Feng Guo, Ph.D.

Associate Professor
Department of Statistics, Virginia Tech
Virginia Tech Transportation Institute
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EDUCATION

Ph.D in Statistics
University of Connecticut, Storrs, CT, 2007
Dissertation title: Modelling Genetic Data using Bayesian Hierarchical Models

Ph.D in Transportation Engineering
University of Connecticut, Storrs, CT, 2010
Dissertation title: Nationwide Freight Generation Models

M.S. Transportation Economics and Management
Tongji University, Shanghai, China, 2000

B.S. Highway and Traffic Engineering
Tongji University, Shanghai, China, 1995

RESEARCH INTERESTS

- Transportation statistics
- Bayesian hierarchical models
- Traffic safety modeling
- Spatial statistics
- Statistical epidemiology

PROFESSIONAL EXPERIENCE

Associate Professor, Department of Statistics, Virginia Tech, Virginia Tech Transportation Institute, Blacksburg, 2013-Current

Assistant Professor, Department of Statistics, Virginia Tech, Virginia Tech Transportation Institute, Blacksburg, 2007-2013

PROFESSIONAL SERVICES:

- Chair, Transportation Statistics Interest group of American Statistical Association. 2016-current
- Co-Chair, Data Analysis Committee. SAE Crash Data Collection and Analysis. 2013-current
- Associate Editor, Sankhya Series B. 2016-current
- Member, Transportation Research Board of the National Academies, Committee on Statistical Methods, (ABJ80) 2011-current
- Member of the Transportation Research Board of the National Academies, Committee on Safety Data, Analysis, and Evaluation (ANB20) 2011-current

- Member of the Transportation Research Board Subcommittee on Traffic Surrogate Measures 2010-current
- Organizer: SAMSI summer program on transportation statistics, August 14-18, 2017
- Scientific committee. The 6th Road Safety & Simulation International Conference 2017
- National Academy of Sciences Panel Study on Research Methodologies and Statistical Approaches to Understanding Driver Fatigue Factors in Motor Carrier Safety and Driver Health. (2014-2015)
- Reviewer for NAS penal report "Improving Motor Carrier Safety Measurement" (2017)
- Associate Editor for The 10th International Chinese Conference of Transportation Professionals (ICCTP 2010)
- Expert reviewer: NCHRP 08-36/Task 115 Applicability of Fair Division, Data Envelopment Analysis and Conjoint Analysis Techniques to Program Funding Level and Project Selection Decision making

PROFESSIONAL SOCIETIES

- American Statistical Association
- Mu Sigma Rho national statistical honor society
- New England Statistical Society
- International Chinese Statistical Association

HONORS AND AWARD

- **Taylor Technical Talent Award,** "Impact of Roadway Lighting on Crash Safety" Ronald Gibbons, Feng Guo, Alejandra Medina, Travis Terry, Jianhe Du, Paul Lutkevich, Qing Li,,The Illuminating Engineering Society of North America (IES)2015
- **Top 15 Most Read Article**, *New England Journal of Medicine,* 2014
- **58th "Most Talked About" Academic Study in 2014**, Altmetric.com (more than 70 news coverages including CBS, NBC, NPR, Associated Press, Fox News, and Routers)

  https://www.altmetric.com/top100/2014/
- **Best Poster Award:** "Senior Fitness-to-Drive Evaluation using Naturalistic Driving Study Data", Feng Guo, Youija Fang, Jonathan Antin, The Fourth International Symposium on Naturalistic Driving Study 2014
- Section on Bayesian Statistical Science best student paper award, Joint Statistical Meeting, Salt Lake City, 2007
- **Gottfried Noether Award**, University of Connecticut, January 2004
- Graduate Predoctoral Fellowship, University of Connecticut, 2004

Award from advisees

- First Place in Student Poster Award, Huiying Mao, Evaluating High G-force Events Using SHRP2 NDS Data, The SAMSI Summer Institute on Transportation Statistics
- Second Place in Student Poster Award, Danni Lu, Evaluating the Impact of Distraction on Crash Risk, The SAMSI Summer Institute on Transportation Statistics

PUBLICATIONS: PEER REVIEWED JOURNALS

UNDER REIVEW

1. Data and Methods for Studying Commercial Motor Vehicle Driver Fatigue, Highway Safety and Long-Term Driver Health, submitted to *Accident Analysis and Prevention*
2. An Objective Analysis of Teen Driver Exposure to High-risk Conditions Using SHRP 2 NDS Data . Sheila Klauer, Alexandria Noble a, Gayatri Ankem a, Feng Guo a,b, Suzie Lee a, Miguel Perez a, Jon Antin a, Bruce Simons-Morton c, Jon Hankey a, and Tom Dingus, *Accident Analysis and Prevention*
3. The prevalence and crash risk associated with cognitive distraction during driving, Dingus, T. A., Owens, J., Guo, F., Fang, Y., Perez, M., McClafferty, J., Fitch, G. M. (2017). *Journal of Safety Science*
4. A Time-Varying Coefficient Model for Evaluating Commercial Truck Driver Performance, Yi Liu, Feng Guo, and Richard Hanowski, *Journal of American Statistical Association*
5. Evaluate Driver Response to Active Warning System in Level-2 Automated Vehicle, Jon Atwood, Feng Guo, and Myra Blanco, *Transportation Research Part F*
6. The Crash Risk Associated with Daily Cellphone Use and Cellphone Use While Driving, Jon Atwood, Feng Guo, Gregory Fitch, and Thomas Dingus, *Accident Analysis and Prevention*
7. Evaluation of Peak-Hour Spatial and Temporal Travel Patterns in Megacities using Cellular Data, Danni Lu, James Li, and Feng Guo, *Transportation Research Part A*

JOURNALS PAPERS

(*Student under my supervision; **: corresponding author)

1. **Guo, F**., I. Kim, and S. G. Klauer. 2018. "Semiparametric Bayesian models for evaluating time-variant driving risk factors using naturalistic driving data and case-crossover approach." *Statistics in Medicine*: (In-press)
2. Li, Q.*, **F. Guo****, I. Kim, S. G. Klauer, and B. G. Simons-Morton. 2018. "A Bayesian finite mixture change-point model for assessing the risk of novice teenage drivers." *Journal of Applied Statistics* no. 45 (4):604-625.
3. Medina-Flintsch, A., J. S. Hickman, **F. Guo,** M. C. Camden, R. J. Hanowski, and Q. Kwan. 2017. "Benefit-cost analysis of lane departure warning and roll stability control in commercial vehicles." *Journal of Safety Research* no. 62:73-80.

