

# Michael A. Knodler Jr., Ph.D.

University of Massachusetts  
Dept. of Civil & Environmental Engineering  
142B Marston Hall  
130 Natural Resource Road  
Amherst, MA 01003

Phone:(413) 545-0228  
Fax: (413) 545-9569  
E-mail:mknodler@ecs.umass.edu

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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 Professor, Department of Civil and Environmental Engineering, 2011-present.  
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-present  
Associate Director, Arbella Insurance Human Performance Laboratory, 2005-present

## ACADEMIC AWARDS AND ACHIEVEMENTS

- 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
- James L. Tighe Distinguished Teaching Award, 2011
- William P. McNamara Distinguished Service Award, New England ITE, 2010
- UMass ASCE – Teacher of the Year, 2010 & 2015
- 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 Distinguished Teaching Award, 2005 & 2009
- University Transportation Center Fellowship, University of Massachusetts – Amherst, 2000-2001
- 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)*

1. Knodler, Michael A. Jr and Robin Riessman. (Awarded) “Massachusetts Strategic Highway Safety Plan- Phases 2 & 3.” Massachusetts Department of Transportation. (\$419,000).
2. Knodler, Michael A and R. Riessman (Awarded) “Tools for Improving Crash Report Reviews” Massachusetts Executive Office of Public Safety and Security (\$166,768)
3. Knodler, Michael A., Christofa, E. and S. Samuel, S., (2016/2019). “University Transportation Center for Safety Research Using Simulation (Safer Sim) – Year 1”. U.S. Department of Transportation via University of Iowa (\$266,418 to UMass).
4. Knodler, Michael A and R. Riessman (2016/2017) “Crash Data Audit” Massachusetts Executive Office of Public Safety and Security (\$123,648)
5. Knodler, Michael A and R. Riessman (2017) “2017 Statewide Observational Safety Belt Survey” Massachusetts Executive Office of Public Safety and Security (\$89,055)
6. Knodler, Michael A and R. Riessman (2015/2017) “Investigation of an Improved Linkage Strategy for Crash Data” Massachusetts Executive Office of Public Safety and Security (\$124,209)
7. Knodler, Michael A and R. Riessman “Massachusetts Revised Crash Report Form E-Manual and Evaluation” Massachusetts Executive Office of Public Safety and Security (\$118,019)
8. Knodler, Michael A and C. Ahmadian (2016/2018). “One Center” Massachusetts Department of Transportation (\$6,141,551)
9. Knodler, Michael A. Christofa, E., Samuel, S., and E. Gonzales (2016/2017). “University Transportation Center for Safety Research Using Simulation (Safer Sim) – Year 3”. U.S. Department of Transportation via University of Iowa (\$274,000 to UMass).
10. Knodler, Michael A. Jr., Fisher, Donald. L, and E. Christofa (2013/2015). “University Transportation Center for Safety Research Using Simulation (Safer Sim) Years 1 & 2”. U.S. Department of Transportation via University of Iowa (\$560,000 to UMass).
11. Fisher, Donald. L., Knodler, Michael A. Jr (Co-PI), and M. Romoser. (2013/2017) “University Transportation Center for Crash Imminent Safety”. U.S. Department of Transportation via Ohio State University (\$285,000 to UMass)
12. Knodler, Michael A. Jr and Robin Riessman. (2014/2015) “Massachusetts Strategic Highway Safety Plan.” Massachusetts Department of Transportation. (\$199,167).
13. Knodler, Michael A. Jr. (2011) “2011 Statewide Observational Safety Belt Surveys” Massachusetts Executive Office of Public Safety. (\$75,000)
14. Knodler, Michael A. Jr. (PI) (2011) “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)
15. Knodler, Michael A. Jr. and Robin Riessman. (2011) “Commercial Motor Vehicle Crash Data Improvement Project: Part 2” Massachusetts State Police. (\$112,967)
16. Knodler, Michael A. Jr. and Robin Riessman. (2011) “Commercial Motor Vehicle Safety Belt Use Survey & Project Evaluation” Massachusetts State Police. (\$207,201)
17. Knodler, Michael A. Jr. (2011) “An Evaluation of Traffic Operations and Safety Impacts Related to Gap Acceptance” University of Massachusetts Transportation Center (\$75,000).
18. Knodler, Michael A. Jr., (2010) “2010 Statewide Observational Safety Belt Surveys” Massachusetts Executive Office of Public Safety. (\$70,000)
19. Knodler, Michael A. Jr. (2010) “Summer Transportation Institute” Massachusetts Department of Transportation. (\$34,440)
20. Knodler, Michael A. Jr. and Robin Riessman. (2010) “Commercial Motor Vehicle Crash Data Quality Improvement Project” Massachusetts Registry of Motor Vehicles. (\$175,068)
21. Knodler, Michael A. Jr. and John Collura. (2009/2012) “Coping with the Older Driving Population” Massachusetts Executive Office of Transportation and Public Works. (\$185,872).

