canada Foundation for Innovation - Leaders Opportunity Fund (2009-2010)
 - Ad hoc Reviewer (2004-present)
- Transportation Research Record; Accident Analysis and Prevent; Transportation Research: Part F; Transportation Research: Part C; ASCE Journal of Transportation Engineering; Journal of Safety Research; Advances in Transportation Studies; Safety Science; Journal of Urban Planning and Development; Ergonomics; Applied Ergonomics; Journal of Professional Issues in Engineering and Practice; ITE Journal*

Selected Service Activities

- Steering Committee, UMass Public Engagement Program (2021-present)
- Co-Chair, Climate Resilience & Sustainability Group
UMass President's Office Brain Trust Initiative (2020-2021)
- Chair, COE Director of Career Service Search (2019)
- Chair, CEE Search Committee in Transportation (3 searches) (2015-2017)
- Program Coordinator, Transportation Engineering Group (2014-2019)
- Member, College of Engineering Strategic Planning Committee (2016-2019)
- Member, UMass Parking Transportation Advisory Board (2014-present)
- Member, UMass Pedestrian & Bicycle Committee (2009-present)
- CEE Department Personnel Committee (2012-2016)
- CEE Curriculum Committee (2009-2014)
- CEE Undergraduate Honors Program Director (2009-2015)

- UMass Mentoring Grant (\$2,000) for TEAAM Program (2006-2007)
- CEE Scholarship Committee (2007-2015)
- FE Exam Review Session Instructor (2005-present)
- Interactive Classroom Administrator (2005-2009)
- Member, Liberty Mutual Post-Doc Fellowship Search Committee (2014-2016)