**SRINIVAS REDDY GEEDIPALLY, Ph.D., P.E.**

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## RESEARCH INTERESTS

Traffic Safety, Data Analysis, Statistical Modeling, Bayesian Statistics, Geometric Design.

## WORK EXPERIENCE

**Research Engineer** **January 2021- Present**
Texas A&M Transportation Institute, Texas A&M University System

**Associate Research Engineer** **June 2016- December 2020**
Texas A&M Transportation Institute, Texas A&M University System

**Assistant Research Engineer** **May 2012- May 2016**
Texas A&M Transportation Institute, Texas A&M University System

**Adjunct Faculty** **Summer 2013**
University of Texas, Arlington, Texas
CE 5300: Traffic Safety Analysis

**Associate Transportation Researcher** **September 2011- April 2012**
Texas A&M Transportation Institute, Texas A&M University System

**Engineering Research Associate** **January 2009- August 2011**
Texas A&M Transportation Institute, Texas A&M University System

**Guest Lecturer** **Spring 2008- Spring 2012**
Texas A&M University, College Station, Texas
CVEN 635: Streets and Highway Design; CVEN 626: Roadside Safety Design; CVEN 456: Highway Design; CVEN 307: Transportation Engineering.

**Graduate Research Assistant** **September 2005- December 2008**
Texas A&M Transportation Institute, Texas A&M University System

## EDUCATION

**Doctor of Philosophy in Civil Engineering (Transportation Eng)** **December 2008**
Texas A&M University, College Station, Texas
*Dissertation* – "Examining the Application of Conway-Maxwell-Poisson Models for Analyzing Traffic Crash Data".

**Master of Science in Traffic Environment and Safety Management** **April 2005**
Linköpings University, Sweden
*Thesis* – "Analysis of Traffic Accidents before and after Resurfacing: A Statistical approach". Swedish National Road and Transport Research Institute (VTI), Sweden.

**Bachelor of Engineering in Civil Engineering** **July 2002**
Osmania University, India
*Thesis* – "Traffic Evaluation and Management along the Kukatpally- LB.Nagar LRT corridor in Hyderabad, India".

## AWARDS AND HONORS

- Best Paper Award, TRB (2021)

- The Fred Burggraf Award, TRB (2016)
- TTI/Trinity Herbert H. Richardson Team Award (2016)
- TTI/Trinity Herbert H. Richardson Team Award (2015)
- The New Researcher Award, Texas A&M Transportation Institute (2013)
- Young Researcher Award, TRB Committee on Statistical Methodology (2011)
- Young Researcher Award, TRB Committee on Safety Data, Analysis and Evaluation (2010)
- Academic Excellence Award, Texas A&M University (2008-09).
- Second prize, Student Research week, Texas A&M University (March 2008)

## PROFESSIONAL AFFILIATIONS

- Handling Editor, Transportation Research Record
- Handling Editor, Frontiers in Future Transportation
- Editorial Advisory Board Member, Analytic Methods in Accident Research, Elsevier
- Member, TRB Committee on Pedestrians (ACH10), 2020 – present.
- Young Member, TRB Committee on Motorcycles and Mopeds (ANF 30), 2015-17.
- Young Member, TRB Committee on Highway Safety Performance (ANB25), 2012-13.
- Member, Texas District of the Institute of Transportation Engineers (TexITE)
- Member, TRB Subcommittee on Surrogate Measures of Safety (ANB20-(3))
- Friend, TRB Committee on Statistical Methodology (ABJ80)
- Friend, TRB Committee on Safety Data, Analysis and Evaluation (ANB20)

## PAST SERVICES

- Treasurer, ITE student chapter, TAMU (January 2007- August 2008)
- Treasurer, Association of Civil Engineering Doctoral Students, TAMU (October 2006- December 2007)
- Civil Engineering Student Ambassador, TAMU (September 2006- August 2007)

## SCIENTIFIC REVIEWER

- Accident Analysis and Prevention
- Journal of the Transportation Research Board: Transportation Research Record
- Journal of Transportation Safety and Security
- Analytic Methods in Accident Research
- Safety Science
- Medical Research Council, UK- grant review
- Journal of Transportation Engineering, American Society of Civil Engineers (ASCE)
- Traffic Injury Prevention
- Transportation Research Part A: Policy and Practice
- Transportmetrica A: Transport Science
- Journal of Urban Planning and Development, ASCE
- Risk Analysis
- Safety Journal, MDPI
- International Journal of Rail Transportation
- Advances in Transportation Studies

- Journal of Advanced Transportation
- Communications in Statistics – Case Studies and Data Analysis
- Journal of Applied Statistics
- Population and Environment
- International Journal of Injury Control and Safety Promotion
- International Journal of Environmental Research and Public Health
- International Conference of Road Safety and Simulation, USA
- International SIIV Congress Conference, Italy