22. Knodler, Michael A. Jr. and John Collura. (2009/2010) "Development of a Transportation Safety Technical Assistance Center for Integrated Analyses" University of Massachusetts Transportation Center (\$79,962)
23. Knodler, Michael A. Jr. and Robin Riessman. (2009/2011) "Development of Commercial Motor Vehicle Toolkit" Massachusetts State Police. (\$292,000)
24. Fisher, Donald and Michael A. Knodler Jr (Co-PI) (2009) "User-Paced vs. System-paced Voice User Interfaces" Mitsubishi Electronics Research Lab. (\$49,919)
25. Knodler, Michael A. Jr. (2009) "2009 Summer Transportation Institute" Massachusetts Executive Office of Transportation (\$38,096).
26. Knodler, Michael A. Jr. (2008) "2008 Statewide and Sub-Sample Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$100,000).
27. Knodler, Michael A. Jr. and Donald Fisher. (2008/2009) "Development and Evaluation of an Attention Maintenance Training Program" University of Massachusetts Transportation Center (\$74,965)
28. Knodler, Michael A. Jr. (2008) "2008 Summer Transportation Institute" Massachusetts Executive Office of Transportation via UMass-Boston. (\$40,000)
29. Knodler, Michael A. Jr. (2008) "2008 Statewide and Sub-Sample Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety and Security. (\$93,000)
30. Knodler, Michael A. Jr. (2008/2010) "Development of an Older Driver Crash Prediction Model" New England University Transportation Center. (\$99,805)
31. Knodler, Michael A. Jr. (2007/2008) "Follow-up Speed Data Collection for Rational Speed" Federal Highway Administration (\$15,000)
32. Knodler, Michael A. Jr., and John Collura. (2007/2008) "Development of a Traffic Safety Toolbox" Massachusetts Executive Office of Transportation and Public Works. (\$55,000)
33. Knodler, Michael A. Jr. (2007/2008) "Massachusetts Police Surveys" Massachusetts Executive Office of Public Safety and Security. (\$54,716)
34. Knodler, Michael A. Jr. (2007) "2007 Summer Transportation Institute" Massachusetts Executive Office of Transportation via UMass-Boston. (\$24,936).
35. Knodler, Michael A. Jr. (2007) "2007 Statewide and Sub-Sample Observational Safety Belt Surveys" Massachusetts Executive Office of Public Safety. (\$75,000)
36. Fisher, Donald and Michael A. Knodler Jr (Co-PI) (2007/2008) "An Evaluation of Back-up Camera Systems in Vehicles" Children's Hospital of Philadelphia, Nissan, and NSF. (\$54,972).
37. Fisher, Donald and Michael A. Knodler Jr (Co-PI) (2007). "Distraction and New In-vehicle Technologies: Evaluation Using an Advanced Driving Simulator" Mitsubishi Electronics Research Lab. (\$38,995)
38. Ni, Daiheng and Michael A. Knodler Jr (Co-PI) (2006/2007) "Understanding the Potential Safety and Mobility Benefits for Elderly Drivers by Simulation and Sensor Technology" New England University Transportation Center. (\$41,683)
39. Knodler, Michael A. Jr. (2006/2008) "Massachusetts Commercial Motor Vehicle Data Quality" Federal Motor Carrier Safety Administration and Massachusetts State Police. (\$218,592)
40. Knodler, Michael A. Jr. (2006/2008) "Improving Massachusetts Crash Data Quality" Massachusetts Executive Office of Transportation. (\$123,449)
41. Knodler, Michael A. Jr. (2006/2007) "Development and Pilot of Web-Based Police Crash Report Training" Massachusetts Governor's Highway Safety Bureau. (\$68,954)
42. Knodler, Michael A. Jr. (2006/2009) "Massachusetts Crash Outcome Data Evaluation System (CODES)" National Highway Traffic Safety Administration. (\$315,000) (Original PI: Heather Rothenberg)
43. Knodler, Michael A. Jr. (2006/2007) "An Application of Pavement Weather Sensors for the Tobin Memorial Bridge" Massachusetts Executive Office of Transportation. (\$42,000)
44. Knodler, Michael A. Jr. (2006) "Scenic Roads – Phase II" Massachusetts Executive Office of Transportation. (\$54,000)
45. Knodler, Michael A. Jr. (2005/2006) "Massachusetts Technical Assistance" Massachusetts Highway Department (\$75,000)
46. Knodler, Michael A. Jr. (2005/2006) "An Evaluation of Dilemma Zone Protection Practices for Signalized Intersection Control" Vermont Agency of Transportation. (\$53,000)

