

## Subasish Das, Ph.D.

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### EDUCATION

- Ph.D. Systems Engineering (Civil Engineering Focus), University of Louisiana at Lafayette, LA (2015)  
Dissertation: *"Effectiveness of Inexpensive Crash Countermeasures to Improve Traffic Safety"*
- M.S. Mathematics (Major in Statistics), University of Louisiana at Lafayette, Lafayette, LA (2015)  
(completed required 36 semester hour course works)
- M.S. Civil Engineering, University of Louisiana at Lafayette, Lafayette, LA (2012)  
Thesis: *"Evaluating Safety Improvement from Edge Lines on Rural Two-lane Highways"*
- B.Sc. Civil Engineering, Bangladesh University of Engineering & technology, Dhaka (2007)  
Thesis: *"Scope of Intelligent Transportation Systems in the Developing Countries"*

### EXPERIENCE

- 2020- TTI Assistant Research Scientist, Texas A&M Transportation Institute, College Station, TX
- 2015-2020 Associate Transportation Researcher, Texas A&M Transportation Institute, College Station, TX
- 2014-2015 Research Associate, University of Louisiana at Lafayette, LA
- 2013-2014 Teaching Assistant, University of Louisiana at Lafayette, LA
- 2010-2012 Research Assistant, University of Louisiana at Lafayette, LA
- 2008-2009 Quantity Surveyor, Hennessey LLC, Dubai, U.A. E.
- 2007-2008 Project Engineer, Mak Estate Developments, Dhaka, Bangladesh

### AWARDS

- 2018 Texas A&M Transportation Institute (TTI) Young Researcher Award
- 2017 Best of Urban Street Symposium Award: TRB 5th Urban Street Symposium
- 2016 Atlas/TTI Competitive Research Program Award
- 2015 Eno Leadership Development Fellow
- 2015 Gulf Region ITS (GRITS) Scholarship
- 2015 Best Paper Award (2nd Place) in University of Louisiana Graduate Research STEM Core
- 2015 Data Incubator Data Science Fellowship Semi-finalist
- 2014 2014 SASHTO Outstanding Graduate Research Award
- 2014 2014 AASHTO High Value Research Sweet Sixteen Award
- 2013 2013 Gulf Region ITS (GRITS) Scholarship First Place Award
- 2012 Travel award for 9th Postgraduate Academic Forum of Beihang University, China
- 2012 University of Louisiana Engineering Designing Leader
- 2011-2014 Deep South Institute of Transportation Engineers Scholarship

### PROFESSIONAL SERVICE ACTIVITIES

- 2019-2020 Member, Association of Pedestrian and Bicycle Professionals (APBP)
- 2015-2016 Vice Chair for Membership, Young Professionals in Transportation (YPT) Houston Chapter
- 2014- Member, Gulf Region Intelligent Transportation Society
- 2012- Associate Member, American Society of Civil Engineers (ASCE)
- 2011- Member, Institute of Transportation Engineers (ITE)

### COMMITTEE MEMBERSHIPS

#### Transportation Research Board

- 2020-2023 Member, Information and Knowledge Management (AJE45)
- 2020-2023 Member, Artificial Intelligence and Advanced Computing Applications (AED50)
- 2019-2021 Member, Impairment in Transportation (ACS50)
- 2016-2020 Member, Library and Information Science for Transportation (ABG40)
- 2019-2021 Member, Data-Driven Safety Analysis (DDSA) Sub-committee
- 2019-2021 Panel Member, NCHRP 23-03: Targeted Guidance and Information Support to State DOT CEOs on Cybersecurity Issues and Protection Strategies

2018-2021 Panel Member, NCHRP 08-120: Initiating the Systems Engineering Process for Rural Connected Vehicle Corridors

## SERVICE

- Editor, *IATSS Research*, Elsevier.
- Handling Editor, *Transportation Research Record: Journal of the Transportation Research Board*, Sage Journals.
- Academic Editor, *PLOS One*
- Area Editor (Highway Safety & Crash Data Analysis), *Journal of Transportation Safety & Security*, Taylor & Francis.
- Editorial Board Member, *Transportation Research Interdisciplinary Perspectives*, Elsevier.
- Committee Member, The 7th International Conference on Geology Resource Management and Sustainable Development (ICGRMSD2019), December 28-29, 2019, Beijing, China
- Reviewer: *Accident Analysis and Prevention; Nature Energy; Transportation Research Part C: Emerging Technologies; Journal of Safety Research; Cities; Transportmetrica A: Transportation Science;*
- Treasurer, ITE Student Chapter, University of Louisiana at Lafayette

## RESEARCH PROJECTS

Principal Investigator or Co Principle Investigator [As PI: \$1.3m (excluding matching fund); As Co-PI=\$0.76m]

- 2020-2021 (PI) TCRP Synthesis SB-33: Uses of Social Media in Public Transportation. National Academies Project. Role: Principal Investigator (\$45,000.00).
- 2020-2022 (PI) Autonomous Delivery Vehicle as a Disruptive Technology: How to Shape the Future with a Focus on Safety? SafeD UTC. (\$800,000.00 [Matching fund: \$510,000.00])
- 2019-2021 (PI) Develop a Real-Time Decision Support Tool for Rural Roadway Safety Improvements. TxDOT Project. (\$300,000.00)
- 2019-2021 (PI) Develop Speed Crash Modification Factors (CMFs) from SHRP-2 Data. FHWA Project. (\$189,891.00)
- 2019-2023 (PI) Safety Enhancements at Short-Storage-Space Railroad Crossings, Michigan DOT Project. (\$110,000.00)
- 2019-2021 (Co-PI) Use of Disruptive Technologies to Support Safety Analysis and Meet New Federal Requirements, SafeD UTC. (\$1,601,000.00 [Matching fund from StreetLight Data: \$1,425,000.00])
- 2019 (PI) Innovative Data Sources for Real-time Crash Prediction. SafeD UTC Project. (\$20,000.00).
- 2019-2020 (Co-PI) NCHRP 20-07 (Task 384): Core Competencies for Key Safety Training. National Academies Project. Role: Co-Principal Investigator (\$75,000.00).
- 2018-2019 (PI) Transportation Safety Planning Noteworthy Practices. FHWA Project. (\$30,000.00)
- 2018-2019 (PI) Rural Speed Safety Project for USDOT Safety Data Initiative. FHWA Project. (\$240,000.00).
- 2018-2020 (Co-PI) Louisiana's Alcohol-Impaired Driving Problem: An Analysis of Crash and Cultural Factors. LADOTD Project. (\$175,000.00).
- 2017-2019 (Co-PI) NCHRP 14-40: Comparison of Cost, Safety, and Environmental Benefits of Routine Mowing and Managed Succession of Roadside Vegetation. National Academies Project. (\$300,000.00).
- 2016 (PI) Safety Impacts of Reduced Visibility in Inclement Weather. Atlas TTI Competitive Research Project; (\$44,000.00).
- 2016 (PI) Improper Passing-Related Crashes on Rural Roadways. TTI Strategic Research Project; (\$21,000.00).
- 2016 (Co-PI) Urban Roadway Fatality Analysis. TTI Research Project; (\$30,000.00).
- 2015 (Co-PI) User Sentiment Analysis with Louisiana Social Media Data for Better and Effective Crash Countermeasures. LTRC TIRE Project; (\$30,000.00).

## Key Researcher

- 46 2020-2023 NCHRP 15-76: Designing for Target Speed, National Academies.
- 45 2020-2022 Develop Highway Safety Manual (HSM) Safety Performance Functions (SPFs) and Calibration Factors for Texas, TxDOT Project.
- 44 2019-2022 Enhancing Freeway Safety Prediction Models. TxDOT Project.
- 43 2019-2022 Improving and Communicating Speed Management Practices. TxDOT Project.
- 42 2019-2022 Quantifying the value of Right of Way. TxDOT Project.