## INVITED SPEAKER

- Highway Safety Analytics and Modeling. NIT Calicut (2023).
- Highway Safety Analytics and Modeling. IIT Hyderabad (2022).
- Updating TxDOT Workcodes. Webinar on "Understanding the Upcoming CMF Rating Transition and Exploring Real-World Applications of CMFs". *CMF Clearinghouse*, December 2020.
- New Safety Tools to Evaluate Intersection and Pedestrian Safety. Vision Zero, *Texas District of the Institute of Transportation Engineers (TexITE)* meeting, October 2020.
- Safety Effectiveness of Centerline Buffers. F*HWA webinar on FoRRRwD Countermeasures*, October, 2020.
- Pedestrian Data for Safety Analysis. TxDOT's ADA Stakeholders Meeting, NCTCOG, Austin, TX, November 2018.
- Developing a Crash Analysis Tool to Address Pedestrian Safety. *Regional Safety Advisory Committee Meeting*, NCTCOG, Dallas, TX, October 2018.
- Developing a Crash Analysis Tool to Address Pedestrian Safety. *Texas Pedestrian Safety Coalition Meeting, Austin*, TX, September 2018.
- Improving Traffic Safety: A Multi-disciplinary Approach. *Texas District of the Institute of Transportation Engineers (TexITE)* meeting, Dallas, TX, November 2016.
- How Can We Reduce Traffic Accidents? *University of Massachusetts,* Lowell, MA, February 2016.
- Project Selection for Highway Widening: A Systemic Approach. *Traffic Safety Conference*, Corpus Christi, TX, June 2015.
- 4Es in Traffic Safety: What are Their Contributions? *Florida International University,* Miami, FL, May 2015.
- Traffic Safety: How Important is it? *Indian Institute of Technology,* Kharagpur, India, February 2015.
- Models for Analyzing Count Data with a Lot of Zeros. *Joint Statistical Meetings*, Boston, MA, August 2014.
- Systemic Approach to Safety in Texas. *Traffic Safety Conference*, San Antonio, TX, May 2014.
- Safety Benefits of Red Light Cameras. *Texas District of the Institute of Transportation Engineers (TexITE)* meeting, Fort Worth, TX, August 2012.
- Statistical Analysis of Traffic Crash Data. *Indian Institute of Science,* Bangalore, India, October 2010.

## PROFESSIONAL LICENSE

Registered Professional Engineer in Texas, Registration No. 109898.

## FUNDED RESEARCH

### Active Projects

1. Develop Crash Predictive Methods for Frontage Roads Including Ramp Terminals and Intersections with Crossroads in Texas. Texas Department of Transportation, 09/2024-08/2026 ($392,825). PI: Srinivas Geedipally
2. Advancing Safety Prediction Methodologies for Horizontal Curves. National Cooperative Highway Research Program, 03/2024-03/2026 ($350,000). PI: Srinivas Geedipally.
3. Guide for Evaluating the Safety Performance of Shared Railway–Highway Interfaces. National Cooperative Highway Research Program, 10/2024-03/2027 ($400,000). Co-PI: Srinivas Geedipally.
4. A Guide and Toolkit for Strategic Decision-Making to Improve Traffic Safety. National Cooperative Highway Research Program, 08/2024-07/2026 ($450,000). PI (from TTI): Srinivas Geedipally.
5. Improving Pedestrian Safety Near Bus Stops in El Paso ($6^{th}$ Year). Texas Department of Transportation, 09/2024-08/2025 ($126,000). PI: Srinivas Geedipally.

### Completed Projects

1. Validation of HSM Crash Prediction Methods for Specific Intersection Types in Oregon, Oregon Department of Transportation11/2021-05/2025 ($159,000). PI: Srinivas Geedipally.
2. Develop Crash Modification Factors for Super 2 Highways. Texas Department of Transportation, 09/2023-11/2024 ($236,029). Co-PI: Srinivas Geedipally.
3. Systemic Selection of Horizontal Curve Locations for Implementing Countermeasures to Improve CMV Safety. Federal Motor Carrier Safety Administration, 08/2021 – 09/2023 ($242,610). PI: Srinivas Geedipally.
4. Guidelines for Optimizing Roadway Cross-Section on Texas Highways. Texas Department of Transportation, 09/2022-08/2023 ($200,000). PI: Marcus Brewer.
5. Develop Highway Safety Manual (HSM) Safety Performance Functions (SPFs) and Calibration Factors for Texas. Texas Department of Transportation, 09/2020-08/2022 ($309,754). PI: Srinivas Geedipally.
6. Safety Analysis in Support of Traffic Operations. Inter-agency contract. Texas Department of Transportation, 09/2015-08/2022 ($1,750,000). PI: Srinivas Geedipally.
7. Guidance On Midblock Pedestrian Signals (MPS). National Cooperative Highway Research Program, 06/2021-09/2022 ($125,000). PI: Kay Fitzpatrick.
8. Enhancing Freeway Safety Prediction Models, 11/2019-10/2019 ($275,000). Co-PI: Srinivas Geedipally.
9. Developing Safety Performance Functions and Crash Modification Factors for Managed Lanes Separation Treatments. Florida Department of Transportation (Subcontractor to Florida International University), 09/2020 – 04/2022 ($80,000). PI: Srinivas Geedipally.
10. Develop a Real-Time Decision Support Tool for Rural Roadway Safety Improvements. Texas Department of Transportation, 11/2019-10/2021 ($). PI: Subasish Das.