4. Li, Q.*, **F. Guo****, S. G. Klauer, and B. G. Simons-Morton. 2017. "Evaluation of risk change-point for novice teenage drivers." *Accident Analysis and Prevention* no. 108:139-146.
5. Hickman, J. S., **F. Guo**, M. C. Camden, N. J. Dunn, and R. J. Hanowski. 2017. "An observational study of the safety benefits of electronic logging devices using carrier-collected data." *Traffic Injury Prevention* no. 18 (3):312-317.
6. **Guo, F.**, S. G. Klauer, Y. Fang, J. M. Hankey, J. F. Antin, M. A. Perez, S. E. Lee, and T. A. Dingus. 2017. "The effects of age on crash risk associated with driver distraction." *International Journal of Epidemiology* no. 46 (1):258-265.
7. Glaser, Y. G., **F. Guo**, Y. J. Fang, B. Deng, and J. Hankey. 2017. "Investigate moped-car conflicts in China using a naturalistic driving study approach." *Journal of Safety Research* no. 63:171-175.
8. Antin, J. F., **F. Guo**, Y. J. Fang, T. A. Dingus, M. A. Perez, and J. M. Hankey. 2017. "A validation of the low mileage bias using naturalistic driving study data." *Journal of Safety Research* no. 63:115-120.
9. Antin, J. F., **F. Guo**, Y. J. Fang, T. A. Dingus, J. M. Hankey, and M. A. Perez. 2017. "The influence of functional health on seniors' driving risk." *Journal of Transport & Health* no. 6:237-244.
10. Dingus, T. A., **F. Guo**, S. Lee, J. F. Antin, M. Perez, M. Buchanan-King, and J. Hankey. 2016. "Driver crash risk factors and prevalence evaluation using naturalistic driving data." *Proceedings of the National Academy of Sciences of the United States of America* no. 113 (10):2636-2641.
11. Chen, G. X., Y. J. Fang, **F. Guo,** and R. J. Hanowski. 2016. "The influence of daily sleep patterns of commercial truck drivers on driving performance." *Accident Analysis and Prevention* no. 91:55-63.
12. Chen, C.*, and **F. Guo****. 2016. "Evaluating the influence of crashes on driving risk using recurrent event models and Naturalistic Driving Study data." *Journal of Applied Statistics* no. 43 (12):2225-2238.
13. Zhu, H. H., Q. Chen, J. W. Ju, Z. G. Yan, **F. Guo,** Y. Q. Wang, Z. W. Jiang, S. Zhou, and B. Wu. 2015. "Maximum entropy-based stochastic micromechanical model for a two-phase composite considering the inter-particle interaction effect." *Acta Mechanica* no. 226 (9):3069-3084.
14. Simons-Morton, B. G., S. G. Klauer, M. C. Ouimet, **F. Guo**, P. S. Albert, S. E. Lee, J. P. Ehsani, A. K. Pradhan, and T. A. Dingus. 2015. "Naturalistic teenage driving study: Findings and lessons learned." *Journal of Safety Research* no. 54:41-48.
15. Hickman, J. S., **F. Guo,** M. C. Camden, R. J. Hanowski, A. Medina, and J. E. Mabry. 2015. "Efficacy of roll stability control and lane departure warning systems using carrier-collected data." *Journal of Safety Research* no. 52:59-63.
16. **Guo, F**., Y. J. Fang, and J. F. Antin. 2015. "Older driver fitness-to-drive evaluation using naturalistic driving data." *Journal of Safety Research* no. 54:49-54.
17. Gibbons, R. B., **F. Guo**, A. Medina, J. H. Du, T. Terry, P. Lutkevich, and Q. Li. 2015. "Approaches to Adaptive Lighting on Roadways." *Transportation Research Record* (2485):26-32.

18. Fitch, G. M., R. J. Hanowski, and **F. Guo**. 2015. "The Risk of a Safety-Critical Event Associated With Mobile Device Use in Specific Driving Contexts." *Traffic Injury Prevention* no. 16 (2):124-132.
19. Farmer, C. M., S. G. Klauer, J. A. McClafferty, and **F. Guo**. 2015a. "Secondary Behavior of Drivers on Cell Phones." *Traffic Injury Prevention* no. 16 (8):801-808.
20. Farmer, C. M., S. G. Klauer, J. A. McClafferty, and **F. Guo**. 2015b. "Relationship of Near-Crash/Crash Risk to Time Spent on a Cell Phone While Driving." *Traffic Injury Prevention* no. 16 (8):792-800.
21. Chen, Q., H. H. Zhu, J. W. Ju, **F. Guo**, L. B. Wang, Z. G. Yan, T. Deng, and S. Zhou. 2015. "A stochastic micromechanical model for multiphase composites containing spherical inhomogeneities." *Acta Mechanica* no. 226 (6):1861-1880.
22. Ouimet, M. C., T. G. Brown, **F. Guo**, S. G. Klauer, B. G. Simons-Morton, Y. J. Fang, S. E. Lee, C. Gianoulakis, and T. A. Dingus. 2014. "Higher Crash and Near-Crash Rates in Teenaged Drivers With Lower Cortisol Response An 18-Month Longitudinal, Naturalistic Study." *Jama Pediatrics* no. 168 (6):517-522.
23. Klauer, S. G., **F. Guo**, B. G. Simons-Morton, M. C. Ouimet, S. E. Lee, and T. A. Dingus. 2014. "Distracted Driving and Risk of Road Crashes among Novice and Experienced Drivers." *New England Journal of Medicine* no. 370 (1):54-59.
    ***Equally contributing authors**
    Rank 58 of all academic papers that received the most attention in 2014 with 72 media reports (https://www.altmetric.com/top100/2014/)
24. Klauer, S. G., **F. Guo**, and B. G. Simons-Morton. 2014. "Distracted Driving and Crash Risk REPLY." *New England Journal of Medicine* no. 370 (16):1565-1566.
25. Simons-Morton, B. G.**, F. Guo**, S. G. Klauer, J. P. Ehsani and A. K. Pradhan (2014). "Keep Your Eyes on the Road: Young Driver Crash Risk Increases According to Duration of Distraction." *Journal of Adolescent Health* **54**(5, Supplement): S61-S67.
26. **Guo, F**., and L. Aultman-Hall. 2014. "A zone design methodology for national freight origin-destination data and transportation modeling." *Transportation Planning and Technology* no. 37 (8):738-756.
27. Soccolich, S. A., M. Blanco, R. J. Hanowski, R. L. Olson, J. F. Morgan, **F. Guo**, and S. C. Wu. 2013. "An analysis of driving and working hour on commercial motor vehicle driver safety using naturalistic data collection." *Accident Analysis and Prevention* no. 58:249-258.
28. **Guo, F.**, B. G. Simons-Morton, S. E. Klauer, M. C. Ouimet, T. A. Dingus, and S. E. Lee. 2013. "Variability in Crash and Near-Crash Risk among Novice Teenage Drivers: A Naturalistic Study." *Journal of Pediatrics* no. 163 (6):1670-1676.
29. **Guo, F.**, and Y. J. Fang. 2013. "Individual driver risk assessment using naturalistic driving data." *Accident Analysis and Prevention* no. 61:3-9.
30. Simons-Morton, B. G., K. Cheon, **F. Guo** and P. Albert. 2013. "Trajectories of kinematic risky driving among novice teenagers." *Accident Analysis & Prevention* 51: 27-32.
31. Hickman, J. S., **F. Guo,** R. J. Hanowski, R. Bishop, G. Bergoffen, and D. Murray. 2012. "Safety Benefits of Speed Limiters in Commercial Motor Vehicles Using

Carrier-Collected Crash Data." *Journal of Intelligent Transportation Systems* no. 16 (4):177-183.