47. Collura, John, Knodler, Michael A. Jr. (Co-PI) and Daiheng Ni. (2005/2007) “Modeling Traffic Flow Impacts in Work Zones” New England Transportation Consortium. (\$100,000)
48. Knodler, Michael A. Jr. and Donald L. Fisher. (2005/2006) “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. (\$41,785)
49. Fisher, Donald L. and Michael A Knodler Jr (Co-PI) (2005/2006) “Driver-Eye-Movement-Based Investigation for Improving Work-Zone Safety” New England Transportation Consortium. (\$75,000)
50. Knodler, Michael A. Jr. (2005) “Statewide and Sub-Sample Observational Safety Belt Surveys” Massachusetts Executive Office of Public Safety. (\$63,000)
51. 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 (\$120,000)
52. Knodler, Michael A. Jr. (2005/2006) “Interdisciplinary Traffic Safety Curriculum” New England University Transportation Center. (\$30,000) (original PI: Kathleen Hancock).
53. O’Conner Barbara and Michael A. Knodler Jr. (Co-PI) (2005/2006) “Cooperative Agreement for Pedestrian Enforcement Programs” National Highway Traffic Safety Administration. (\$75,000)

## SELECTED PUBLICATIONS

### *Refereed Journal Publications*

1. Fournier, N., Christofa, E., and Knodler, M.A. (accepted). “A Mixed Method Investigation of Bicycle Exposure in Crash Rates”, *Accident Analysis & Prevention*.
2. 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.
3. 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.
4. 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*.
5. 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.
6. Roach, D., Christofa, E., and Knodler Jr., M.A. (2016) “Safety Assessment before and after Implementation of Roundabouts through Microsimulation.” *Advances in Transportation Studies*, Special Issue, Vol.2.
7. Fitzpatrick, C., McKinnon, I. A., Tainter, F. T., & Knodler, M. A. (2016) “The Application of Continuous Speed Data for Setting Rational Speed Limits and Improving Roadway Safety” *Safety Science*. Volume 85, pp. 171-178.
8. Zhang, T., Samuel, S., Zafian, T., Nicholas, C. A., Zhang, J., Knodler Jr, M., & Fisher, D. L. (2016). Can Secondary Traffic Alerts Improve the Latent Hazard Anticipation Ability of Novice and Experienced Drivers? A Simulator Study. In *Advances in Physical Ergonomics and Human Factors* (pp. 715-726). Springer International Publishing.
9. Yamani, Y., Samuel, S., Knodler, M. A., & Fisher, D. L. (2016). Evaluation of the effectiveness of a multi-skill program for training younger drivers on higher cognitive skills. *Applied Ergonomics*, 52, 135-141.
10. Gómez, R., Samuel, S., Romoser, M., Knodler, M., Collura, J., & Fisher, D. (2014). Mitigation of Pedestrian-Vehicle Conflicts at Stop-Controlled T-Intersections. *Transportation Research Record: Journal of the Transportation Research Board*, (2464), 20-28.
11. Fitzpatrick, C., Harrington, C., Knodler, M., and Romoser, M. (2014) “The Influence of Clear Zone Size and Roadside Vegetation on Driver Behavior” *Journal of Safety Research*. Volume 49, pp. 97-104.
12. Fitzpatrick, C., Abrams, D., Tang, Y. and M. Knodler (2013) “Spatial and Temporal Analysis of Driver Gap Acceptance Behavior at Modern Roundabouts” *Transportation Research Record* 2388, pp. 14-20.
13. Wenners, K., Knodler, M., Kennedy, J. and C. Fitzpatrick (2013) “Large-Scale Observation Study of