- 41 2019-2022 Implementation of Automated Traffic Signal Performance Measures. TxDOT Project.
- 40 2019-2022 Examine Trade-off between Centerline Separation and Shoulder Width Allotment. TxDOT Project.
- 39 2019-2022 **NCHRP 03-134:** Determination of Encroachment Conditions in Work Zones
- 38 2019-2024 **NCHRP 17-92:** Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures.
- 37 2019-2023 ELCSI-PFS, Phase XI, Safety Evaluations of Mini-Roundabouts and Wrong Way Driving Improvements, FHWA.
- 36 2019 Using Machine Learning Tools to Identify Pedestrian Crash Types. TTI
- 35 2019 Winter-Related Performance Analysis, PennDOT
- 34 2019-2022 **NCHRP 06-18:** Guide for Snow and Ice Control Operations
- 33 2019-2022 Transportation Pooled Fund Study # TPF-5(361): SHRP2 Naturalistic Driving Study Pooled Fund: Advancing Implementable Solutions
- 32 2019-2023 Pre-Crash Modification Factors Study for Curb Extensions and Bicycle Specific Intersection Markings, FHWA
- 31 2018-2020 Traffic Safety Improvements at Low Water Crossings, TxDOT.
- 30 2018-2020 Evaluation of Roadside Treatments to Mitigate Roadway Departure Crashes, TxDOT.
- 29 2018-2021 Development of Pedestrian Intersection Crash Modification Factors, FHWA project.
- 28 2018-2020 **NCHRP 05-24:** Guidelines for Vehicle and Equipment Color, Marking, and Lighting.
- 27 2018-2020 **NCHRP 14-41:** Permanent Vegetation Control Treatments for Roadsides.
- 26 2018 Evaluation of Bicycle and Pedestrian Monitoring Equipment to Establish Collection Database/Methodologies for Estimating Non-Motorized Transportation. TxDOT project.
- 25 2017-2019 Collection and Estimation of Annual Average Daily Traffic (AADT) on Lower-Volume Roads. FHWA Project.
- 24 2017-2019 A Data-Driven Safety Analysis Framework for the Beaumont District. TxDOT project.
- 23 2017-2019 Identifying Infrastructure-Based Motorcycle Crash Countermeasures – Phase I. FHWA project.
- 22 2017-2019 Evaluation of Safety Improvement Projects and Countermeasures. TxDOT project.
- 21 2017-2019 Knowledge Extraction using Natural Language Processing from Farm Equipment related Crash Narratives. NIOSH project.
- 20 2017-2019 Development of Crash Modification Factors for Different Separated Bike Lane (SBL) Configurations. FHWA project.
- 19 2017-2019 CV Pilot Deployment and Program Evaluation– Planning for SMEE Assessment of Smart Columbus Program. FHWA project.
- 18 2017-2018 Influences on Bicyclists and Motor Vehicle Operating Speed within a Corridor. UTC Project.
- 17 2017 Measuring Automated Vehicle Safety. TTI project
- 16 2017 Transit Automation Tech Reviews. Volpe.
- 15 2016-2020 Field Evaluation of At-Grade Alternative Intersection Designs. FHWA project.
- 14 2016-2019 Technical Support for Focus Approach to Roadway Departure (RwD) Safety. FHWA project.
- 13 2016-2019 Pedestrian and Bike Scalable Risk Assessment Methodology (ScRAM). FHWA project.
- 12 2016-2018 **NCHRP 17-76:** Guidance for the Setting of Speed Limits.
- 11 2016-2018 **NCHRP 17-71:** Proposed AASHTO Highway Safety Manual, Second Edition.
- 10 2016 Safety Performance of Truck Lane Restrictions in Dallas-Fort Worth. TTI Research project.
- 9 2016 Analysis of the Shoulder Widening need on the State Highway System. TxDOT project.
- 8 2016 Is Age a Factor in Crashes at Channelized Right-Turn Lanes? An Exploration of Potential Relationships. Atlas Research project.
- 7 2015 User Sentiment Analysis with Louisiana Social Media Data for Better and Effective Crash Countermeasures. LTRC 2014 TIRE Award project.
- 6 2015 Developing a method for estimating AADT on all Louisiana roads. Louisiana DOT project.
- 5 2013-2014 A Comprehensive Study on Pavement Edge Line Implementation. Louisiana DOT project.
- 4 2012 Safety Improvement from Edge Lines on Rural Two-Lane Highways. Louisiana DOT project.
- 3 2012 Developing Inexpensive Crash Countermeasures for Louisiana Local Roads. Louisiana DOT project.
- 2 2011 Mining Potentially Interesting Positive and Negative Association Patterns from Traffic Safety Data. LTRC 2011 TIRE Award project.
- 1 2010 Developing Louisiana Crash Reduction Factors. Louisiana DOT project.

## PUBLICATIONS

### Research Reports

- 21 2020 Fitzpatrick, K., **S. Das**, T. J. Gates, E. S. Park, M. P. Pratt, K.K. Dixon, J. Kay, M. Chakraborty. Development of the Posted Speed Limit Setting Procedure and Tool, Web-Only **NCHRP 17-76 Report** (in press).
- 20 2020 McFalls, J., B. Storey, S. Das, and J. Haberman. Permanent Vegetation Control Treatments for Roadsides. Web-Only **NCHRP 14-41 Report** (in press).
- 20 2020 Dixon, K., S. Geedipally, E. Park, R. Srinivasan, B. Lan, M. Brewer, **S. Das**, L. Wu, C. Zegeer, and E. Rista. Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes. **NCHRP 17-66 Report** (in press).
- 19 2020 Avelar, R., S. Geedipally, **S. Das**, L. Wu, and B. Kutela. Evaluation of Roadside Treatments to Mitigate Roadway Departure Crashes, TxDOT Report.
- 18 2020 **Das, S.**, R. Avelar, S. Geedipally, L. Wu, D. Lord, and M. Banihashemi. Rural Speed Safety Project for USDOT Safety Data Initiative (SDI), USDOT Report.
- 17 2019 Tsapakis, I., S. Sharma, S. Geedipally, B. Dadashova, and **S. Das**. Evaluation of Highway Safety Improvement Projects and Countermeasures. TxDOT Report.
- 16 2018 Turner, S., .... **S. Das**, .... Guide for Scalable Risk Assessment Methods for Pedestrians and Bicyclists. FHWA Report.
- 15 2018 Turner, S., B. Dadashova, G. Griffin, and **S. Das**. Improving the Amount and Availability of Pedestrian and Bicyclist Count Data in Texas. TxDOT Report.
- 14 2018 Fitzpatrick, K., and S. Das. Influences on Bicyclists and Motor Vehicle Operating Speed within a Corridor. SafeD UTC Project Report.
- 13 2018 Pratt, M., S. Geedipally, **S. Das**, and D. Lord. Pavement Safety-based Guidelines for Horizontal Curve Safety. TxDOT Report.
- 12 2018 Mensar, M., Trueblood, A., Shipp, E., and **S. Das**. MCCS Data Analysis and Literature Review. FHWA Project Report.
- 11 2017 **Das, S.**, B. Brimley, and A. Pant. Safety Impacts of Reduced Visibility in Inclement Weather. Report No.: ATLAS-2017-19.
- 10 2017 Turner, S., .... **S. Das**, .... Synthesis of Methods for Estimating Pedestrian and Bicyclist Exposure to Risk at Area wide levels and on Specific Transportation Facilities. Publication No. FHWA-SA-17-041.
- 9 2017 Le, M., **S. Das**, and M. Pratt. Safety Performance of Truck Lane Restrictions in Dallas-Fort Worth. TTI Report.
- 8 2017 Dixon, K., and S. Das. Measuring and Benchmarking Automated Vehicle Safety. TTI Report.
- 7 2016 Dixon, K., K. Fitzpatrick, R. Avelar, and **S. Das**. Analysis of the Shoulder Widening need on the State Highway System. Report No. 0-6840-1.
- 6 2016 Fitzpatrick, K., and **S. Das**. Is Age a Factor in Crashes at Channelized Right-Turn Lanes? An Exploration of Potential Relationships. Report No.: ATLAS-2016-14.
- 5 2015 Sun, X., **S. Das**, V. Ragbhan, and R. Benton. User Sentiment Analysis with Louisiana Social Media Data for Better and Effective Crash Countermeasures. Report No. 14-4TIRE.
- 4 2015 Sun, X., and **S. Das**. Developing a method for estimating AADT on all Louisiana roads. Report No. FHWA/LA.15/14-3SA.
- 3 2014 Sun, X., and **S. Das**. A Comprehensive Study on Pavement Edge Line Implementation. Report No. FHWA/LA.13/508. (**2014 AASHTO High Value Research Sweet Sixteen Award**)
- 2 2013 Sun, X., and **S. Das**. Developing Crash Modification Factor for Louisiana. Report No. FHWA/LA.12/506.
- 1 2011 Sun, X., and **S. Das**. Safety Improvement from Edge Lines on Rural Two-Lane Highways. Report No. FHWA/LA.11/487.