32. **Guo, F**., Q. Li, and H. Rakha. 2012. "Multistate Travel Time Reliability Models with Skewed Component Distributions." *Transportation Research Record* (2315):47-53.
33. Antin, J. F., T. E. Lockhart, L. M. Stanley, and **F. Guo**. 2012. "Comparing the impairment profiles of older drivers and non-drivers: Toward the development of a fitness-to-drive model." *Safety Science* no. 50 (2):333-341.
34. Novak, D. C., C. Hodgdon, **F. Guo,** and L. Aultman-Hall. 2011. "Nationwide Freight Generation Models: A Spatial Regression Approach." *Networks & Spatial Economics* no. 11 (1):23-41.
35. Jiao, Y., E. Cortes, K. Andrews, and **F. Guo**. 2011. "Poor-data and data-poor species stock assessment using a Bayesian hierarchical approach." *Ecological Applications* no. 21 (7):2691-2708.
36. Park, S., H. Rakha, and **F. Guo**. 2010. "Calibration Issues for Multistate Model of Travel Time Reliability." *Transportation Research Record* (2188):74-84.
37. **Guo, F.**, X. S. Wang, and M. A. Abdel-Aty. 2010. "Modeling signalized intersection safety with corridor-level spatial correlations." *Accident Analysis and Prevention* no. 42 (1):84-92.
38. **Guo, F**., H. Rakha, and S. Park. 2010. "Multistate Model for Travel Time Reliability." *Transportation Research Record* (2188):46-54.
39. **Guo, F.**, S. G. Klauer, J. M. Hankey, and T. A. Dingus. 2010. "Near Crashes as Crash Surrogate for Naturalistic Driving Studies." *Transportation Research Record* (2147):66-74.
40. **Guo, F.**, D. K. Dey, and K. E. Holsinger. 2009. "A Bayesian Hierarchical Model for Analysis of Single-Nucleotide Polymorphisms Diversity in Multilocus, Multipopulation Samples." *Journal of the American Statistical Association* no. 104 (485):142-154.
41. Scott, D. M., D. C. Novak, L. Aultman-Hall, and **F. Guo**. 2006. "Network Robustness Index: A new method for identifying critical links and evaluating the performance of transportation networks." *Journal of Transport Geography* no. 14 (3):215-227.

PEER REVIEWED CONFERENCE PROCEEDINGS (FULL PAPERS)

Please note that the Transportation Research Board meeting is the most influential meeting on transportation research, Papers are peer reviewed with about a 50% acceptance rate.

C1. Owens, J. M., Dingus, T. A., **Guo, F.**, Fang, Y., Perez, M., McClafferty, J., & Tefft, B. (2018). *Estimating the prevalence and crash risk of drowsy driving using data from a large-scale naturalistic driving study* (Paper No. 18-04410). Washington, DC: Transportation Research Board.

C2. Owens, J. M., Tefft, B., **Guo, F**., Fang, Y., Perez, M., McClafferty, J,. & Dingus, T. A. (2018). *Crash risk of cell phone use while driving: case-crossover study of SHRP 2 Naturalistic Driving Data* (Paper No. 18-03148). Washington, DC: Transportation Research Board.

C3. Jianhe Du, **Feng Guo**, Hesham Rakah "Study of High Occupancy Toll Lane Usage by Single Occupancy Vehicles" , *Proceedings of the Transportation Research Board 96th Annual Meeting*, 2016

C4. Gibbons, Ronald**, Feng Guo,** Jianhe Du, Alejandra Medina, Teavis Terry, Pul Lutkevich, Qing Li, Linking Roadway Lighting and Crash Safety, *Proceedings of the Transportation Research Board 94th Annual Meeting*, 2015

C5. Alejandra Medina Flintsch, Ronald B. Gibbons, Jianhe Du, **Feng Guo,** Travis Neal Terry, "Moving Toward MAP-21 and Beyond: Creating GIS Multistate Database to Support Safety Analyses", *Proceedings of the Transportation Research Board 94th Annual Meeting*, 2015

C6. Jeffery S. Hickman, **Feng Guo**, Mathew Camden, Richard J. Hanowski, Jessica Mabry, Quon Kwan, "Efficacy of Roll Stability Control, Forward Collision Warning, and Lane Departure Warning Using Carrier-Collected Crash Data", *Proceedings of the Transportation Research Board 91st Annual Meeting*, 2012

C7. Alejandra M. Flintsch, Jeffrey Hickman, **Feng Guo**, Richard J. Hanowski, Mathew Camden, "Cost-Benefit Analysis: Onboard Safety System Effectiveness Evaluation", *Proceedings of the Transportation Research Board 91st Annual Meeting, 2012.*

C8. Park, S., Rakha, H., **Guo, F.**, 2011. Multi-state travel time reliability model: Impact of incidents on travel time reliability. In: *Proceedings of the 14th International IEEE Conference on Intelligent Transportation Systems (ITSC*), Washington, DC, USA, pp. 2106-2111.

C9. Zachary R. Doerzaph, Rajaram Bhagavathula, **Feng Guo**, "Identification of factors related to violation propensity using large naturalistic intersection approach-level database" *Proceedings of* the *Transportation Research Board 89th Annual Meeting*, 2010.

C10. **Feng Guo**, Xuesong Wang, and Mohamed A. Abdel-Aty, "Corridor Level Signalized Intersection Safety Analysis Using Bayesian Spatial Models", *Proceedings of the Transportation Research Board 88th Annual Meeting*, 2009.

C11. Yang, S., Wang, W., and **Guo, F.** (2008) Effective Freeway Incident Response: A Bayesian Network Based Algorithm. *Transportation and Development Innovative Best Practices 2008*: pp. 344-349.

C12. **Feng Guo** and Lisa Aultman-Hall, "Comparing and Integrating Data Sources to Update the Truck Generation Model in a State-wide Planning Model", *Proceedings of the Transportation Research Board 84th Annual Meeting*, Washington DC, 2005.

C13. **Feng Guo** and Lisa Aultman-Hall, "Alternative Nationwide Freight Generation Models**",** *Proceedings of the Transportation Research Board 84th Annual Meeting*, Washington DC, 2005.

C14. Wael ElDessouki, John Ivan, and **Feng Guo**, "Trafficshed Approach for Estimating Hourly Traffic Volumes on Freeways," *Proceedings of the Transportation Research Board 82nd Annual Meeting*, Washington, DC, 2003.

C15. **Feng Guo** and Zhiming Tan, "Statistical Analysis of Traffic Flow Characteristics in Shanghai Highway System", *Proceedings of the Annual Meeting of Shanghai Society of Civil Engineering,* 2000.

CONFERENCE PROCEEDINGS (FULL PAPERS, ABSTRACT REVIEWED)

C16. **Feng Guo** and Lisa Aultman-Hall, "Towards Continental Freight Transportation Planning Models", *European Transport Conference*, Strasbourg France, October 2003.

REPORTS FOR FUNDED PROJECTS

R1. Hickman, J.S., Scopatz, B., Lantz, B., Bergoffen, G., Wu, Y., Camden, M.C., Mao, H., **Guo, F.,** & Hanowski, R.J. (under Agency review). *Hours-of-Service Rules Impact Analysis*. Washington, D.C: Federal Motor Carrier Safety Administration.

R2. Hickman, J.S., Mabry, J.E., Glenn, L., Guo, F., Mao, H., Richard, R.J., Whiteman, J., Herbert, W. (under Agency review). *Commercial Driver Individual Differences Study (CDIDS)*. Washington, DC: Federal Motor Carrier Safety Administration.