- Drivers' Cell Phone Usage" *Transportation Research Record* 2365, pp. 49-57.
14. Samuel, S., Romoser, M.R.E., Roman, L.G., Hamid, M., Gomez, R., Collura, J., Knodler, M. & Fisher, D.L. (2013) – Effects of Advanced Yield Markings and Symbolic Signs on Vehicle-Pedestrian Conflicts: A Field Evaluation – *Transportation Research Record*, 2393, 139-147, 2013.
  15. Turochy, R. E, Fricker, J. D., Hawkins, H. G., Hurwitz, D. S., Ivey, S., M. A. Knodler and R. K. Young. (2013) Assessment of Introductory Transportation Engineering Course and General Transportation Engineering Curriculum. *Transportation Research Record*, 2328, pp. 9-15.
  16. Muttart, J., Hurwitz, D., Pradhan, A., Fisher, D. and M. A. Knodler (2012). Warning System for Backing Crashes Developed from Acceleration and Response Time to an Audible Warning. *Journal of Transportation Safety & Security*. Volume 3, Issue 1, 38-58.
  17. Hurwitz, D. Wang, H., Knodler M.A., Ni, D. and D. Moore (2012). Fuzzy Sets to Describe Driver Behavior in the Dilemma Zone of High-Speed Signalized Intersection. *Transportation Research: Part F*, Vol 15F, pp.132-143.
  18. Hurwitz, D., Knodler, M. A. and B. Nyquist (2012). Evaluation of Advanced Sensor Detection in Type II Dilemma Zones at High-Speed Signalized Intersections. *ITE Journal*. Vol 82, No. 3, pp. 24-28.
  19. Pradhan, A. K., Divekar, G., Masserang, K., Romoser, M., Zafian, T., Blomberg, R. D., Thomas, F. D., Reagan, I., Knodler, M. A. Pollatsek, A. and D. L. Fisher (2011). The effects of focused attention training on the duration of novice drivers' glances inside the vehicle. *Ergonomics*, Vol. 54, Issue 10, pp. 917-931.
  20. Gomez, R., Samuel, S., Gerardino, L., Romoser, M., Collura, J., Knodler, M. and D. Fisher. (2011) Do advance yield markings increase safe driver behaviors at unsignalized, marked midblock crosswalks: A driving simulator study. *Transportation Research Record* 2264, pp.27-33.
  21. Hurwitz, D., Knodler, M. A. and B. Nyquist (2011). Evaluation of Driver Behavior in Type II Dilemma Zones at High-Speed Signalized Intersections. *Journal of Transportation Engineering*, Vol 137, No. 4 pp. 277-286.
  22. Heaslip, K., Collura, J. and M. A. Knodler (2011). Evaluation of Work Zone Design Features to Aid Older Drivers. *ITE Journal*. Vol 81, No. 3, pp. 36-40.
  23. Chan, E., Pradhan, A. K., Knodler Jr., M. A., Pollatsek, A. and D. L. Fisher (2010). Evaluation on a Driving Simulator of the Effect on Drivers' Eye Behavior from Distractions Inside and Outside the Vehicle. *Transportation Research: Part F*, Vol 13F, Issue 5, pp.343-353.
  24. Garay, L., Pradhan, A. K., Schmidt-Nielsen, B., Harsham, B., Weinberg, G., Shen, Y., Divekar, G., Romoser, M., Knodler, M. and D. L. Fisher (2010). Evaluation of Different Speech and Touch Interfaces to In-Vehicle Music Retrieval Systems. *Accident Analysis & Prevention*, Vol 42, Issue 3, pp. 913-920.