### Book

- 2021 **Das, S.** *Artificial Intelligence in Highway Safety*. CRC Press, Boca Raton, FL.

### Book Chapter

- 6 2021 **Das, S.**, Chapter 10: Impact of COVID-19 on industries. COVID-19 and the Environment Impact, Concerns & Management, Elsevier.
- 5 2020 **Das, S.**, S. Chatterjee, and S. Mitra. Improper Passing and Lane-Change related Crashes: Pattern Recognition using Association Rules Negative Binomial Mining. Springer.
- 4 2020 Dutta, A., and **S. Das**. Tweets about Self Driving Cars: Deep Sentiment Analysis using Long Short-Term Memory network (LSTM). Springer.

- 3 2020 **Das, S.,** Dutta, A., Mudgal, A., and Datta, S. Non-fear-based Road Safety Campaign as a Community Service: Contexts from Social Media. *Communication in Computer and Information Science. Conference Proceeding Book of 20th International Conference on Innovations for Community Services (I4CS), 12-14 January 2020, Bhubaneswar, India. Volume 717.* Springer, Hessen, Germany.
- 2 2020 **Das, S.** Automobile Safety Inspection. *International Encyclopedia of Transportation*, Elsevier. Amsterdam, Netherlands.
- 1 2018 Jalayer, M, Zhou, H., and **S. Das.** Exploratory Analysis of Run-Off-Road Crash Patterns. *Data Analytics for Smart Cities.* CRC Press, Boca Raton, FL

**Peer Reviewed Journal Articles (\* indicates Student) [Google Scholar Citations: 611; h-index=13; i10-index=19]**

- 71 2021 Das, S., and Dutta, A. Twelve Years of Transportation Annual Meeting Hashtag: Implications for Networking and Research Trends. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 70 2021 Das, S., X. Sun, B. Dadashova, M. Rahman, and M. Sun. Sun Glare and Traffic Crashes: Identifying Patterns of Key Factors. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 69 2021 **Das, S.,** Dutta, A., and Tsapakis, I. Motorcycle Crash Causation Study: Exploratory Topic Models from Crash Narrative Reports. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 68 2021 **Das, S.,** and Dutta, A. Light Delivery Vehicles Crashes: Identifying Insights using Joint Dimension Reduction and Clustering. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 67 2021 **Das, S.** Fatal Crash Reporting in Media: A Case Study on Bangladesh. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 66 2021 Tsapakis, I., **S. Das,** S. Jessberger, W. Holik, and P. Anderson. Improving Stratification Procedures to Estimate Annual Average Daily Traffic (AADT) for Non-Federal Aid-System (NFAS) Roads. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 65 2021 Fitzpatrick, K., **S. Das,** T. Gates, K. Dixon, and E. Park. Considering Roadway Context in Setting Posted Speed Limits. *Transportation Research Record: Journal of the Transportation Research Board (accepted).*
- 64 2020 Jalayer, M., M. Pour-Rouholamin, D. Patel, **S. Das,** and H. Parvardeh, H. A Penalized-likelihood Approach to Characterizing Bridge related Crashes in New Jersey. *Traffic Injury Prevention (in press).*
- 63 2020 **Das, S.** Traffic Volume Prediction in Low-Volume Roadways: Cubist Approach. *Transportation Planning and Technology (in press).*
- 62 2020 Zubaidi, H., I. Obaid, I., A. Alnedawi, and **S. Das.** Motor Vehicle Driver Injury Severity Analysis Utilizing A Random Parameter Binary Probit Model Considering Different Types of Driving Licenses in 4-Legs Roundabouts in South Australia. *Safety Science (in press).*
- 61 2020 **Das, S.,** X.Sun, and M. Sun. Rule-based safety prediction models for rural two-lane run-off-road crashes. *International Journal of Transportation Science and Technology.*
- 60 2020 **Das, S.,** Dutta, A., Dey, K., Jalayer, M., and Mudgal, A. Single and Multiple Vehicle Crashes due to Hydroplaning: A Case Study of Interpretable Machine Learning. *Transportation Research Interdisciplinary Perspectives (TRIP).*
- 59 2020 **Das, S.,** and A. Dutta. Characterizing Public Emotions and Sentiments in COVID-19 Environment: A Case Study of India. *Journal of Human Behavior in the Social Environment.*
- 58 2020 Kong, X., **S. Das,** K. Jha, and Y. Zhang. Understanding Speeding Behavior from Naturalistic Driving Data: Applying Classification Based Association Mining. *Accident Analysis and Prevention.*
- 57 2020 **Das, S.** City Transit Rider Tweets: Understanding Sentiments and Politeness. *Journal of Urban Technology (in press).*
- 56 2020 **Das, S.,** A. Dutta, and K. Fitzpatrick. Technological Perception on Autonomous Vehicles: Perspectives of the Non-motorists. *Technology Analysis & Strategic Management.*
- 55 2020 **Das, S.** Identifying key patterns in motorcycle crashes: findings from taxicab correspondence analysis. *Transportmetrica A: Transport Science.*
- 54 2020 **Das, S.,** M. Le, and B. Dai. Application of Machine Learning Tools in Classifying Pedestrian Crash Types: A Case Study. *Transportation Safety and Environment.*
- 53 2020 **Das, S.,** S. Geedipally, and K. Fitzpatrick. Inclusion of Speed and Weather Measures in Safety Performance Functions for Rural Roadways. *IATSS Research.*