11. Examine Trade-Offs Between Center Separation and Shoulder Width Allotment for a Given Roadway Width. Texas Department of Transportation, 07/2019-04/2021 ($258,085). PI: Srinivas Geedipally.
12. Analyzing the Data to Address Pedestrian and Intersection Safety Issues. Center for Transportation Institute, TTI 12/2019-08/2020 ($30,000). PI: Srinivas Geedipally.
13. Evaluation of Roadside Treatments to Mitigate Roadway Departure Crashes. Texas Department of Transportation, 09/2017-08/2019 ($219,656). Co-PI: Srinivas Geedipally.
14. Improving Pedestrian Safety Near Transit Stops. Texas Department of Transportation, 10/2018-09/2019 ($134,136). PI: Srinivas Geedipally.
15. Developing a Crash Analysis Tool to Address Pedestrian Safety. Texas Department of Transportation, 10/2015-09/2019 ($375,797). PI: Srinivas Geedipally.
16. Evaluation of Safety Improvement Projects and Countermeasures. Texas Department of Transportation, 09/2017-08/2019 ($). PI: Ioannis Tsapakis.
17. A Data-Driven Safety Analysis (DDSA) Framework for the Beaumont District. Texas Department of Transportation, 09/2017-02/2019 ($823,569). PI: Robert Wunderlich.Enhancing Curve Advisory Speed and Curve Safety Assessment Practices. Texas Department of Transportation, 09/2017-02/2019 ($). PI: Mike Pratt
18. Developing Pavement Safety-Based Guidelines for Improving Horizontal Curve Safety. Texas Department of Transportation, 09/2016-08/2018 ($299,215). PI: Mike Pratt, co-PI: Srinivas Geedipally.
19. Big Data Methodology for Simplifying Traffic Safety Analyses. Safety Through Disruption (Safe-D) National UTC, 05/2017-08/2018 ($219,508). PI: Dominique Lord.
20. Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes. National Cooperative Highway Research Program, 09/2014-07/2017 ($350,000). PI: Karen Dixon, co-PI: Srinivas Geedipally.
21. Safety and Analysis Fundamentals Training. Federal Highway Administration, Task Order #6, 09/2016-09/2017 ($129,000). PI: Raul Avelar.
22. Michigan Rural Segment and Intersection Safety Performance Functions (SPFs). Michigan Department of Transportation. 10/2015- 12/2017 ($69,756). PI (from TTI): Raul Avelar.
23. Evaluating Curve Speed Behavior Using SHRP 2 Data. Advancing Transportation Leadership and Safety (ATLAS), 11/2016-05/2017 ($73,546). PI: Srinivas Geedipally.
24. TTI Interactive Mapping DDACTS Tool and Training to the Texas Department of Public Safety. Texas Department of Transportation, 10/2016-09/2017 ($147,361). PI: Jon Graber.
25. Integrating Datasets to Evaluate CMV Crash Severity and Risk on Texas Roads. Federal Motor Carrier Safety Administration, 09/2016-03/2018 ($273,482). PI: David Bierling.
26. Audible Lane Departure Warning for Seal Coat Surfaces. Texas Department of Transportation, 09/2015-04/2017 ($256,259). PI: Adam Pike.
27. Innovative Tools and Techniques in Identifying Highway Safety Improvement Projects. Texas Department of Transportation, 09/2015-06/2017 ($299,946). PI: Ioannis Tsapakis.
28. Work Zone Crash Characteristics and Countermeasure Guidance. National

Cooperative Highway Research Program (17-61), 09/2012-01/2017 ($600,000). PI: Gerald Ullman.