R3. Rizzo, M., Stern, H. S., Blower, D., Czeisler, C. A., Dinges, D. F., Greenhouse, J. B., **Guo, F.**, Hanowski, R.J., Hartenbaum, N.P., Krueger, G.P., Mallis, M.M., Pearson, J.R., Small, D.S., Stuart, E.A., & Wegman, D. H. (Panel on Research Methodologies and Statistical Approaches to Understanding Driver Fatigue Factors in Motor Carrier Safety and Driver Health). (2016). *Commercial motor vehicle driver fatigue, long-term health, and highway safety: Research needs.* Washington, DC: The National Academies Press. http://www.nap.edu/catalog/21921/commercial-motor-vehicle-driver-fatigue-long-term-health-and-highway-safety

R4. Charlie Klauer, Gayatri Ankem, **Feng Guo,** Peter Baynes, Youjia Fang, Whitney Atkins, Stephanie Baker, Rebekah Duke, Jon Hankey, Tom Dingus, (2016) *Driver Coach Study: Using Real-time and Post Hoc Feedback to Improve Teen Driving Habits*, the National Surface Transportation Safety Center for Excellence.

R5. Kevin Grove, Jon Atwood, Pete Hill, Greg Fitch, Myra Blanco, **Feng Guo**, Sheldon Russell, Matthew Marchese, Paul Bartholomew, & Trevor Richards*, Field Study Of Heavy-Vehicle Crash Avoidance Systems: Final Report* (2016) , National Highway Traffic Safety Administration, DOT HS 812 280

R6. **Feng Guo**, Youjia Fang, and Jonathan Antin (2014) *Older Driver Fitness-to-Drive Evaluation using Naturalistic Driving Study*, National Surface Transportation Center for Excellence

R7. Ronald Gibbons. **Feng Guo,** Alejandra Medina, Travis Terry, Jianhe Du, Paul Lutkevich, and Qing Li (2014), *Design Criteria for Adaptive Roadway Lighting*, (Report No. FHWA-HRT-14-051), Federal Highway Administration

R8. Ronald Gibbons, **Feng Guo,** Alejandra Medina, Travis Terry, Jianhe Du, Paul Lutkevich, David Corkum, and Peter Vetere (2014), *Guidelines for the Implementation of Reduced Lighting on Roadway*, (Report No. FHWA-HRT-14-050), Federal Highway Administration,

R9. Hickman, J.S., Camden, M.C., **Guo, F.,** Dunn, N.J., & Hanowski, R.J. (2014). *Evaluating the Potential Safety Benefits of Electronic Hours-of-Service Recorders*. Report RRR-13-059. Washington, D.C: Federal Motor Carrier Safety Administration.

R10. Fitch, G. M., Soccolich, S. A., **Guo, F.**, McClafferty, J., Fang, Y., Olson, R. L., Perez, M. A., Hanowski, R. J., Hankey, J. M., & Dingus, T. A. (2013). *The Impact of Hand-held and Hands-free Cell Phone Use on Driving Performance and Safety-Critical Event Risk*. (Report No. DOT HS 811 757). Washington, D.C.: National Highway Traffic Safety Administration.

R11. Jeffery S. Hickman, **Feng Guo**, Mathew C. Camden, Alejandra M. Flintsch, Richard J. Hanowski, and Erin J. Mabry (2013), *Onboard Safety Systems Effectiveness Evaluation: Final Report,* (Report No. FMCSA-RRT-12-012), Washington DC: Federal Motor Carrier Safety Administration.

R12. Richard J. Hanowski., Gene Bergoffen, Jeffery S. Hickman, **Feng Guo**, Dan Murray, Richard Bishop, Steve Johnson, and Mathew C. Camden, (2012). *Research on the Safety Impacts of Speed Limiter Device Installations on Commercial Motor Vehicles*, Washington, DC: Federal Motor Carrier Safety Administration.

R13. Myra Blanco, Richard J. Hanowski, Rebecca L. Olson, Justin F. Morgan, Susan A. Soccolich, Shih-Ching Wu, **Feng Guo** (2011), *The Impact of Driving, Non-Driving Work, and Rest Breaks on Driving Performance in Commercial Motor Vehicle Operations*, Report FMCSA-RRR-11-017, Federal Motor Carrier Safety Administration.

R14. Rakha, Hesham, Jianhe Du, Sangjun Park, **Feng Guo**, Zach Doerzaph, , Derek Viita, Gary Golembiewski, Bryan Katz, Nick Kehoe, and Heather Rigdon (2011) *Feasibility of Using In-Vehicle Video Data to Explore How to Modify Driver Behavior That Causes Nonrecurring Congestion*, Report S2-L10-RR-1, Transportation Research Board of the National Academies

R15. **Feng Guo**, Brian M. Wotring, and Jonathan F. Antin (2010), *Evaluation of Lane Change Collision Avoidance Systems Using the National Advanced Driving Simulator*, National Highway Traffic Safety Administration, Report number: DOT HS 811-332

R16. Sheila G. Klauer, **Feng Guo**, Jeremy Sudweeks, and Thomas A. Dingus (2010), *An Analysis of Driver Inattention Using a Case-Crossover Approach On 100-Car Data*, Report DOT-HS-811-334 the National Highway Traffic Safety Administration.

R17. **Feng Guo**, Sheila G. Klauer, Michael T. McGill, Thomas A. Dingus (2010), *The Relationship Between Near-Crashes and Crashes: Can Near-Crashes Serve as a Surrogate Safety Metric for Crashes*, Report DOT-HS-811-382 the National Highway Traffic Safety Administration.

R18. **Feng Guo**, Jonathan M. Hankey (2009), *Modeling 100-Car Safety Events: A Case-Based Approach for Analyzing Naturalistic Driving Data*, the National Surface Transportation Safety Center for Excellence.

R19. Sheila G. Klauer, **Feng Guo**, Vicki L. Neale, and David J. Ramsey (2008), *Estimating the relationship between highway infrastructure and environmental factors to traffic safety*, Virginia Tech Transportation Institute Center for Automotive Safety Research.

R20. Lisa Aultman-Hall, **Feng Guo**, Darren Scott, and Ted Grossardt (2002), *Development of Freight Commodity Generation Models,* Bureau of Transportation Statistics, US Department of Transportation.

R21. Lisa Aultman-Hall, **Feng Guo**, Chris O'Brien, Pat Padlo and Brian Hogge (2004), *Incorporating Truck Flows into the State-wide Planning Traffic Model*, Report #04-299 Final Report to the Connecticut Cooperative Highway Research Program.

R22. John Ivan, Wael ElDessouki, Ming Zhao, and **Feng Guo** (2002), *Estimating Link Traffic Volumes by Month, Day of Week, and Time of Day*. Joint Highway Research Advisory Council Report 02-287.

GRANTS

Submitted

G1. PI, Estimating Effectiveness of Safety Treatments in the Absence of Crash Data, NCHRP, $600K

G2. Co-PI: Impact of ADHD and Individual Symptom Dimensions on Driving Behaviors and Outcomes: Analysis of Naturalistic Driving Data from Early Licensure, NIH.