- 52 2020 **Das, S., S. Ashraf\***, **L. Tran\***, and A. Dutta. Pedestrians Under Influence (PUI) Crashes: Patterns from Correspondence Regression Analysis. *Journal of Safety Research*.
- 51 2020 **Das, S., L. Tran\***, and **M. Theel\***. Understanding Patterns in Marijuana Impaired Traffic Crashes: A Case Study. *Journal of Substance Use*.
- 50 2020 **Das, S.** A Short Review of Transportation Research Record Articles: Focusing on Authors, Co-authorships, and Research Trends. *TR News*. Nov-December Issue (*in press*).
- 49 2020 **Das, S.**, and S. Geedipally. Rural Speed Safety Project for USDOT Safety Data Initiative: Findings and Outcomes. *ITE Journal*. September Issue.
- 48 2020 **Das, S.**, and A. Dutta. Extremely serious crashes on urban roadway networks: Patterns and trends. *IATSS Research*.
- 47 2020 **Das, S.**, X. Sun, **S. Goel\***, M. Sun, A. Rahman, and A. Dutta. Flooding related Traffic Crashes: Findings from Association Rules. *Journal of Transportation Safety and Security*.
- 46 2020 **Das, S.**, and L. White. RuralSpeedSafetyX: Interactive Decision Support Tool to Improve Safety, SoftwareX.
45. 2020 Rahman, M., X. Sun, and **S. Das**. Reconfiguring Urban Undivided Four-Lane Highways to Five-Lane: An Unideal but Very Effective Solution for Crash Reduction. *ASCE Journal of Transportation Engineering, Part A: Systems*.
- 44 2020 **Das, S.**, and G. Griffin. Big Data and Transportation Safety: Connecting the Dots. *Transportation Research Record: Journal of the Transportation Research Board*.
- 43 2020 **Das, S.**, Dutta, A., Tsapakis, I. Automated vehicle collisions in California: Applying Bayesian latent class model. *IATSS Research*.
- 42 2020 **Das, S.**, Dutta, A., and Brewer, M. Transportation Research Record Articles: A Case Study of Trend Mining. *Transportation Research Record: Journal of the Transportation Research Board*.
- 41 2020 **Das, S.**, Islam, M., Dutta, A., and **Shimu, T\***. Uncovering Deep Structure of Determinants in Large Truck Fatal Crashes. *Transportation Research Record: Journal of the Transportation Research Board*.
- 40 2020 Geedipally, S., **Das, S.**, Pratt, M., and Lord D. Determining Skid Resistance Needs on Horizontal Curves for Different Levels of Precipitation. *Transportation Research Record: Journal of the Transportation Research Board*.
- 39 2020 Dadashova, B., G. Griffin, **S. Das**, S. Turner, and B. Sherman. Estimation of Average Annual Daily Bicycle Counts using Crowdsourced Strava Data. *Transportation Research Record: Journal of the Transportation Research Board*. (in press).
38. 2019 **Das, S.**, and **I. Tsapakis**. Interpretable Machine Learning Approach in Estimating Traffic Volume on Low-Volume Roadways. *International Journal of Transportation Science and Technology*. Vol 9(1), pp. 76-88.
- 37 2019 **Das, S.**, and **A. Bibeka\***. Understanding Crime and Demographic Influence on Non-motorized Trips: Macro-level Analysis. *Journal of Human Behavior in the Social Environment*.
- 36 2019 **Das, S.**, B. Storey, **T. Shimu\***, S. Mitra, **M. Theel\***, and **B. Maraghepour\***. Severity Analysis of Tree and Utility Pole Crashes: Applying Fast and Frugal Heuristics. *IATSS Research*.
- 35 2019 **Das, S.**, A. Dutta, and S. Geedipally. Applying Bayesian Data Mining to measure the Effect of Vehicular Defects on Crash Severity. *Journal of Transportation Safety & Security*.
- 34 2019 **Das, S.** #TRBAM: Influence of Twitter Hashtags. *TR News*, Nov-December Issue.
- 33 2019 **Das, S.**, L. Kyle, L. Wu, and R. Henk. Understanding Crash Potential Associated with Teen Driving: Survey Analysis using Multivariate Graphical Method. *Journal of Safety Research*.
- 32 2019 **Das, S.**, **X. Kong\***, and I. Tsapakis. Hit and Run Crash Analysis using Association Rules Mining. *Journal of Transportation Safety and Security*.
- 31 2019 McCourt, R., K. Fitzpatrick, P. Koonce, and **S. Das**. Speed Limits: Leading to Change. *ITE Journal*, pp. 40-45.
- 30 2019 Jalayer, M., and **S. Das**. Application of Unmanned Aerial vehicle to Inspect and Inventory Interchange Assets to Mitigate Wrong-Way Entries. *ITE Journal*.
- 29 2019 **Das, S.**, A. Dutta, and X. Sun. Patterns of Rainy Weather Crashes: Applying Rules Mining. *Journal of Transportation Safety and Security*.
- 28 2019 **Das, S.**, M. Le, M. Pratt, and C. Morgan. Safety effectiveness of truck lane restrictions: a case study on Texas urban corridors. *International Journal of Urban Sciences*.
- 27 2019 Trueblood, A., E. Shipp, A. Pant, and **S. Das**. Farm Equipment Crash Narrative Analysis. *Traffic Injury Prevention*.
- 26 2019 **Das, S.**, I. Tsapakis, and **S. Datta\***. Safety Performance Functions of Low-Volume Roadways. *Transportation Research Record: Journal of the Transportation Research Board*.