  25. Hurwitz, D., Pradhan, A., Fisher, D., Knodler, M. A., Muttart, J., Menon, R. and U. Meissner (2010). Backing Collisions: A Study of Drivers' Eye and Backing Behavior Using Combined Rear View Camera and Sensor Systems. *Injury Prevention*, Vol 16, Issue 2, pp.79-84.
  26. Pradhan, A. K., Pollatsek, A., Knodler, M. and D. L. Fisher (2009). Can younger drivers be trained to scan for information that will reduce their risk in roadway scenarios that are hard to identify as hazardous? *Ergonomics*, 52, pp. 657-673.
  27. Muttart, J. W., Fisher, D. L., Knodler, M. and A. Pollatsek (2007). Driving Without a Clue: Evaluation of Driver Simulator Performance During Hands-Free Cell Phone Operation in a Work Zone. *Transportation Research Record* 2018, pp. 9-14.
  28. Knodler Jr., M. A, Noyce, D. A., and D. L. Fisher (2007). Evaluating Effect of Two Allowable Permissive Left-Turn Indications. *Transportation Research Record* 2018, pp. 53-62.
  29. Fisher, D. L., Pradhan, A. K., Pollatsek, A. and M. A. Knodler Jr. (2007). Empirical Evaluation of Hazard Anticipation Behaviors in the Field and on a Driving Simulator Using Eye Tracker. *Transportation Research Record* 2018, pp. 80-86.
  30. Knodler Jr., M. A, Noyce, D. A., Kacir, K. C. and C. L. Brehmer (2006). Potential Application of the Flashing Yellow Arrow Permissive Indication in Separated Left-Turn Lanes. *Transportation Research Record* 1973, pp. 10-17.

31. Knodler Jr., M. A., Noyce, D. A., Kacir, K. C. and C. L. Brehmer (2006). An Analysis of Driver and Pedestrian Comprehension for Permissive Left-Turn Applications. *Transportation Research Record*, 1982, pp. 65-75.
32. Benavente, M., Knodler Jr., M. A. and H. Rothenberg (2006). A Case Study Assessment of Crash Data Challenges: Linking Databases for Analyzing Injury Specifics and Crash Compatibility Issues. *Transportation Research Record* 1953, pp. 180-186.
33. Knodler Jr., M. A., Noyce, D. A., Kacir, K. C. and C. L. Brehmer (2005). An Evaluation of the Flashing Yellow Arrow Permissive Indication for use in Simultaneous Indications. *Transportation Research Record* 1918, pp. 46-55.
34. Knodler Jr., M. A., Noyce, D. A., Kacir, K. C. and C. L. Brehmer. (2005). An Evaluation of Traffic Signal Displays for Protected-Permissive Left-Turn Control Using Driving Simulator Technology. *Journal of Transportation Engineering*, Volume 131 No. 4, pp. 270-278.
35. Rothenberg, H. Riessman, R. and M. A. Knodler Jr. (2005). Applying User Feedback to Improve Data Access and Usability: Massachusetts Beta Test Results *Journal of Safety Research*. Vol. 6, Issue 5, pp. 469-471.