In contracting process

G3. Co-PI: "Developing a Sentinel Surveillance System for Drug Use by Drivers on the Road and in Crashes", The AAA Foundation for Traffic Safety. (in contracting process)

G4. Co-PI: "Identify kinematic threshold value for risk teen drivers", The General Motors(in contracting process)

GRANT

G1. PI (VT part) "Big Data Methodologies for Simplifying Traffic Safety Analyses" Safe-D National UTC, $109,608. May 2017-August 2018.

G2. PI: Evaluating Driving Time by Day Using SHRP2 Naturalistic Driving Study (SHRP2 NDS) Data, CSAA Insurance Service Inc, USD 39,670, Principal Investigators: Guo Feng (100%), 11/15/2016-04/30/2017

G3. Co-PI: Secondary Task Prevalence, odds Ratios vs Relative Risk, Absolute Risk and Alternative Baselies in SHRP2 Naturalistic Driving, University of Michigan - Ann Arbor, USD 24,310 (Total VT portion $314K), Principal Investigators: Klauer Sheila G (55%), Guo Feng (45%), 10/06/2016-05/31/2018

G4. Co-PI: Examination of the Legalization of Recreational Marijuana on the Driving While Intoxicated (DWI) System - Phase II, National Highway Traffic Safety Administration, Department of Transportation, USD 304,959, Principal Investigators: Smith Ryan C (65%), Guo Feng (25%), Dingus Thomas A (10%), 09/23/2016-03/22/2019

G5. Co-PI: Naturalistic Driving Study, Federal Motor Carrier Safety Administration, Department of Transportation, USD 1,799,676, Principal Investigators: Hanowski Richard J (50%), Hammond Rebecca L (40%), Guo Feng (10%), 09/20/2016-09/19/2018

G6. Co-PI: Truck and Bus Maintenance Requirements and Their Impact on Safety, Federal Motor Carrier Safety Administration, Department of Transportation, USD 335,627, Principal Investigators: Andrew Krum (50%), Guo Feng (40%), Richard Hanowski (10%), 09/19/2016-03/18/2019

G7. Co-PI: Risk of Eyes-Off-Road Behavior for Different Roadways and Traffic Demands: An Analysis Using SHRP2 NDS Data, MAC (7), USD 53,712, Principal Investigators: Sheila Klauer (55%), Feng Guo (45%), 06/01/2016-07/30/2016Co-PI FMCSA

G8. PI: Evaluating Interactions among Driver Behaviors and the Impacts on Safety Outcomes, National Surface Transportation Safety Center for Excellence $40,000 2016-2017

G9. Co-PI (PI: Miguel Perez), "Driving Maneuver Statistics using Shanghai NDS data" 2016-2017 General Motors $36,054 (40% effort)

G10. Co-PI: (PI Miguel Perez, "SHRP2 and Shanghai NDS Front Impact Avoidance Maneuver Analysis" (40% effort),) General Motors 2016-2017 $ 128,946

G11. Co-PI (PI: Tom Dingus), Case-Crossover Analysis Of The Crash Risk Of Cell Phone Use While Driving, $218,177 AAA Foundation (15% effort) 2016-2016

G12. Co-PI (PI: Tom Dingus), Crash Risks of Cognitive Distractions and Driver Drowsiness, AAA Foundation, $294,853 AAA Foundation (15% effort)2014-2015

G13. PI (Co-PI Jon Hankey) Moped-Vehicle Conflicts Evaluation using Shanghai NDS data; General Motors, $71,833 (90% effort). 2014-2015

G14. PI: Automation and Collision Avoidance Efficacy Using SHRP2 NDS; National Surface Transportation Safety Center for Excellence, $43,000 (100% effort), 2015-2016,

G15. Co-PI (PI: Gerardo Flintsch) "Development and Demonstration of Pavement Management Programs" Federal Highway Administration, $716,627 (Phase II) (20% effort), 2014~2015.

G16. Co-PI: (PI: Greg Fitch) Investigating the Relationship between Crashes/Near-Crashes and Cell Phone Call Duration and User Types, National Surface Transportation Safety Center for Excellence, $70,000 (50% effort). 2015-2016,

G17. Co-PI (PI: Sheila Klauer), Further analysis of the 100-Car Case-Crossover Baseline Data:, Association of Global Automakers$25,233 (50%) 2014-2015

G18. Co-PI (PI: Ron Gibbons; Co-PI: Suzie Lee) "Evaluating the Efficacy of Lighting, Markings, and Paint Schemes in Reducing the Incidence of Law Enforcement Vehicle Crashes", US Department of Justice (2013-2015) $806,199 (40% effort)

G19. Co-PI (PI: Greg Fitch, Co-PI, Hanowski) "Cell-Phone Naturalistic Driving Study (NDS) Dataset: Additional Analyses", National Highway Traffic Safety Administration September, 2013 –December, 2014, $350,296 (35% effort)

G20. PI, (Co-PI: Rich Hanowski) "Evaluate the Safety Impacts of Sleeping and Activity Patterns for Commercial Truck Drivers" National Institute of Occupational Safety and Health. $43,000.(50% effort) 2014~2015

G21. Co-PI (PI: Myra Blanco) "Field Study of Heavy Vehicle Crash Avoidance Systems" National Highway Traffic Safety Administration, $1,997,955, (10% effort), 2013-

G22. PI, (Co-PI: Jon Hankey) "Crash and Near-Crash Analysis for Shanghai NDS", (National Surface Transportation Safety Center for Excellence, $50,000 (90% effort), 2012~2015

G23. PI, (Co-PI: Jon Hankey) "Driver Distraction Analysis for Shanghai NDS", (National Surface Transportation Safety Center for Excellence, $30,000 (90% effort), 2012~2015

G24. PI, (Co-PI: Hesham Rakha) "Development of Bayesian Multi-State Travel Time Reliability Models", Mid-Atlantic Universities Transportation Center, $45,011.

G25. Co-PI (PI: Jeff Hickman; Co-PI: Rick Hanowski), "Technical Approach: Evaluating the Potential Safety Benefits of Electronic On-Board Recorders", Federal Motor Carrier Safety Administration, $350,000 (25% effort), 2012~2013

G26. PI, (Co-PI: Jon Hankey) "International Driver Behavior Comparison using Shanghai NDS", (National Surface Transportation Safety Center for Excellence, $140,000 (90% effort), 2012~2015.

G27. PI, (Co-PI: Jon Hankey) "Shanghai Naturalistic Driving Study" $121,000, Tongji University. (90% effort), 2012~2015.

G28. PI "Old Driver Fitness-to-Driver Analysis Using Naturalistic Driving Data" $25,000 National Surface Transportation Safety Center for Excellence, 2012~2014.

G29. PI, "The Impacts of Safety Critical Events on Driver Behaviors", National Surface Transportation Safety Center for Excellence, $25,000 (100% effort), 2012~2014.

G30. PI, "Traffic Safety Predictive Modeling", The CEI Group, $85,000 (100% effort), 2011~2012.

G31. Co-PI, (PI: Ron Gibbons; Co-PI Alejandra Medina)"Strategic Initiative for Evaluation of Reduced Lighting on Roadways" Federal Highway Administration. $886,542 (35% effort) 2011~2013.

G32. Co-PI, (PI: Gerardo Flitch) "Development and Demonstration of Pavement Management Programs" Federal Highway Administration, $131,268 (Phase I) (20% effort), 2011~.