- 25 2019 **Das, S.**, K. Jha, K. Fitzpatrick, M. Brewer, and T. Shimu\*. Pattern Identification from Elderly Cyclist Fatal Crashes. *Transportation Research Record: Journal of the Transportation Research Board*.
- 24 2019 **Das, S.**, A. Dutta, T. Lindheimer, M. Jalayer, and Z. Elgart. YouTube as a Source of Information in Understanding Autonomous Vehicle Consumers: A Natural Language Processing (NLP) Study. *Transportation Research Record: Journal of the Transportation Research Board*.
- 23 2019 Fitzpatrick, K., R. McCourt, and **S. Das**. Are Attitudes Changing with Respect to the Setting of Posted Speed Limits? *Transportation Research Record: Journal of the Transportation Research Board*.
- 22 2019 **Das, S.**, A. Bibeka\*, X. Sun, T. Zhou, and M. Jalayer. Aging Pedestrian Fatal Crash related Contributing Factors: Applying Empirical Bayes Geometric Mean Method. *Transportation Research Record: Journal of the Transportation Research Board*.
- 21 2019 **Das, S.**, S. Geedipally, K. Dixon, X. Sun, and C. Ma\*. Measuring the Effectiveness of Vehicle Inspection Regulations in Different States of the U.S. *Transportation Research Record: Journal of the Transportation Research Board*.
- 20 2019 **Das, S.**, A. Dutta, R. Avelar, K. Dixon, X. Sun, and M. Jalayer. Supervised Association Rules Mining on Pedestrian Crashes in Urban Areas: Identifying Patterns for Appropriate Countermeasures. *International Journal of Urban Sciences*.
- 19 2018 **Das, S.**, A. Dutta, Kong, X.\*, and Sun, X. Hit and Run Crashes: Knowledge Extraction from Bicycle Involved Crashes using First and Frugal Tree. *International Journal of Transportation Science and Technology*.
- 18 2018 **Das, S.**, A. Dutta, G. Medina, L. Minjares-Kyle, and Z. Elgart. Extracting patterns from Twitter to promote biking.
- 17 2018 **Das, S.**, A. Dutta, M. Jalayer, A. Bibeka\*, and L. Wu. Factors influencing the patterns of wrong-way driving crashes on freeway exit ramps and median crossovers: exploration using ‘Eclat’ association rules to promote safety. *International Journal of Transportation Science and Technology*, Vol. 7 Iss. 2, pp. 114-123.
- 16 2018 **Das, S.**, R. Avelar, K. Dixon, and X. Sun. Investigation on the Wrong Way Driving Crash Patterns using Multiple Correspondence Analysis. *Accident Analysis and Prevention*. Vol. 111, pp. 43-55.
- 15 2018 **Das, S.**, A. Dutta, K. Dixon, L. Minjares-Kyle, and G. Gillette. Using Deep Learning in Severity Analysis of At-Fault Motorcycle Rider Crashes. *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2672, Iss. 34, pp. 122-134.
- 14 2018 **Das, S.**, A. Mudgal, A. Dutta, and S. Geedipally. Vehicle Consumer Complaint Reports Involving Severe Incidents: Mining Large Contingency Tables. *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2672, Iss. 32, pp. 77-82.
- 13 2018 **Das, S.**, X. Sun, K. Dixon, and A. Rahman. Safety Effectiveness of Roadway Conversion with a Two Way Left Turn Lane. *Journal of Traffic and Transportation Engineering*. Vol. 5, Iss. 5, pp. 309-317.
- 12 2017 **Das, S.**, B. Brimley, T. Lindheimer, and M. Zupancich\*. Association of Reduced Visibility with Crash Outcomes. *LATSS Research*. Vol. 42, Iss. 3, pp. 143-151.
- 11 2017 **Das, S.**, K. Dixon, X. Sun, A. Dutta, and M. Zupancich\*. Trends in Transportation Research: Exploring Content Analysis in Topics. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2614, pp. 27–38.
- 10 2016 **Das, S.**, X. Sun, and A. Dutta. Text Mining and Topic Modeling on Compendium Papers from Transportation Research Board Annual Meetings. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2552, pp. 48-56.
- 9 2016 **Das, S.**, and X. Sun. Association knowledge for fatal run-off-road crashes by Multiple Correspondence Analysis. *LATSS Research*, Vol. 39, Iss. 2, pp. 146–155.
- 8 2015 **Das, S.**, and X. Sun. Factor Association with Multiple Correspondence Analysis in Vehicle-Pedestrian Crashes. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2519, pp. 95-103.
- 7 2015 **Das, S.**, X. Sun, F. Wang, and C. Leboeuf. Estimating likelihood of future crashes for crash-prone drivers. *Journal of Traffic and Transportation Engineering*, Vol. 2 Iss. 3, pp. 145-157.
- 6 2015 Khattak, M., A. Khattab, H. Rizvi, **S. Das**, and M. Bhuyan. Imaged-based Discrete Element Modeling of Hot Mix Asphalt Mixtures. *Materials and Structures*, Vol. 48, Iss. 8, pp. 2417–2430.
- 5 2015 **Das, S.**, X. Sun, and A. Dutta. Investigating User Ridership Sentiments for Bike Sharing Programs. *Journal of Transportation Technologies*, Vol. 5, Iss.2, pp. 69-75.
- 4 2014 Sun, X., **S. Das**, Z. Zhang, F. Wang, and C. Leboeuf. Investigating Safety Impact of Edgelines on Narrow, Rural Two-Lane Highways by Empirical Bayes Method. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2433, pp. 121-128.
- 3 2014 Sun, X., **S. Das**, and Y. He. Analyzing Crash-Prone Drivers in Multiple Crashes for Better Safety Educational and Enforcement Strategies. *Journal of Transportation Technologies*, Vol. 4, Iss.1, pp. 93-100.

- 2 2013 **Das, S.**, X. Sun, Y. He, F. Wang, and C. Leboeuf. Investigating the Safety Impact of Raised Pavement Markers on Freeways in Louisiana. *International Journal of Engineering Research & Innovation*, Vol. 5, Iss. 2, pp. 74-80.
- 1 2013 Sun, X., **S. Das**, N. Fruge, R. Bertinot, and D. Magri. Four-Lane to Five-Lane Urban Roadway Conversions for Safety. *Journal of Transportation Safety & Security*, Vol. 5, Iss. 2, pp. 106-117.

#### Journal Articles submitted for Publication (\* indicates Student)

- 11 2020 Rahman, M., X. Sun, **S. Das**, and S. Khanal. Exploring the Influential Factors of Roadway Departure Crashes on Rural Two-Lane Highways with Logit Model and Association Rules Mining. *International Journal of Transportation Science and Technology* (2<sup>nd</sup> review)
- 10 2020 Park, E., K. Fitzpatrick, **S. Das**, and R. Avelar. Exploration of the relationship among roadway characteristics, operating speed, and crashes for city streets using path analysis. *Accident Analysis & Prevention* (2<sup>nd</sup> review).
- 9 2020 Dey, K., M. Rahman, **S. Das**, and A. Williams. Left Turn Phasing Selection Considering Vehicle to Vehicle and Vehicle to Pedestrian Traffic Conflicts. *Journal of Traffic and Transportation Engineering* (2<sup>nd</sup> review)
- 8 2020 **Das, S.** An Exploratory Analysis of Unmanned Aircraft Sightings using Text Mining. *Transportation Research Record: Journal of the Transportation Research Board* (2<sup>nd</sup> review)
- 7 2020 Rahman, M. K. Dey, **S. Das**, and M. Sherfinski. Sharing the Road with Autonomous Vehicles: A Qualitative Analysis of the Perceptions of Pedestrians and Bicyclists. *Transportation Research Part F: Traffic Psychology and Behaviour* (1<sup>st</sup> review).
- 6 2020 Khodadadi, A. \*, I. Tsapakis, **S. Das**, and D. Lord. Application of Different Negative Binomial Parameterizations to Develop Safety Performance Function for Non-Federal Aid System Roads. *Accident Analysis & Prevention* (1<sup>st</sup> review).
- 5 2020 Kong, X. \*, **S. Das**, H. Zhou, and Y. Zhang. Patterns of near-crash events in naturalistic driving dataset: applying rules mining. *Accident Analysis & Prevention* (1<sup>st</sup> review).
- 4 2020 Kong, X. \*, **S. Das**, H. Zhou, and Y. Zhang. Characterizing Phone Usage while Driving: Safety Impact from Road and Operational Perspectives using Factor Analysis. *Accident Analysis & Prevention* (1<sup>st</sup> review).
- 3 2020 M. Rahman, X. Sun, **S. Das**, M. Sun, and M. Hossain. Using Association Rule Mining in Investigating Animal-related Crashes on Louisiana Roadways. *Traffic Injury Prevention* (1<sup>st</sup> review).
- 2 2020 Zubaidi, H., I. Obaid, A. Alnedawi, and **S. Das**. Temporal stability assessment of injury severities of motor vehicle drivers failed to give way at unsignalized intersections: random parameters approaches with heterogeneity in means and variances. *Analytical Methods of Accident Research* (1<sup>st</sup> review).
- 1 2020 **Das, S.**, Mousavi, M., and Shirinzad, M. Speeding Related Motorcycle Injuries: Findings from Cluster Correspondence Analysis. *Journal of Traffic Safety and Security* (1<sup>st</sup> review).