***Refereed Journal Publications (under review)***

1. Hajiseydivadi, F., Zhang, T., Agrawal, R., Knodler, M., Fisher, D.L., & Samuel, S (under review). Effectiveness of Visual Warnings on Young Drivers Hazard Anticipation and Hazard Mitigation Abilities. *Accident Analysis & Prevention*.
2. Fitzpatrick, C., Knodler, M., & Samuel, S. (under review). The Use of Driving Simulation to Determine How Perception of Time Impacts Driver Aggressiveness. *Accident Analysis & Prevention*.
3. Krishnan, A., Samuel, S., Romoser, M. R., Knodler, M., & Fisher, D. L. (under review). *Evaluation of Training Program Designed to Decrease Young Drivers' Secondary Task Engagement in High-Risk Scenarios. Accident Analysis & Prevention.*
4. Hajiseydivadi, F., Schneider, C., Zhang, J., Romoser, M.R.E., Samuel, S., Knodler, M., & Fisher, D. (under review). Older driver simulator based intersection training: can simulator sickness be reduced and training effectiveness be maintained? *Journal of Safety Research*.
5. Park, H. J., Knodler, M., Gao, S., Park, K., & Samuel, S. (under review). Evaluation of Cell Phone Impact Zone at Signalized Intersections. *Journal of Safety Science*.
6. Park, H. J., Gao, S., Knodler, M., Samuel, S., & Haghani, A. (under review). Real time crash prediction and avoidance under unexpected traffic congestion. *Journal of Safety Research*.
7. Park, H. J., Gao, S., Knodler, M., Samuel, S., & Haghani, A. (2017, under revision). Dynamic Traffic Sensor Location and Partial submodularity: under Connected Vehicle Environment. *Transportation Science*.

***Refereed Conference Proceedings (peer reviewed by paper)***

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*. SAGE Publications
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*. SAGE Publications
3. Young, J., Zhang, T., Samuel, S., Knodler, M., & Fisher, D. L. (2017). Simulator Evaluation of the Effectiveness of an Comprehensive Teen Driver Training Program (No. 17-03443). In *Transportation Research Board 96th Annual Meeting*.
4. Zhang, T., Samuel, S., Zafian, T., Nicholas, C., Zhang, J., Knodler, M., & Fisher, D.L. (2016). Do Traffic Warnings on Google Glass Improve the Latent Hazard Anticipation Ability of Novice & Experienced Drivers? In *Proceedings of the Applied Human Factors & Ergonomics Conference*.
5. Schneider, C., Hajiseydivadi, F., Zhang, J., Romoser, M., Samuel, S., Knodler, M., & Fisher, D. (2016). Use of Micro-Scenarios to Reduce the Effects of Simulator Sickness in Training Intervention Studies. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 60, No. 1,

pp. 1946-1950). SAGE Publications.