G33. Co-PI, (PI: Sheila Klauer) "A Trip Level Analysis of Driver Distraction Using 100–Car Study Database" Insurance Institute of Highway Safety, $284,252 (50% effort), 2010~2012.

G34. Co-PI (PI: Jeff Hickman; Co-PIs Richard Hanowski; Erin Mabry) "Commercial Driver Individual Differences Study" Federal Motor Carrier Safety Administration, $3,000,000 (10% effort), 2010-2015.

G35. PI, "Final Report for NADS Lane Change Collision Avoidance System Study", National Highway Traffic Safety Administration, $ 29,967 (100% effort), 2009~2010.

G36. Co-PI, (PI: Gerardo Flintsch) Sponsor confidential, $48,992 (50% effort), 2009~2010.

G37. PI, "Developing Bayesian Models for Naturalistic Driver Study", National Surface Transportation Safety Center for Excellence, $59,755 (100% effort), 2008 – current.

G38. Co-PI, (PI: Jon Hankey) "Modeling 100-Car Naturalistic Driving Study data", National Surface Transportation Safety Center for Excellence $30,000, 2007- 2008.

G39. Co-PI, (PI: Lisa Aultman-Hall) "Development of an optimal nationwide freight planning zone system", the New England University Transportation Center, $54,772, 2004 – 2005.

INVITED TALKS

1. Using SHRP 2 Data to Capture the Most Dangerous Phase of Cell Phone Use, TRB 2018 Annual Meeting, Washington, DC.
2. Statistics Inference and Big Data: Risk Assessment and Prediction using NDS, Tongji University, Dec 9 2017

3. NDS and Driving Safety, Beijing Jiaotong University, Dec 11, 2017
4. Driver Risk Prediction and Behavior Intervention, The 5th Annual Distracted Driving Summit, Norfolk, VA. Oct 29, 2017.
5. "Causal Inference on Commercial Motor Vehicle Driver Fatigue, Long-term Health and Safety" The 10th International Conference on Managing Fatigue, San Diego, March 2017
6. "Statistical Challenges in Evaluating the Impact of Driver Behavior for Naturalistic Driving Study" Invited Session: Using the Extraordinary Power of Statistics for Transportation Safety Research at the Federal Highway Administration, Joint Statistical Meeting, August 3rd, 2016
7. "The Impact of Driver Behavior on Safety: Results from Naturalistic Driving Study", Traffic Safety Symposium, Shanghai, July 10th 2016
8. Feng Guo, "The Impact of Driver Behavior on Safety: Results from Naturalistic Driving Study" Transportation Research Congress Inaugural Meeting, Beijing, June 7th, 2016
9. "Driving Risk Assessment with Novel Data Sources", INFORMS Seminar, Virginia Tech, April 6th, 2016
10. "Context Sensitive Selection of Crash Surrogates for Naturalistic Driving Studies", Transportation Research Board Annual Meeting, January 12th, 2016
11. "New Tools for Transportation Statistics" Invited Session Discussant, JSM 2015, Seattle, WA, August 13, 2015
12. "A Case-Based Approach to Assessing Time-variant Risk Factors for Naturalistic Driving Study" Invited Session: Innovative Statistical Methodology for Studying Driving: Opportunities for Biostatisticians, WNAR 2015, Boise, Idaho, June 16, 2015
13. "Driving Behavior and Active Safety System Evaluation using Naturalistic Driving Study" The 9th China Road Safety Forum, Beijing. August 25th, 2015
14. "Fundamentals of Highway Safety Modeling", Research Institute of Highway of the Minister of Transport. Beijing, China August 28, 2015.
15. "Driver Behavior Evaluation" China Academy of Railway Science. August 27, 2015, Beijing, China
16. "Modeling Crash Likelihood Using Naturalistic Driving Study Data" June 4th 2014, Southeast University, Nanjing, China.
17. "Sampling Strategy and Analysis Method" Federal Highway Administration Naturalistic Driving Study Workshop, August 4-5, 2014 Washing DC and September 24-25, 2014, Blacksburg, VA
18. "Analysis of Naturalistic Driving Data" Recent Advances in Young Driver Research: New Analytic Approaches from Recent and On-going Research Workshop, January, 2013, Washington DC.
19. "Analysis of Naturalistic Driving Study Data" Naturalistic Driving Study Workshop at the Federal Highway Administration, Oct, 2012, McLean, Virginia.
20. "Developing Data Analysis Plan for Naturalistic Driving Study", Naturalistic Driving Study Workshop at the Transportation Research Board, January, 2012 Washington DC.

21. "Estimating Crash Risk Using Naturalistic Driving Study Data", The Second International Naturalistic Driving Symposium, September, 2010, Blacksburg, VA
22. "Modeling Crash Likelihood Using Naturalistic Driving Study Data", Workshop for euroFOT research group, May, 2010, Blacksburg, VA
23. "Modeling Crash Likelihood Using Naturalistic Driving Study Data" March 2010, National Institute of Child Health and Human Development.
24. "Assessing Driving Risk Using Naturalistic Driving Studies", Joint Sino-German Symposium on Urban Road Traffic Safety, Shanghai, China, October, 2009
25. "Modeling 100-Car Data", INFORMS seminar, April 2009, Virginia Tech
26. "Modeling Safety Outcomes of Naturalistic Driving Study", Naturalistic Driving Study Workshop at the Transportation Research Board, January 2009 Washington DC.
27. "Cohort and Case-control approaches", First Human Factors Symposium: Naturalistic Driving Methods & Analyses, August 2008, Blacksburg, VA.

CONFERENCE PRESENTATIONS

1. Owens, J. M., Dingus, T. A., **Guo, F.,** Fang, Y., Perez, M., McClafferty, J., & Tefft, B. (2018). *Estimating the prevalence and crash risk of drowsy driving using data from a large-scale naturalistic driving study* (Paper No. 18-04410) [Extended Abstract]. Paper presented at the TRB 2018 Annual Meeting, Washington, DC.
2. Owens, J. M., Tefft, B., **Guo, F**., Fang, Y., Perez, M., McClafferty, J,. & Dingus, T. A. (2018). *Crash risk of cell phone use while driving: case-crossover study of SHRP 2 Naturalistic Driving Data* (Paper No. 18-03148) [Extended Abstract]. Paper presented at the TRB 2018 Annual Meeting, Washington, DC.
3. Antin, J. F., **Guo, F**., Fang, Y., Dingus, T. A., Hankey, J. M., Perez, M. A. (2017). *The influence of functional health on seniors' driving risk and mobility using naturalistic driving study data*. 6th International Symposium on Naturalistic Driving Research, June 7-9, 2017, Hague, Netherlands.
4. Chen, G.X., Fang, Y., **Guo, F.,** Hanowski, R. J. (2017). *Truck driver sleep patterns influence driving performance. 10th International Conference on Managing Naturalistic Driving Research*, March 20-23, 2017, San Diego, CA, USA.
5. *Statistical Analysis of Naturalistic Driving Study Data: How You Slice and Dice Matters* , Discussant, Baltimore, MD August 3rd, 2017 JSM 2017
6. Li, Qing, Feng Guo, and Inyoung Kim, *Non-Parametric Bayesian Change-Points Methods for Detecting Driving Risk Changes*, JSM August 2nd, 2017, Baltimore, MD
7. Jon Atwood and **Feng Guo,** *The Prevalence of Cell Phone Use Overall and While Driving and the Association with Crash Risk*, Baltimore, MD August 3, 2017 JSM 2017
8. Chen, G.X., Fang, Y., **Guo, F.,** Hanowski, R. J. (2016). *The influence of daily sleep patterns of commercial truck drivers on driving performance*. The 5th International Symposium on Naturalistic Driving Research, Aug. 30-Sep. 1, 2016, Blacksburg, VA, USA.