29. Identification of Factors Contributing to the Decline of Traffic Fatalities in the United States (17-67). National Cooperative Highway Research Program, 09/2014-02/2017 ($300,000). PI (from TTI): Srinivas Geedipally.
30. Safety Prediction Models for Six-Lane and One-Way Urban and Suburban Arterials. National Cooperative Highway Research Program (17-58), 01/2013-03/2016 ($600,000). PI: Dominique Lord.
31. Developing a Procedure for Estimating the Required Sample Size for Safety Performance Function Calibration Factors. Advancing Transportation Leadership and Safety (ATLAS), 09/2014-09/2015 ($72,750). PI: Dominique Lord, co-PI: Srinivas Geedipally.
32. Develop Guidelines for New Vehicle Detection at High-Speed Signalized Intersections. Texas Department of Transportation, 08/2014-08/2015 ($175,204). PI: Dan Middleton.
33. Vehicle Tyres and Road accidents. Qatar Petroleum Research and Technology Department. Subcontract with Texas A&M University- Qatar, 01/2013-12/2014 ($450,000). PI (from TTI): Srinivas Geedipally.
34. Evaluation of the TAPCO Sequential Dynamic Curve Warning System. Federal Highway Administration, 06/2011-05/2015 ($126,000). PI: Adam Pike.
35. Effectiveness of Performance Based Pavement Marking Maintenance Contracts. Texas Department of Transportation, 09/2011-08/2013 ($257,000). PI: Adam Pike.
36. Surface Treatments to Alleviate Crashes on Horizontal Curves. Texas Department of Transportation, 09/2011-08/2013 ($318,598). PI: Mike Pratt.
37. Improving the Quality of Motorcycle Travel Data Collection. National Cooperative Highway Research Program (08-81), 06/2011-05/2013 ($300,000). PI: Dan Middleton.
38. Evaluation of the Measures and the Development of a Plan to Reduce the Number and Mitigate the Severity of Crashes Involving Motorcyclists on Texas Highways. Texas Department of Transportation, 09/2011-02/2013 ($184,305). PI: Patricia Turner.
39. An Empirical Bayes Analysis of Photographic Traffic Enforcement Systems in Texas. Texas Department of Transportation, Inter-agency contract, 09/2011-08/2012 ($80,500). PI: Troy Walden, co-PI: Srinivas Geedipally.
40. Field Evaluation of the Effectiveness of Detection-Control System. Federal Highway Administration, 09/2008-03/2012 ($348,238). PI: Dan Middleton.
41. Safety Prediction Methodology and Analysis Tool for Freeways and Intersections. National Cooperative Highway Research Program (17-45), 05/2009-02/2012 ($700,000). PI: James Bonneson.
42. Evaluation of Automated Traffic Enforcement Systems in Texas. Texas Department of Transportation, Inter-agency contract, 09/2010-08/2011 ($80,500). PI: Troy Walden.
43. Analysis of Roadway Departure Crashes on Two-Lane Rural Roads in Texas. Texas Department of Transportation, 09/2007-08/2011 ($390,000). PI: Dominique Lord.
44. Seat Belts on School Buses Study. Texas state legislature thru the Legislative Budget Board, 09/2009-05/2010 ($250,000). PI: Katie Womack.
45. Guidelines for Designing Bridge Piers and Abutments for Vehicle Collisions. Texas

Department of Transportation, 04/2007-08/2010 ($315,000). PI: Gene Buth.

46. Methodology to Predict the Safety Performance of Rural Multilane Highways. National Cooperative Highway Research Program (17-29), 07/2004-04/2008 ($700,000). PI: Dominique Lord.

## PUBLICATIONS

### Textbook

Lord, D., X. Qin, **S. Geedipally** (2021). Highway Safety Analytics and Modeling. Elsevier.

### Book Chapters

1. Lord, D., **S. Geedipally** (2018) Safe Mobility: Challenges, Methodology and Solutions. Chapter 14- Safety Prediction with Datasets Characterized with Excess Zeros and Long Tails. Emerald Transport and Sustainability, Volume 11, 351–382Levine, N., D. Lord, B.-J. Park, **S. Geedipally**, H. Teng, and L. Sheng (2013) CrimeStat IV: Chapter 17 - Estimating Complex Models with Markov Chain Monte Carlo Simulation (Part V: Spatial Modeling II). National Institute of Justice, Washington, D.C.
2. Levine, N., D. Lord, B.-J. Park, **S. Geedipally**, H. Teng, and L. Sheng (2013) CrimeStat IV: Chapter 19 - Spatial Regression Modeling (Part V: Spatial Modeling II). National Institute of Justice, Washington, D.C.
3. Levine, N., D. Lord, B.-J. Park, **S. Geedipally**, H. Teng, and L. Sheng (2013) CrimeStat IV: Chapter 20 - The CrimeStat Regression Module (Part V: Spatial Modeling II). National Institute of Justice, Washington, D.C.

### Magazine Article

Lord, D., **Geedipally, S.R**. Funding Projects to Improve Highway Safety in Texas. Roads & Bridges. August 2, 2012 (http://www.roadsbridges.com/safety-funding-projects-improve-highway-safety-texas).

### Research Reports

1. **Geedipally, S. R.**, Dixon, K., Pratt, M., & Kutela, B. (2025). *Validation of HSM crash prediction methods for specific intersection types in Oregon* (Report No. SPR 871). Oregon Department of Transportation
2. Brewer, M. A., **Geedipally, S. R.**, Speed, J., Das, S., Javed, S. A., & Fitzpatrick, K. (2025). *Crash modification factors for Super 2 highways* (FHWA/TX-25/0-7183-R1). Texas Department of Transportation.
3. **Geedipally, S. R.**, Wu, L., Ko, M., Shipp, E., Wunderlich, R., Lord, D., Martin, E., & Pant, A. (2023, September). *Systemic selection of horizontal curve locations for implementing countermeasures to improve CMV safety* (FM-MHP-0591). Federal Motor Carrier Safety Administration.
4. Brewer, M. A., **Geedipally, S. R.**, Pratt, M. P., & Dixon, K. (2023). *Guidelines for optimizing roadway cross-section on Texas highways* (FHWA/TX-23/0-7136-R1). Texas Department of Transportation.
5. **Geedipally, S.R.**, Dixon, K., Wu, L., Pratt, M.P., Avelar, R., Das, S., Tsapakis, I., Lord, D., and Saini, G. (2022). *Calibrating The Highway Safety Manual Predictive Methods for Texas Highways* (FHWA/TX-22/0-7083-R1). Texas Department of Transportation.
6. Alluri, P., **Geedipally, S.R.,** Salum, J., & Kadeha, C. (2022, April). *Developing Safety Performance Function (SPF) and Crash Modification Factor (CMF) for*