#### Journal Articles to be Submitted for Publication (\* indicates Student)

14. 2020 **Das, S.**, M. Le. Are Clear Roads and Speeding contributing to Crash Frequencies during COVID-19? *Accident Analysis and Prevention*.
- 13 2020 **Das, S.**, X. Kong\*, X. Xiao\*, H. Zubaidi, I. Obaid, and Z. Wei.\* Driver's Speeding related Safety Surrogates and Child Occupancy: Findings from Correspondence Analysis. *Journal of Safety Research*.
- 12 2020 **Das, S.**, M. Jalayer, K. Dey, H. Zubaidi, I. Obaid, and M. Rahman. Bayesian Clustering of Risk Perceptions of Teen Drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*.
- 11 2020 Wang, R.\* , **S. Das**, N. Duffield, and X. Kong\*. Using GPS trajectory data to classify vehicle types: a machine learning-based approach. *Transportation Research Part C: Emerging Technologies*.
- 10 2020 **Das, S.** Quantifying Disproportionality Scores from Bridge Inventory Data Elements. *Journal of Structural Engineering*.
- 9 2020 **Das, S.**, I. Tsapakis, and A. Khodadadi\*. Safety Performance Functions for Low-Volume Rural Minor Collector Two-lane Roadways. *IATSS Research*.
- 8 2020 **Das, S.**, X. Kong\*, S. Lavrenz, M. Jalayer, and L. Wu. Fatal Crashes at Highway Rail Grade Crossings: An U.S. based Study. *International Journal of Transportation Science and Technology*
- 7 2020 **Das, S.** American Generations, Aging, and Traffic Fatalities. *Accident Analysis & Prevention*.
- 6 2020 **Das, S.**, M. Rahman, and X. Sun. Traffic Injuries of Teen Cyclists: Pattern Recognition using Multivariate Graphical Method. *Traffic Injury Prevention*.
- 5 2020 **Das, S.** Scenarios of Fatal Pedestrian Crashes at Intersections: Findings from Data Mining. *Safety Science*.



- 4 2020 **Das, S.** Traffic Crashes from the Suicidal Attempts: Findings from Keyword-based Topic Modeling. Accident Analysis & Prevention.
- 3 2020 **Das, S.** Bicyclist Under Influence (BUI) Crashes: Identifying Association Patterns using Block Cluster Analysis. Journal of Safety Research.
- 2 2020 **Das, S.,** and **X. Kong\***. Racial Slurs used in Traffic Crash Events: An Observational Study. Accident Analysis & Prevention.
- 1 2020 **Kong, X.\*,** **S. Das,** Y. Zhang, and **X. Xiao\***. Exploring the fails-to-yield behavior of pedestrian or driver at non-signalized intersection through a naturalistic field study data. Journal of Safety Research.

**Peer Reviewed Computer Science Conference Proceeding Papers (\* indicates Student)**

- 2 2020 **Wang, R.\*,** **S. Das,** and A. Mudgal. Patterns of Origin Destination Distributions: Rules Mining using Massive GPS Trajectory Data. Proceeding in the First International Conference on Urban Data Science, January 20-21, Madras, India.
- 1 2012 He, Y., X. Sun, L. Du, R. Jinmei, and **S. Das.** Level of service for parking facilities. 15th International IEEE Conference on Intelligent Transportation Systems, Anchorage, AK.

**Peer Reviewed Transportation Engineering Conference Proceeding Papers (\* indicates Student)**

- 66 2021 **Das, S.** Traffic Fatalities by American Generations: Exploratory Evaluation using Person Level Data. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 65 2021 **Das, S.,** X. Kong\*, S. Lavrenz, M. Jalayer, and L. Wu. Pattern Recognition from Rail Grade Crossing Fatal Crashes. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 64 2021 **Das, S.,** and R. Wang\*. Racism discussed in Transportation Research: Bibliometric Analysis and Topic Modeling. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 63 2021 **Das, S.,** and M. Theel\*. Pandemic and Transportation Research: Bibliometric Analysis and Topic Modeling. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 62 2021 Kong, X.\*, **S. Das,** H. Zhou, and Y. Zhang. Patterns of near-crash events in naturalistic driving dataset: applying rules mining. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 61 2021 Khodadadi, A., I. Tsapakis, **S. Das,** and D. Lord. Application of Different Negative Binomial Parameterizations to Develop Safety Performance Function for Non-Federal Aid System Roads. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 60 2021 Rahman, M., K. Dey, **S. Das,** and M. Sherfinski. Sharing the Road with Autonomous Vehicles: A Qualitative Analysis of the Perceptions of Pedestrians and Bicyclists. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 59 2021 Sun, M., X. Sun, M. Rahman, and **S. Das.** Calibration and Development of Safety Performance Functions for Rural Two-Lane Two-Way Stop-Controlled Intersections in Louisiana. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 58 2021 Hosseini, P., M. Jalayer, and **S. Das.** A Multiple Correspondence Approach to Identify Contributing Factors Related to Work Zone Crashes. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 57 2021 Hosseini, P., M. Jalayer, and **S. Das.** Identifying Wrong-Way Driving (WWD) Crashes in Police Reports Using Text Mining Techniques. The 100th Transportation Research Board Annual Meeting (virtual due to COVID-19).
- 56 2020 Mahmoudzadeh, A., Z. Elgart, S. Arezoumand, T. Hansen, and **S. Das.** Designing Transit Agency Job Descriptions for Optimal Roles: An Analytical Text-Mining Approach. ASCE International Conference on Transportation and Development (virtual due to COVID-19).
- 55 2020 **Das, S.,** Dutta, A., Dey, K., Jalayer, M., and Mudgal, A. Single and Multiple Vehicle Crashes due to Hydroplaning: A Case Study of Interpretable Machine Learning. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 54 2020 **Das, S.,** K. Fitzpatrick, and A. Dutta. Survey of Bicyclists and Pedestrians towards Autonomous Vehicles. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 53 2020 **Das, S.,** and A. Dutta. Co-Author Networks in Transportation Research: Findings from TRID Data. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 52 2020 Dutta, A., and **S. Das.** Framework of a Job Lexicon for Future Transportation Workforce. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 51 2020 **Das, S.,** **X. Kong\*,** **R. Wang\*,** and **A. Mahmoudzadeh\*.** Pedestrian Collisions with Bicyclist: Emotion Mining using YouTube Data. The 99th Transportation Research Board Annual Meeting, Washington