9. Glaser, Y., **Guo, F.,** Fang, Y., Deng, B., Hankey, J. (2016). I*nvestigate moped-vehicle conflicts in China using a naturalistic driving study approach*. The 5th International Symposium on Naturalistic Driving Research, Aug. 30-Sep. 1, 2016, Blacksburg, VA, USA
10. Yi Liu and Feng Guo, *A Semiparametric Frailty Model with Time-Varying Coefficients Based on Penalized B-Splines with Application to the Naturalistic Truck Driving Study,* Joint Statistical Meeting, Chicago, August 3rd, 2016
11. Jianhe Du, **Feng Guo**, Hesham Rakah, *Study of High Occupancy Toll Lane Usage by Single Occupancy Vehicles*, Transportation Research Board 96th Annual Meeting, Washing D.C. 2016
12. Wei Wang and **Feng Guo,** *Big Data for User-focused Identification of Road Infrastructure Conditions and Safety Concerns*, *Transportation Research Board 96th Annual Meeting*, 2016, Washing D.C.
13. Hickman, J.S., Hanowski, R.J., Mabry, J.E., **Guo, F.,** Herbert, W., Hallquist, T., & Walker, M. (2015). *The Commercial Driver Individual Differences Study*. The 9th International Conference on Managing Fatigue in Fremantle Australia.
14. Hickman, J.S., Hanowski, R.J. **Guo, F.,** Medina, A., & Kwan, Q. (2012). *Efficacy of roll stability control, lane departure warning, and forward collision warning using carrier-collected crash data*. The Annual Society of Automotive Engineers Commercial Vehicle Engineering Congress in Chicago, IL
15. **Feng Guo**, *Crowd-Sourcing Big Data from Smartphone Apps for Transportation Research: Role of Statistics and Challenge*, JSM August 10th 2015, Seattle
16. Qing Li and Feng Guo "Change-Points Detection in Driving Risk Allowing for Varying Change-Points Among Subjects by Bayesian Parametric Models." JSM 2015, Seattle, August 10th 2015
17. Youjia Fang and **Feng Guo,** *Bayesian random exposure Poisson regression models for evaluating the safety impact of cellphone visual-manual tasks*, JSM, August 12th 2015, Seattle
18. Gibbons, Ronald, **Feng Guo,** Jianhe Du, Alejandra Medina, Teavis Terry, Pul Lutkevich, Qing Li, *Linking Roadway Lighting and Crash Safety*, *The Transportation Research Board 94th Annual Meeting*, January 2015, Washington D.C.
19. Alejandra Medina Flintsch, Ronald B. Gibbons, Jianhe Du, Feng Guo, Travis Neal Terry, *Moving Toward MAP-21 and Beyond: Creating GIS Multistate Database to Support Safety Analyses*, The Transportation Research Board 94th Annual Meeting, January 2015, Washington D.C.
20. Gibbons, Ronald, **Feng Guo,** Jianhe Du, Alejandra Medina, Teavis Terry, Pul Lutkevich, Qing Li, *Approaches to Adaptive Lighting on Roadways*, The Transportation Research Board 94th Annual Meeting, January 2015, Washington D.C.
21. Qing Li and **Feng Guo,** *Recurrent-Event Models for Detecting the Change-Points of Driving Risk for Teenage Drivers*. JSM, Aug, 2014. Boston
22. Chen Chen and Feng Guo, *Assessing Time-Varying Crash Effect using Semi-parametric Recurrent Event Model*, JSM, Aug, 2014, Boston

23. Chen Chen and **Feng Guo**; *Evaluate the impact of crashes on driving risk using recurrent event models*, JSM, Aug, 2013, Montreal, Canada,
24. Fitch, G. M., **F. Guo,** Y. Yang, S. Soccolich, M. Perez, R. Hanowski, J. Hankey, T. Dingus, T*he Impact of Hand-Held and Hands-Free Cellphone Use on Driving Performance and Safety-Critical Event Risk*, The 3rd International Conference on Driver Distraction and Inattention, September 2013, Gothenburg, Sweden.
25. Youjia Fang and **Feng Guo**: *Model distraction-related driving risk using Bayesian hierarchical models,* JSM, Aug, 2013, Montreal, Canada,
26. Medina, A., Hickman, J.S., Hanowski, R.J., **Guo, F**., & Kwan, Q, *A formal economic analysis of roll stability control and lane departure warning using carrier-collected crash data*. 2012, The annual Society of Automotive Engineers Commercial Vehicle Engineering Congress in Chicago, IL.
27. Medina-Flintsch, A., Hickman, J.S., **Guo, F**., Camden, M.C., Hanowski, R.J., *Cost benefit analysis - onboard safety systems effectiveness evaluation*. The Annual Transportation Research Board Conference, 2012, Washington, D.C.
28. Hickman, J.S., **Guo, F.,** Camden, M.C., Hanowski, R.J., Medina, A., Mabry, J.E., & Kwan, Q. (2012). *Efficacy of roll stability control, forward collision warning, and lane departure warning using carrier-collected crash data*. Paper presented at the annual Transportation Research Board Conference in Washington, D.C.
29. Camden, M., **Guo, F.,** Hickman, J.S., & Hanowski, R. (2011, August). *Onboard safety system effectiveness evaluation for commercial motor vehicles.* Paper presented at the 2011 Joint Statistical Meetings, Miami Beach, FL.
30. Hickman, J.S., Hanowski, R.J., Mabry, J.E., **Guo, F**., Herbert, W, Hallquist, T., & Walker, M., *A methods overview of a case-control approach to assess obstructive sleep apnea in commercial vehicle drivers*. The bi-annual International Conference on Managing Fatigue in Transportation, Resources and Health, 2011, Perth, Australia.
31. Inyoung Kim**, F. Guo,** and Cun Gang Park. *Conditional logistic mixed effects model for matched case-control studies with traffic accident application*, The Joint Statistical Meeting 2011:Aug 2011, Miami Beach, FL
32. Inyoung Kim and **F. Guo**, *Conditional logistic mixed effects model for unbalanced matched case-control studies*, Eastern North American Region/International Biometric Society, Mar 2010, New Orleans, LA,
33. Feng Guo, *Assessing the crash and near-crash rate for teenage drivers*, Joint Statistical Meeting, 2010, Denver, Colorado,
34. Feng Guo, *A Case-Crossover Study for Evaluating the Safety Impact of Driver Behavior*, Joint Statistical Meeting, 2009, Washington D.C.
35. Feng Guo, *Safety Analysis of Signalized Intersections Using Bayesian Spatial Models*, Joint Statistical Meeting, Denver, 2008, Colorado
36. Feng Guo, *Statistical Reasoning and Study Design in Transportation Safety Study*, Virginia Tech Transportation Institute, 2008.
37. Feng Guo, *On Detecting Stabilizing or Divergent Selection Using Patterns of Variation at SNP Loci*, Joint Statistical Meeting, 2007, Salt Lake City, Utah

38. Feng Guo, *A Hierarchical Bayesian Approach for Estimating Origin of Mixed Population*, contributed session at the Twentieth New England Statistics Symposium, 2006, Worcester Polytechnic Institute, Worcester, Massachusetts
39. Feng Guo, *Comparing and Integrating Data Sources to Update the Truck Generation Model in a State-wide Planning Mode*", 84th Transportation Research Board Annual Meeting, 2005, Washington D.C.