*Managed Lanes Separation Treatments* (Final Report BE-975). Florida Department of Transportation

7. Pratt, M. P., **Geedipally, S.R.**, Le, M., Wu, L., Avelar, R., Das, S., and Lord, D., (2022). *Enhancing Freeway Safety Prediction Models* (FHWA/TX-22/0-7067-R1). Texas Department of Transportation.
8. Fitzpatrick, K., **Geedipally, S.R.**, Kutela, B., Koonce, P. (2022). *Guidance on Midblock Pedestrian Signals (MPS)*. NCHRP 03-141, Transportation Research Board of The National Academies.
9. **Geedipally, S. R.**, Brewer, M. A., Wunderlich, R., Pratt, M. P., Wu, L., Das, S., & Florence, D. (2021). *Examine Trade-Offs Between Center Separation and Shoulder Width Allotment for a Given Roadway Width* (No. FHWA/TX-21/0-7035-R1). Texas Department of Transportation.
10. Pratt, M. P., **Geedipally, S. R.**, & Le, M. (2021). *Curve Advisory Speed and Curve Safety Assessment Practices: Training Development and Support* (No. FHWA/TX-20/5-6960-01-R1). Texas Department of Transportation.
11. Avelar, R., **Geedipally, S.**, Das, S., Wu, L., Kutela, B., Lord, D., & Tsapakis, I. (2020). *Evaluation of Roadside Treatments to Mitigate Roadway Departure Crashes*: Technical Report (No. FHWA/TX-20/0-6991-R1). Texas Department of Transportation.
12. Wunderlich, R., Dixon, K., Wu, L., **Geedipally, S.**, Dadashova, B., & Shipp, E. (2020). *Making Every Day Count: Applying Data-Driven Safety Analyses in a TxDOT District* (No. FHWA/TX-20/5-9052-01-R1). Texas Department of Transportation.
13. Wunderlich, R., Dixon, K., Wu, L., **Geedipally, S.**, & Shipp, E. (2020). *Data-driven Safety Analysis: A User Guide* (No. 5-9052-01-P1). Texas. Dept. of Transportation. Research and Technology Implementation Office.
14. Das, S., **Geedipally, S.**, Wu, L., Fitzpatrick, K., Avelar, R., Banihashemi, M., & Lord, D. (2019). *Rural speed safety project for USDOT safety data initiative*. USDOT final report.Pratt, M.P., **S.R. Geedipally**, R. Avelar, M. Le, and D. Lord. *Enhancing Curve Advisory Speed and Curve Safety Assessment Practices*. TxDOT 0-6960. Texas A&M Transportation Institute, College Station, TX. 2019.
15. Tsapakis, I., S. Sharma, B. Dadashova, **S. Geedipally**, A. Sanchez, M. Le, L. Cornejo, S. Das, and K. Dixon. *Evaluation of Highway Safety Improvement Projects and Countermeasures*. TxDOT 0-6961. Texas A&M Transportation Institute, College Station, TX. 2019.
16. K. Dixon, **S.R. Geedipally**, E.S. Park, M. Brewer, R. Srinivasan, and D. Carter. *Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes*. National Cooperative Highway Research Program, Washington, D.C., 2018.
17. Pratt, M.P., **S.R. Geedipally**, B. Wilson, S. Das, M. Brewer, and D. Lord. *Pavement Safety-Based Guidelines for Horizontal Curve Safety*. TxDOT 0-6932. Texas A&M Transportation Institute, College Station, TX. 2018.
18. D. Lord, **S. Geedipally**, F. Guo, A. Jahangiri, M. Shirazi and X. Deng. *Analyzing Highway Safety Datasets: Simplifying Statistical Analyses from Sparse to Big Data*. Safety through Disruption (Safe-D) National University Transportation Center, 2018.
19. T. Gates, P. Savolainen, R. Avelar, **S. Geedipally**, D. Lord, A. Ingle, S. Stapleton I. *Michigan Rural Segment and Intersection Safety Performance Functions (SPFs)*. Michigan Department of Transportation, 2018.