6. Samuel, S., Zafian, T., Nicholas, C., Zhang, J., Knodler, M., & Fisher, D.L. (2016). Do Traffic Warnings on Heads-Mounted Displays Improve Latent Hazard Anticipation? A Simulator Study. In *Transportation Research Board 95th Annual Meeting*.
7. Samuel, S., Romoser, M., Knodler, M. & Fisher, D.L. (2015). Evaluating Spillover Effects on Forward Roadway Glance Duration. In *Proceedings of the International Road Safety & Simulation Conference*.
8. Gomez, R. A., Samuel, S., Romoser, M. R. E., Knodler Jr, M. A., Collura, J., & Fisher, D. L. (2014). Mitigation of Pedestrian-Vehicle Conflicts at Stop-Controlled T- Intersections. In *Transportation Research Board 93rd Annual Meeting* (No. 14- 1834).
9. Gómez, R. A., Samuel, S., Romoser, M. R. E., Gerardino, L. R., Knodler, M., Collura, J. and Fisher, D. L. (2013). A driving simulator evaluation of road markings and symbolic signs on vehicle-pedestrian conflicts. In: *Proceedings of the Conference on Road Safety on Four Continents*, Beijing. Linköping, Sweden: The Swedish National Road and Transport Research Institute.
10. Samuel, S., Romoser, M. R. E., Roman Gerardino, L., Hamid, M., Gomez, R. A., Knodler Jr, M. A., ... & Fisher, D. L. (2013). Effect of Advance Yield Markings and Symbolic Signs on Vehicle-Pedestrian Conflicts: Field Evaluation. In *Transportation Research Board 92nd Annual Meeting* (No. 13-4358).
11. Swansen, E. McKinnon, I. A. and M. A. Knodler (2013). Integration of Crash Report Narratives for Identification of Work Zone-Related Crash Classification. Annual Meeting of the Transportation Research Board, Washington DC.
12. Berthaume, A. and M. A. Knodler (2013). Hazardous Bicycle Maneuvers at Single-Lane Roundabouts in Massachusetts: A Conflict and Events Study. Annual Meeting of the Transportation Research Board, Washington DC.
13. 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. Annual Meeting of the Transportation Research Board, Washington DC.
14. Hurwitz, D. S., Tuss, H., Olsen, M. J., Roe, G. and M. A. Knodler (2013). Transportation Applications for Mobile Lidar Scanning: State-of-the-Practice Questionnaire. Annual Meeting of the Transportation Research Board, Washington DC.
15. 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. Annual Meeting of the Transportation Research Board, Washington DC.
16. 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. Annual Meeting of the Transportation Research Board, Washington DC.
17. Peabody, D. and M. Knodler (2012) Application of Spatial Crash Analyses and Road Safety Investigations to Increase Older Driver Safety: A Segment Based Analysis.
18. Swansen, E. and M. Knodler (2012). An Analysis of Linked Crash and Citation Data for use in Determining Causation for Work Zone Crashes. Annual Meeting of the Transportation Research Board, Washington DC.
19. 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 – *Transportation Research Board 90th Annual Meeting*
20. Tupper, S., Knodler, M. and D. Hurwitz (2011) Connecting Gap Acceptance Behavior with Crash Experience. Road Safety and Simulation, Indianapolis, IN.
21. Peabody, D. and M. Knodler (2011) An Application of Spatial Crash Analyses and Road Safety Investigations to Increase Older Driver Safety. Road Safety and Simulation, Indianapolis, IN.
22. 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. Annual Meeting of the Transportation Research Board, Washington D.C.
23. Heaslip, K. Collura, J. and M. A. Knodler (2009). Evaluation of Work Zone Design Features to Aid Older Drivers. Annual Meeting of the Transportation Research Board, Washington D.C.

24. 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. Annual Meeting of the Transportation Research Board, Washington D.C.
25. Knodler, M., Hurwitz, D. and H. Rothenberg (2008). An Evaluation of Rationally Implemented Speed Limits on Collector Roadway. Annual Meeting of the Transportation Research Board, Washington D.C.
26. 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. Annual Meeting of the Transportation Research Board, Washington, D.C.
27. 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.
28. 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.
29. Hurwitz, D. and M. Knodler (2007). Static and Dynamic Evaluation of the Driver Speed Perception and Selection Process. Driving Assessment, Olympia, WA.
30. Rothenberg, H, Benavente, M., Knodler, M. A. and Kennedy, J. (2007). An application of CODES Data Linkages for Crashworthiness Computations. Society of Automotive Engineers World Congress, Detroit, MI.
31. 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, D.C.
32. Hurwitz, D., Knodler Jr., M. and D. Dulaski (2005). Speed Perception Fidelity in a Driving Simulator Environment. Driving Simulation Conference - North America, Orlando, FL.
33. Knodler Jr., M. A. and Noyce, D. A. (2005). Tracking Driver Eye Movements at Permissive Left-Turns. Driving Assessment, Rockport, ME.
34. Knodler Jr., M. A., Noyce, D. A. and Kacir, K.C. (2003). An Application of Driving Simulator Technology: An Evaluation of Traffic Signal Displays for Protected-Permissive Left-Turn Control. Driving Simulator Conference – North America, Dearborn, MI.
35. Knodler Jr., M. A., Noyce, D. A., Kacir, K. C. and Brehmer, C. L. (2002). The Use of a Full-Scale Driving Simulator in Evaluating Driver Comprehension of Traffic Signals. 7<sup>th</sup> International Conference on Applications of Advanced Technology in Transportation, American Society of Civil Engineers, Cambridge, MA.