INVITED LECTURE:

1. "Fundamentals of Highway Safety Modeling", "June 5th to June 7th, 2014, Southeast University, Nanjing, China.

CONFERENCE ORGANIZER AND CHAIR

- Organizer, The SAMSI Summer Institute on Transportation Statistics, August 14th -18th 2017, Durham, NC
- Chair, The Essential Role of Statistics for the Future of Mobility, Baltimore, JSM 2017
- Chair, "Americans on the Move: Challenges and Solutions in Modeling Transportation Data", JSM, 2016, Chicago
- Organizer, "Advanced Statistical Models for Driving Risk and Driving Behavior" August 10th JSM 2015, Seattle
- Chair, "Innovative Approaches to Administrative Records", August 10th JSM 2015, Seattle
- Organizer and Chair, "Modeling Driver Behavior Using Advanced Data Collection Method", August 3rd JSM 2014, Boston
- Chair of Invited Penal Discussion on Transportation Statistics and Data Needs, JSM 2013, Montreal, Canada
- Organizer for the session on transportation statistics at JSM 2011, Miami, FL

JORNAL REVIEW

- *IEEE Transactions on Intelligent Transportation Systems*
- *Plos One*
- *Journal of American Statistical Association*
- *Statistics in Medicine*
- *Journal of Safety Research*
- *International Journal of Environmental Research and Public Health*
- *Journal of Transportation Research Record*
- *Accident Analysis and Prevention*
- *Traffic Injury and Prevention*
- *Transportation Research Part C*
- *Journal of Transportation Engineering*
- *Ecological Applications*
- *Transportmetrica*
- *Journal of Adolescent Health*
- *Journal of Transportation Safety and Security*

- *Sustainability*
- *International Journal of Environmental Research and Public Health*
- *Journal of natural science publishing*
- *Pediatrics*
- *Journal of Public Health*
- *American Journal of Preventive Medicine*

♦ Research proposal reviewers for 2013 research solicitation, The National Center for Transportation Systems Productivity and Management (NCTSPM), a U.S. DOT University Transportation Center

UNIVERSITY SERVICE

♦ President, College of Science Faculty Associate , Virginia Tech (2014-2015)

♦ Vice-President, College of Science Faculty Associate (2013-2014)

♦ Design Team: Data Analytics and Decision Science Destination Area (2016)

♦ Design Team: Intelligent Infrastructure for Human-centered Communities Destination Area (2016)

DEPARTMENT SERVICE

♦ Committee member, Human Factors of Transportation Safety Graduate Certificate Program (2014-current).

♦ Biostatistics Hiring Committee (2015)

♦ CMDA assistant professor search committee (2015)

♦ Department of Statistics Graduate Committee (2014~ present)

♦ Department of Statistics Computing Committee (2007 - 2016)

♦ Chair: CMDA Hiring Committee (2014-2015)

♦ Department CMDA Hiring Committee (2013-2014)

♦ Department Spatial-Temporal Hiring Committee s (2013-2014)

♦ Department of Statistics Colloquium Organizer (Fall 2011~Spring 2012)

♦ Corporate Partner Conference Mu Sigma Rho Seminar Committee (2010 - 2011)

GRADUATE STUDENT ADVISORY COMMITTEE

Ph.D students graduated as Chair

NAME AND MAJOR	YEAR	JOB PLACEMENT
Youjia Fang (Statistics)	2014	Virginia Tech Transportation Institute, 2014 -Current
Dengfeng Zhang (Statistics)	2014	Citi Bank (2014-2017); Jingdong Finance (2017)
Chen Chen (Statistics)	2015	(CSAA Insurance)

Qing Li (Statistics)	2015	Visiting Assistant Professor Univ. of Wisconsin-Madison (2015 – 2018) Tenure Track Assistant Professor, Iowa State University (2018-)

Ph.D Committee Chair (current)

Yi Liu (Statistics)
Jon Atwood (statistics)
Maggie Mao(Statistics)
Danni Lu (Statistics)

Visiting Scholar Hosted

Dr. Xingguo Jiang, Shouthwestern University, China September 2016
Dr. Jinsong Kang, Tongji University, China, August 2016
Danni Lu (September 2014 to March 2015)
Qing Chen (January 2013 to January 2015)
Zhen Yang (December 2013 to December 2014)
Zhonghong Dong (September 2013 to June 2014)
Lanfang Zhang (August 2011-August 2012)
Shu Han (August 2010~August 2011)

Ph.D Committee Member

Kang, Xiaoning (Statistics)
Sun, Peng (Statistics)
Shunan Zhao (Statistics)
Ryland Wayne Musick (Civil Engineering)
Ross McCarthy (Civil Engineering)
Shahriar Najafi (Civil Engineering) ,2015
Elhenawy, Mohammed Mamdouh Zakaria (Civil Engineering) ,2015
Laing Shan (Statistics) 2015,
Ana Maria Ortega Villa (Statistics 2015)
Yangyi Xu (Statistics 2015)
Dan Hua (Fisheries and Wildlife Sciences) Graduated in Jan 2015
Mohammed Elhenawy (Electronic Engineering) Graduated in May 2015
Yan Li (Fisheries and Wildlife Sciences) Graduated in May 2014
Bryan Higgs (Civil Engineering) Graduated in July 2014
Hao Chen (Civil Engineering) Graduated in 2014
YuanYuan Duan (Statistics) Graduate in 2014
Ismail Zohdy (Civil and Environmental Engineering) 2013
Huaiye Zhang (Statistics) graduated in 2012
Jonathan Duggins (Statistics) Graduated in 2010
Matthew Williams (Statistics) graduated in 2010
Hao Yu (Fisheries and Wildlife Sciences) graduated in 2010

M.S. Committee Member

Amith Kaushal Bangalore Narendranath Rao (ECE)
Yiyuan Wu, Statistics, Graduated in Feb. 2017

Yan Li (Statistics), Chair, graduated in 2012
Zhiliang Xing (Statistics)
Nicholas Kehoe (Civil and Environmental Engineering)
Gaoqiang Zhang (Civil and Environmental Engineering), graduated in 2012
Steve Valeri (Civil and Environmental Engineering), graduated in 2012
Man Tang (Fisheries and Wildlife Sciences) graduated in 2014
Katherine Griffin (Statistics) graduated in 2011
Elaine Nsoesie (Statistics) graduated in 2008
Nicolle Goble (Statistics) graduated in 2009
Emmanuel Frimpong (Statistics) graduated in 2009
Ismail Zohdy (Civil and Environmental Engineering) graduated in 2009
Yan Li (Fisheries and Wildlife Sciences) graduated in 2010
Tye Deweber (Fisheries and Wildlife Sciences) graduated in 2010
Bryan Higgs (Civil and Environmental Engineering) graduated in 2011