20. Tsapakis, I., K. Dixon, J. Li, B. Dadashova, W. Holik, S. Sharma, **S. Geedipally**, and J. Le. *Innovative Tools and Techniques in Identifying Highway Safety Improvement Projects*. TxDOT 0-6912. Texas A&M Transportation Institute, College Station, TX. 2017.
21. A.M. Pike, B. Wilson, E. S. Park, **S. Geedipally**, and L. Wu. *Audible Lane Departure Warning Treatments for Seal Coat Road Surfaces*. TxDOT 0-6888-S. Texas A&M Transportation Institute, College Station, TX. 2017.
22. Bierling, D., A. Trueblood, E. Shipp. B. Dai, M. Martin, I. Tsapakis, **S. Geedipally**, S. Sharma, *Integrating Datasets to Enhance Commercial Motor Vehicle Safety Analysis: At-Fault CMV Crash Severity in 20 Texas Counties—Analysis, Results, and Recommendations*. USDOT, Federal Motor Carrier Safety Administration, Motor Carrier Safety Assistance Program, 2017.
23. D. Lord, **S. Geedipally**, and M. Shirazi. *Developing a Procedure for Estimating the Required Sample Size for Safety Performance Function Calibration Factors*. Advancing Transportation Leadership and Safety (ATLAS), 2016.
24. G. Ullman, M.Pratt, **S. Geedipally,** B. Dadashova, R. J. Porter, J. Medina and M. Fontaine. *Work Zone Crash Characteristics and Countermeasure Guidance*. National Cooperative Highway Research Program, Washington, DC, 2017.
25. D. Blower, C. Flannagan, **S. Geedipally,** D. Lord, R. Wunderlich. *Identification of Factors Contributing to the Decline of Traffic Fatalities in the United States*. National Cooperative Highway Research Program, Washington, DC, 2017.
26. D. Lord, **S. Geedipally,** M. Pratt, E. S. Park, S. Hadi Shirazi and K. Fitzpatrick. *Safety Prediction Models for Six-Lane and One-Way Urban and Suburban Arterials*. National Cooperative Highway Research Program, Washington, DC, 2016.
27. E. Shipp, R. Wunderlich, D. del Junco, J. Holcomb, E. Fox, J. Tomasek, M.E. Perez, **S.R. Geedipally**, A. Ferdinand, M. Benden, S. Maindale. *Assessing the Feasibility ofCreating an Integrated Crash and Injury Data System for Texas*. 161413-1. Project No. 161413-1. Texas A&M Transportation Institute, College Station, TX. July 2015.
28. **S. Geedipally**, T.D. Walden, L. Wu. *A Systemic Approach for Selecting Median Barrier Installation Projects*. Technical Memorandum. Traffic Operations Division, Texas Department of Transportation, August 2015.
29. Lord, D., and **S.R. Geedipally**. *Safety Effects of the Red-Light Camera Enforcement Program in Chicago, Illinois*. Research report prepared for the Chicago Tribune, College Station, TX. November 2014.
30. **S. Geedipally**, M. Ko, L. Wu. T.D. Walden, D. Lord. *A Systemic Approach to Project Selection for Highway Widening*. Technical Memorandum. Traffic Operations Division, Texas Department of Transportation, August 2014.
31. T.D. Walden, D. Lord, M. Ko, **S. Geedipally**, L. Wu. *Developing Methodology for Identifying, Evaluating, and Prioritizing Systemic Improvements*. Technical Memorandum. Traffic Operations Division, Texas Department of Transportation, August 2014.
32. A.M. Pike, P. Songchitruksa, I. Damnjanovic, **S.R. Geedipally**, D. Kang. *Evaluating the Effectiveness of Performance Based Pavement Marking Maintenance Contracts in Texas*. TxDOT 0-6705-S. Texas A&M Transportation Institute, College Station, TX. 2014.
33. M.P. Pratt, **S.R. Geedipally**, A.M. Pike, P.J. Carlson, D. Lord. *Evaluating the Need for Surface Treatments to Reduce Crash Frequency on Horizontal Curves*. TxDOT 0-

6714-S. Texas A&M Transportation Institute, College Station, TX. 2014.

34. D. Middleton, P. Turner, H. Charara, S. Sunkari, **S. Geedipally,** and R. Scopatz. *Improving the Quality of Motorcycle Travel Data Collection*. National Cooperative Highway Research Program, Washington, DC, May 2013.
35. P.A. Turner, L.L. Higgins, **S.R. Geedipally**. *Development of a Statewide Motorcycle Safety Plan for Texas*: Technical Report. 0-6712-1. Texas A&M Transportation Institute, College Station, TX. June 2013.
36. D. Middleton, R. Longmire, H. Charara, J. Bonneson, **S. Geedipally**, M. Ko. *Field Evaluation of the Effectiveness of Detection-Control System*. Texas Transportation Institute, College Station, TX. January 2012.
37. J.A. Bonneson, **S.R. Geedipally**, M.P. Pratt, D. Lord. *Safety Prediction Methodology and Analysis Tool for Freeways and Intersections*. 476440-1, National Cooperative Highway Research Program, Washington, DC, October 2011.
38. T.D. Walden, **S. Geedipally**, M. Ko, R. Gilbert, M. Perez. *Evaluation of Automated Traffic Enforcement Systems in Texas*. Technical Memorandum. Traffic Operations Division, Texas Department of Transportation, August 2011.
39. D. Lord, M.A. Brewer, K. Fitzpatrick, **S.R. Geedipally**, Y. Peng. *Analysis of Roadway Departure Crashes on Two-Lane Rural Roads in Texas*. 0-6031-1. Texas Transportation Institute, College Station, TX. 2011.
40. C.E. Buth, W.F. Williams, M.S. Brackin, D. Lord, **S.R. Geedipally**, A. Abu-Odeh. *Analysis of Large Truck Collisions with Bridge Piers: Phase 1. Report of Guidelines for Designing Bridge Piers and Abutments for Vehicle Collisions.* 9-4973-1. Texas Transportation Institute, College Station, TX. May 2010.
41. Lord, D., **Geedipally, S.R.**, Persaud, B.N., Washington, S.P., van Schalkwyk, I.,Ivan, J.N., Lyon, C., Jonsson, T. *Methodology for Estimating the Safety Performance ofMultilane Rural Highways*. NCHRP Web-Only Document 126, National Cooperation Highway Research Program, Washington, DC, 2008.