***Conference Proceedings (peer reviewed by abstract)***

36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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.
42. 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.

43. 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.
44. Benavente, M., Rothenberg, H. and M. Knodler (2006). Evaluation of Frequency and Injury Outcomes of Lane Departure Crashes. Institute of Transportation Engineers Annual Meeting, Milwaukee, WI.
45. Gadiel, G. and M. A. Knodler Jr. (2006). Conflict Analysis of In-Pavement Roadway Lights. Institute of Transportation Engineers Spring Conference, San Antonio, TX.
46. Knodler Jr., M. A. and D. Dulaski (2005). An Initial Evaluation of the Driver Speed Selection Process on Posted and Unposted Roadways Varying in Functional Classification. Institute of Transportation Engineers Spring Conference, Las Vegas, NV.
47. 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.
48. Knodler Jr., M. A., Noyce, D. A., Kacir, K. C. and C. L. Brehmer (2002). Comparison of the Green Ball and Flashing Yellow Permitted Indications. Institute of Transportation Engineers Annual Meeting, Philadelphia, PA.
49. 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

### ***Reports***

1. Knodler, Michael A. Jr., Heather Rothenberg and Robin Riessman (2011). "Improving Crash Data Quality in Massachusetts" Massachusetts Executive Office of Transportation & Public Works, Boston, MA.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

## 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 – 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.

#### *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 of Civil and Environmental Engineering 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.

### *Short Courses and Workshops*

- **Speed 101**  
Transportation Safety Institute – Taught 2 courses in 2008 & 2009
- **Speed Management**  
NHTSA, FHWA & FMCSA – Taught at 10 U.S. locations between 2007 & 2008
- **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

### *Affiliations*

- 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-present)
  - Member, Traffic Control Devices Committee (2006-present)
- Institute of Transportation Engineers – Member (2004-present)
  - Officer (Current: Past President), New England ITE (2006-present)
  - Officer (Current: Chair), Transportation Education Council (2006-present)
  - Secretary, Bicycle and Pedestrian Council (2002-2005)
  - University of Massachusetts Student Chapter Advisor (2005-present)
  - Student Member (1998-2004)
- ITS America - University Member (1999-present)
- American Society of Civil Engineers – Associate Member (2005-present)
  - Student Member (1997-2004)

### *Selected Service Activities*

- Chair, CEE Search Committee in Transportation (2015-2017)
- Member, College of Engineering Strategic Planning Committee (2016-2017)
- CEE Department Personnel Committee (2012-2016)
- CEE Curriculum Committee (2009-present)
- CEE Undergraduate Honors Program Director (2009-2015)
- UMass Mentoring Grant (\$2,000) for TEAAM Program (2006-2007)
- ASCE Journal of Transportation Ad hoc Reviewer
- CEE Scholarship Committee (2007-present)
- NERRC Scholarship, Chair (2004-present)
- Transportation Research Board Ad hoc Reviewer
- Institute of Transportation Engineers Ad-hoc Reviewer
- Interactive Classroom Administrator (2005-2009)
- TRB – TCD Doctoral Student Session Chair (2007-present)
- Canada Foundation for Innovation - Leaders Opportunity Fund Reviewer (2009-2010)