- D.C., Jan 12-16.
- 50 2020 **Das, S., K. Jha\***, and A. Dutta. Vision Zero Hashtags in Social Media: Understanding End-User Needs from Natural Language Processing. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 49 2020 **Das, S.**, A. Dutta, and I. Tsapakis. Traffic Collisions Involving Autonomous Vehicles in California: Bayesian Model Based Clustering. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 48 2020 **Das, S., L. Tran\***, and **B. Maraghepour\***. Understanding Patterns in Marijuana Impaired Traffic Crashes: A Case Study on Louisiana. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 47 2020 **Das, S., S. Ashraf\***, A. Dutta, and **L. Tran\***. Pedestrians Under Influence: Findings from Correspondence Regression Analysis. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 46 2020 Sun, M., X. Sun, M. Rahman, M. Akter, and **S. Das**. Safety Performance Functions for Rural Two-Way Stop-Controlled Intersections. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 45 2020 Jalayer, M., M. Pour-Rouholamin, D. Patel, **S. Das**, and H. Parvardeh. A Penalized-likelihood Approach to Characterizing Bridge-related Crashes in New Jersey. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 44 2020 Sun, M., X. Sun, M. Rahman, M. Akter, and **S. Das**. Two-Way Stop-Controlled Intersection Analysis with Zero-inflated Models. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 43 2020 **Das, S.**, X. Sun, **S. Goel\***, M. Sun, M. Rahman, and I. Narsaria. Flooding related Traffic Crashes: Findings from Association Rules. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 42 2020 **Kong, X.\***, **S. Das**, K. Jha, and Y. Zhang. Understanding Speeding Behavior from Naturalistic Driving Data: Applying Classification Based Association Mining. The 99th Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 41 2020 **Das, S.** Extremely Serious Crashes on Urban Roadway Networks: Patterns and Trends. The 6th International Symposium on Highway Geometric Design, featuring the 6th Urban Street Symposium. Amsterdam, The Netherlands, June 28-July 1.
- 40 2019 Sun, X., and **S. Das**. Estimating Annual Average Daily Traffic for Low-Volume Roadways. The 12th TRB International Conference on Low Volume Roads, being held September 15–18, Kalispell, Montana.
- 39 2019 **Das, S.**, I. Tsapakis, and **S. Datta\***. Safety Performance Functions of Low-Volume Roadways. The 12th TRB International Conference on Low Volume Roads, being held September 15–18, Kalispell, Montana.
- 38 2019 **Das, S.**, A. Dutta, S. Geedipally, **C. Ma\***, and Z. Elgart. Effect of Vehicular Defects on Crash Severity: A Bayesian Data Mining Approach. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 37 2019 **Das, S.**, I. Tsapakis, W. Holik, **S. Datta\***, and **X. Kong\***. Estimation of Traffic Volumes on Low-Volume Roads: Interpretable Machine Learning Approach. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 36 2019 **Das, S.**, A. Dutta, and **S. Datta\***. Injury Severity Analysis from Crash Narratives of Tree and Utility Pole associated Crashes: An Interpretable Machine Learning Approach. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 35 2019 Jalayer, M., M. O'Connell, H. Zhou, P. Szary, and **S. Das**. Application of Unmanned Aerial Vehicle to Inspect and Inventory Interchange Assets to Mitigate Wrong-Way Entries. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 34 2019 Sun, M., X. Sun, D. Shan, D. Armstrong, and **S. Das**. Louisiana Pedestrian Crash Analysis with Multinomial Logit Model and Bayesian Network. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 33 2019 **Das, S.**, and A. Dutta. Data Curation using Deep Learning. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 32 2018 **Das, S.**, L. Minjares-Kyle, R. Avelar, and **B. Bommanayakanahalli\***. Improper Passing related Crashes: Identifying Patterns using Negative Binomial Precise Rules. The 7<sup>th</sup> International Symposium on Naturalistic Driving Research (NDRS 2018), Blacksburg, VA, Aug 28-30.
- 31 2018 **Das, S.**, Fitzpatrick, K., and **C. M\***. Vehicle Speeds in Presence of Bicyclists. Joint Western and Texas District Meeting, Keystone, CO, June 24-27.

- 30 2018 **Das, S.**, M. Le, M. Pratt, and C. Morgan. Safety Performance of Truck Lane Restrictions in Texas: Empirical Bayes Observational Before-After Analysis. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 29 2018 **Das, S.**, L. Minjares-Kyle, K. Dixon, A. Palanisamy, and A. Dutta. #TRBAM: Understanding Communication Patterns and Research Trends by Twitter Mining. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 28 2018 **Das, S.**, G. Medina, L. Minjares-Kyle, Z. Elgart. Social Media Hashtags Associated with Bike Commuting: Applying Natural Language Processing Tools. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 27 2018 **Das, S.**, and A. Dutta. Knowledge Extraction from Transportation Research Thesaurus. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 26 2018 L. Minjares-Kyle, **Das, S.**, G. Medina, and R. Henk. Knowledge about Crash Risk Factors and Self-Reported Driving Behavior: Exploratory Analysis on Multi-State Teen Driver Survey. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 25 2018 Bibeka, A.\*, **S. Das**, M. Martin, M. Jalayer, and S. Munira. Macro Level Analysis of Pedestrian and Bike Commuting: Using Self-Organizing Map to Associate Crime, Poverty, and Demographics. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 24 2018 Rahman, A., X. Sun, and **S. Das**. Safety Performance Evaluation of Urban Undivided Four-Lane to Five-Lane Conversion in Louisiana. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 7-11.
- 23 2017 **Das, S.** Exploring SHRP2 NDS for the perspective of Self-Driving Cars in Difficult Driving Condition. Autonomous Vehicle Symposium, San Francisco, CA, Jul 10-14.
- 22 2017 **Das, S.**, X. Sun, and K. Dixon. Converting Four lane roadways into Five lane roadways on Urban structure: Study on Safety Effectiveness. Urban Street Symposium 5, Raleigh, North Carolina, May 21-24 (*2017 Urban Street Symposium Best Paper Award*).
- 21 2017 **Das, S.**, K. Dixon, R. Avelar, and K. Fitzpatrick. Using Machine Learning Techniques to estimate non-motorized trips for rural roadways. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 8-12.
- 20 2017 **Das, S.**, B. Brimley, T. Lindheimer, and M. Zupancich\*. Safety Impacts of Reduced Visibility in Inclement Weather. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 8-12.
19. 2017 **Das, S.**, R. Avelar, K. Dixon, and X. Sun. Pedestrian Crash Analysis Using Association Rules Mining. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 8-12.
18. 2017 **Das, S.**, L. Minjares-Kyle, R. Avelar, K. Dixon, and B. Bommanayakanahalli\*. Improper Passing-Related Crashes on Rural Roadways: Using Association Rules Negative Binomial Miner. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 8-12.
17. 2017 **Das, S.**, X. Sun, A. Dutta, and M. Zupancich\*. Twitter in Circulating Transportation Information: A Case Study on Two Cities. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 8-12.
16. 2017 Avelar, R., T. Lindheimer, K. Dixon, J. Miles, and **S. Das**. Safety Evaluation of the Seasonality of Crashes with Tire Debris on Highways and Freeways. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 8-12.
- 15 2016 X. Sun, **S. Das**, and N. Broussard. Developing crash models with supporting vector machine for urban transportation planning. The 17th Road Safety on Five Continents (RS5C) Conference, Rio de Janeiro, Brazil, May 17-19.
- 14 2016 **Das, S.**, and X. Sun. Estimating Traffic Volume of Non-state Roadways with Support Vector Regression. The 95th Transportation Research Board Annual Meeting, Washington D.C., Jan 10-14.
- 13 2016 **Das, S.** Effectiveness of Inexpensive Crash Countermeasures to Improve Traffic Safety. The 95th Transportation Research Board Annual Meeting, Washington D.C., Jan 10-14.
- 12 2015 **Das, S.**, and X. Sun. Zero-Inflated Models for Different Severity Types in Rural Two-Lane Crashes. The 94th Transportation Research Board Annual Meeting, Washington D.C., Jan 10-14.
- 11 2015 **Das, S.**, and X. Sun. Determining the Knowledge Gap in Performance Based Analysis of Geometric Design and Condition Incorporating Safety. The 94th Transportation Research Board Annual Meeting, Washington D.C., Jan 10-14.
- 10 2015 **Das., S.**, X. Sun, D. Magri, N. Fruge, and R. Bertnotane. Conversion for Urban Roadway: An Unideal but Effective Way to Improve Roadway Safety. The 94th Transportation Research Board Annual Meeting, Washington D.C., Jan 10-14.