## Refereed Journal Articles

*Submitted for Publication*

1. Brewer, M. A., **Geedipally, S. R.**, Speed, J., Das, S., Javed, S. A., & Fitzpatrick, K. (2025). Crash Modification Factors for Super 2 Passing Lanes on Rural Two-Lane Highways in Texas. Submitted for presentation at the 104th Annual Meeting of the Transportation Research Board, Washington, D.C.
2. Brown, W., Gambatese, J., Hurwitz, D.S., Nnaji, C., **Geedipally, S. R.**, Finley, M. (2025). Understanding Work Zone Intrusions: Contributing Factors, Prevention Strategies, and Practitioner Perspectives from a National Survey and Literature Review. Submitted for presentation at the 104th Annual Meeting of the Transportation Research Board, Washington, D.C.
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8. Shirazi, M., **Geedipally, S. R.** (2022). A Simulation Analysis to Explore When Using a Calibration Function is Preferred Over a Scalar Factor for Calibrating Safety Performance Functions. *Journal of Transportation Safety & Security,* DOI: 10.1080/19439962.2022.2056932.
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15. **Geedipally, S. R.,** Lord, D., Pratt, M. P., Fitzpatrick, K., & Park, E. S. (2020). Safety performance of one-way arterials. *Transportation Research Record: Journal of the Transportation Research Board*, 2674(10).
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**Conference Presentations**

1. Brewer, M., Geedipally, S. R., Pratt, M., Dixon, K. (2024). Recommendations for Optimizing Roadway Cross-Section on Texas Highways, Presented at the 103rd Annual Meeting of the Transportation Research Board, Washington, D.C.
2. Madeline, B., Shirazi, M., **Geedipally, S.R.** (2023). Exploring the Impact of Different Parameterizations on Developing Calibration Functions. Presented at the 102nd Annual Meeting of the Transportation Research Board, Washington, D.C.
3. Kutela, B., Fitzpatrick, K., **Geedipally, S.R.** (2023). Pedestrian Volume Estimation for Midblock Crosswalks and Intersections in California. Presented at the 102nd Annual Meeting of the Transportation Research Board, Washington, D.C.
4. Bonga, N.K., **Geedipally, S.**, Wunderlich, R. (2023). Estimating Pedestrian Crashes near Bus Stops. Presented at the 102nd Annual Meeting of the Transportation Research Board, Washington, D.C.
5. Avelar, R., **Geedipally, S.**, Saini, G. (2023). Assessing the Relative Importance of Goodness of Fit Measures from the Calibration of Safety Performance Functions. Presented at the 102nd Annual Meeting of the Transportation Research Board, Washington, D.C.
6. Avelar, R., **Geedipally, S.**, Ashraf, S. (2023). HSM Calibration Sample Size based on Calibration Factor Statistical Properties. Presented at the 101st Annual Meeting of the Transportation Research Board, Washington, D.C.
7. **Geedipally, S.R.** (2021). Effects of Bus Stops on Pedestrian Safety at Signalized Intersections. Presented at the Conference of Transportation Research Group of India.
8. **Geedipally, S.R.**, M. Le, K. Fitzpatrick, and R. Avelar (2020). Identifying High Risk Locations to Address Pedestrian Safety Issues. Presented at the

99th Annual Meeting of the Transportation Research Board, Washington, D.C.

9. Shimu, T. H., D. Lord, **S. Geedipally,** L. Wu, and R. Wunderlich (2020). Investigating Factors that Contributed to the Large Reduction and Subsequent Increase in Roadway Fatalities in the United States between 2005 and 2016. Presented at the 99th Annual Meeting of the Transportation Research Board, Washington, D.C.
10. **Geedipally, S.R.**, D. Blower, C. Flannagan, R. Wunderlich, and D. Lord (2018). In-depth Investigation of Factors That Contributed to the Decline in Fatalities from 2008 to 2011 in the United States. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington, D.C.
11. Pratt, M., **S.R. Geedipally**, B. Dadashova, L. Wu, and M. Shirazi (2018). Validating Curve Speed Prediction Models Using Naturalistic Data. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington, D.C.
12. Flannagan, C., R. Wunderlich, **S.R. Geedipally**, D. Lord, and D. Blower (2018). Using crash prediction models that incorporate economic factors for state highway safety planning. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington, D.C.
13. Tsapakis, I., H., William, K., Dixon, S., Sharma, J., Li, B., Dadashova, and **S. Geedipally** (2018). Alternatives in Economic Analysis and Prioritization of Highway Safety Improvement Projects in Texas. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington, D.C.
14. Pratt, M.P., **S.R. Geedipally,** K.M. Collins, and J.A. Crawford (2017). Combining Safety Analysis Tools for Evaluation of Freeway Work Zones. Presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C.
15. Mitra, S., **S.R. Geedipally**, and D. Lord (2017). Safety analysis of urban signalized intersections in Kolkata, India using a combined proactive and reactive approach. Presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C.
16. Abu-Odeh, A., M. Sadeq, E. Masad, **S.R. Geedipally**, and M. Ko (2017). Experimental and Analytical Investigation of the Performance of SUV and Balloon Tires Commonly Used in Qatar. Presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C.
17. Pratt, M., and **S.R. Geedipally** (2016). Developing a Framework for Evaluating and Selecting Curve Safety Treatments. Presented at the 95th Annual Meeting of the Transportation Research Board, Washington, D.C.
18. **Geedipally S.** (2015). A Systemic Approach to Project Selection for Highway Widening. 41st Annual International Forum on Traffic Records and Highway Information Systems, Costa Mesa, CA, October 28, 2015.
19. **Geedipally, S.R.**, and S. Patil (2013). Factors affecting motorcycle crashes according to their collision type. Presented at 2013 *Conference of Transportation Research Group of India (CTRG).*
20. Zou, Y., D. Lord, and **S.R. Geedipally** (2012). Over- and Under-Dispersed Crash Data: Comparing the Conway-Maxwell-Poisson and Double-Poisson Distributions. Presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C.Cheng, L., **S.R. Geedipally**, and D. Lord (2012). Examining the Poisson-Weibull Generalized Linear Model for Analyzing Crash Data. Presented at

the 91st Annual Meeting of the Transportation Research Board, Washington, D.C.

21. **Geedipally, S.R**., D. Lord and C. Eugene Buth (2010). Estimating the Crash Risk involving Heavy Vehicles and Bridge Piers. Presented at the T-5 AASHTO Technical Committee for Loads and Load Distribution, Sacramento, CA.
22. **Geedipally S.** (2008). Examining the Application of Conway-Maxwell-Poisson Models for Analyzing Traffic Crash Data. Doctoral Student Research in Transportation Operations and Traffic Control. Presented at the 87th Annual Meeting of the Transportation Research Board.
23. **Geedipally S.**, S.D. Guikema, S. Dhavala, and D. Lord (2008). Characterizing the Performance of a Bayesian Conway-Maxwell Poisson GLM. Presented at the 2008 Joint Statistical Meetings, Denver, CO.

**Working Papers (Unpublished work)**

1. **Geedipally, S.,** Avelar, R., Kutela, B., Wu, L. (2021). Using Systemic Approach to Identify Sites with Promise for Safety Improvement: An Application to Fixed Object Collisions. Texas A&M Transportation Institute, College Station, Texas.
2. Das, S., **S. Geedipally,** K. Fitzpatrick, P. Teicher, and P. Sung (2019). Safety Performance Functions for Rural Two-lane and Rural Multilane Roadways Considering Operating Speed and Weather Data. Texas A&M Transportation Institute, College Station, Texas.
3. Avelar, R.E., S. Ashraf, **S. Geedipally**, and T. Gates (2018). Potential issues with discarded Random Effects in Crash Prediction Models: Bias, NB Overdispersion and Proposed Remedies. Texas A&M Transportation Institute, College Station, Texas.
4. Ko, M., **S.R. Geedipally**, M. Pratt (2017). An Analysis of Pedestrian Involved Crashes at Signalized Intersections in Texas. Texas A&M Transportation Institute, College Station, Texas.
5. **Geedipally, S.R.**, M. Sadeq, E. Masad and N. Traut (2016). Influence of Vehicle Tires on Traffic Crashes in Qatar. Texas A&M Transportation Institute, College Station, Texas.
6. Middleton, M., P. Songchitruksa, M. Pratt, and **S.R. Geedipally** (2015). Evaluation of New Detectors for High-Speed Signalized Intersections. Texas A&M Transportation Institute, College Station, Texas.
7. Le, M., B. Brydia, C. Beltran, and **S.R. Geedipally** (2015). Identifying Secondary Incidents without Temporal and Spatial Parameters Using Historical Traffic Data. Texas A&M Transportation Institute, College Station, Texas.
8. Patil, S. and **S.R. Geedipally** (2013). A Study of Crashes Involving Young Drivers and Motorcycle Riders in Texas. Texas A&M Transportation Institute, College Station, Texas.
9. Higgins, L., P. Turner, and **S.R. Geedipally** (2013). Motorcycle Safety in Texas: Results of a Statewide Survey. Texas A&M Transportation Institute, College Station, Texas.
10. **Geedipally, S.R.**, R. Henk, and B. Fette (2012). Effectiveness of Teens in the Driver Seat Program in Texas. Texas A&M Transportation Institute, College Station, Texas.Walden, T.D., **S.R. Geedipally**, M. Ko, R.C. Gilbert, and M.C. Perez (2012). Evaluation of Red Light Camera Systems in Texas: A Before-after Study. Texas A&M Transportation Institute, College Station, Texas.
11. Lord, D., B. Persaud, S.P. Washington, J. Ivan, I. van Schalkwyk, C. Lyon and **S.R.**

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