- 9 2014 **Das, S.**, and X. Sun. Exploring Clusters of Contributing Factors for Single-Vehicle Fatal Crashes Through Multiple Correspondence Analysis. The 93<sup>rd</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 8 2014 Sun, X., **S. Das**, Z. Zhang, and F. Wang. Investigating Safety Impact of Edge Line on Narrow Rural Two-Lane Highways by Empirical Bayes Method. The 93<sup>rd</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 7 2014 **Das, S.**, and X. Sun. Investigating the Pattern of Traffic Crashes under Rainy Weather by Association Rules in Data Mining. The 93<sup>rd</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 12-16.
- 6 2014 **Das, S.**, X. Sun, and A. Dutta. Sentiment Analysis of the Riders of the Bike Sharing Programs. 55th Annual Transportation Research Forum, San Jose, CA, Mar 13-15.
- 5 2014 **Das, S.** Analyzing At-fault Crash-Prone Drivers of Louisiana associated with Multiple Crashes. SASHTO 2014 Annual Conference, New Orleans, LA, Aug 23-27 (**2014 SASHTO Outstanding Graduate Research Award**).
- 4 2013 Sun, X., and **S. Das**. Converting Divided Urban Four-Lane Roadway to Five-Lane Roadway: Successful Case Study in Louisiana. The 92<sup>nd</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 3 2013 Sun, X., **S. Das**, S. Rasel, and F. Wang. Analyzing Crash-Prone Drivers in Multiple Crashes for Better Safety Educational and Enforcement Strategies. The 92<sup>nd</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 2 2013 **Das, S.**, and X. Sun. Investigating the Safety Impact of Raised Pavement Markers. The 92<sup>nd</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 13-17.
- 1 2012 Sun, X., **S. Das**, N. Fruge, R. Bertinot, and D. Magri. Crash Modification Factor for an Inexpensive yet Very Cost-Effective Safety Improvement: Converting Undivided Four-Lane Urban Roadways to Five-Lane Roadways. The 91<sup>st</sup> Transportation Research Board Annual Meeting, Washington D.C., Jan 22-26.

#### TALKS/WORKSHOPS

15. 2019 TxDOT Roadway Departure Safety Implementation Workshop. Lubbock, TX. November 4.
- 14 2019 AADT Estimation Errors in Predicting Safety of Low-volume Roadways. The 98th Transportation Research Board Annual Meeting, Washington D.C., Jan 13.
- 13 2019 Youtube as a Source of Information in Understanding Autonomous Vehicle Consumers: A Natural Language Processing (NLP) Study, Washington D.C., Jan 14.
- 12 2019 Injury Severity Analysis from Crash Narratives of Tree and Utility Pole associated Crashes: An Interpretable Machine Learning Approach, Washington D.C., Jan 15.
- 11 2019 Estimation of Traffic Volumes on Low-Volume Roads: Interpretable Machine Learning Approach, Washington D.C., Jan 16.
- 10 2018 Using Deep Learning in Severity Analysis of At-Fault Motorcycle Rider Crashes. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 9.
- 9 2018 #TRBAM: Understanding Communication Patterns and Research Trends by Twitter Mining. The 97th Transportation Research Board Annual Meeting, Washington D.C., Jan 9.
- 8 2017 Developing a Method for Estimating AADT on Local Roads. 2017 TRC Transportation Engineering Conference, Hot Springs, AK, May 17.
- 7 2017 Text mining on 100 years of Air Crash Narratives: Key Findings. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 11.
- 6 2017 Workshop on Text Mining in R: Understanding 100 years of Air Crash Narratives. Texas A&M University ITE General Meeting, College Station, TX, February 9, 2017.
- 5 2017 Workshop on R in Transportation Safety Research: Case Studies. Texas A&M University ITE General Meeting, College Station, TX, February 7, 2017.
- 4 2017 Visualization Lightning Talk: Visual Analytics by using Web GIS Tools in Transportation Decision Making. The 96th Transportation Research Board Annual Meeting, Washington D.C., Jan 11.
- 3 2016 Modeling in Roadway Safety: The Two Cultures. Texas A&M University ITE General Meeting, College Station, TX, May 17.
- 2 2015 Two days' workshop on Interactive Highway Safety Design Model (IHSDM). Civil Engineering Department, University of Louisiana at Lafayette, LA, Mar.
- 1 2014 Two days' workshop on Interactive Highway Safety Design Model (IHSDM). Civil Engineering Department, University of Louisiana at Lafayette, LA, Mar.

## **MEDIA**

- 2020 TTI News feature ‘Winfree, Das Featured in Traffic Technology International.’  
<https://tti.tamu.edu/news/winfree-das-featured-in-traffic-technology-international/>
- 2020 A detailed interview is featured in ‘Traffic Technology International September Issue.’  
<https://tti.mydigitalpublication.co.uk/publication/?i=672384>
- 2020 An interview is featured in Star Tribune Newspaper (March 21). <https://www.startribune.com/arrests-rare-in-minor-minneapolis-hit-and-run-cases/568965202/>
- 2018 Subasish’s #TRBAM analysis were posted by NASEMTRB’s official social media handles.
- 2016 TRB Committee ABG40’s newsletter Kaleidoscope featured Subasish’s text mining paper.
- 2015 Eno Transportation Center’s online annual report highlighted Subasish’s Eno fellowship.
- 2014 AASHTO newsletter ‘Research Makes Difference’ featured on Subasish’s 2014 AASHTO Sweet Sixteen High Value Research award.
- 2014 AASHTO Research Impact 2014 newsletter featured on Subasish’s ‘4U to 5T’ project.
- 2014 LTRC newsletter made a feature on Subasish’s 2014 AASHTO Sweet Sixteen High Value Research award.
- 2013 GRITS Newsletter highlighted Subasish’s First Place Scholarship for Academic Excellence.

## **COURSES DEVELOPED**

- 2 2020 Graduate level course on ‘Artificial Intelligence in Highway Safety’
- 1 2020 Graduate level course on ‘Highway Safety Core Competency’ (<https://github.com/subasish/NCHRP-20-07-384-CC-Courses>)

## **COURSES TAUGHT/SUPERVISED**

- 3 2013 Teaching Assistant of graduate level course ‘Highway Safety Fundamental Course’ at UL Lafayette.
- 2 2012 Teaching Assistant of graduate level course ‘Highway Safety Fundamental Course’ at UL Lafayette.
- 1 2011 Teaching Assistant of graduate level course ‘Highway Safety Fundamental Course’ at UL Lafayette.

## **RESEARCH MENTORING**

### **Thesis Supervision**

- Mentor, *Vehicle Category Classification based on GPS Trajectory Data*, M.S. Thesis of R. Wang, 2020.
- Mentor, *Investigating Safety Effectiveness of Centerline Rumble Strips on Rural Two-Lane Roads in Louisiana with Empirical Bayes Method*, M.S. Thesis of M. A. Rahman, 2016.
- Mentor, *Development of Crash Prediction Models for Transportation Planning Analysis*, M.S. Thesis of N. Broussard, 2015.
- Mentor, *Estimating Annual Average Daily Traffic for Non-State Roads in Louisiana*, M.S. Thesis of C. W. LeBoeuf, 2014.
- Mentor, *Analyzing the Safety Impact of Crash-Prone Drivers in Louisiana*, M.S. Thesis of F. Wang, 2013.
- Mentor, *Safety Effectiveness of Raised Pavement Markers*, M.S. Thesis of S. Rasel, 2012.

### **PhD Students**

Zihang Wei, Civil Engineering, TAMU (2020-); Ali Khodadadi, Civil Engineering, TAMU (2019-); Xiaoqiang “Jack” Kong, Civil Engineering, TAMU (2018-); Shruti Ashraf, Civil Engineering, TAMU (2018-2019); Chaolun Ma, Civil Engineering, TAMU (2018-2019); Sonjukta Datta, Civil Engineering, TAMU (2017-2018);

### **M.S. Students**

Vikram Agarwal, Civil Engineering, TAMU (2020-); Ruihong Wang, Electrical and Computer Engineering, TAMU (2019-2020); Nabila Nazneen, Chemical Engineering, TAMU (2019-); Samia Tasnim, Public Health, TAMU (2019-); Bita Maraghehpour, Public Health, TAMU (2019-); Apoorba Bibeka, Civil Engineering, TAMU (2016-2019); Sadia Najneen, Public Health, TAMU (2018-2019); Isha Narsaria, Civil Engineering, TAMU (2018-2019); Condor Manaswini, Civil Engineering, TAMU (2018-2019); Alence Poudel, Civil Engineering, TAMU (2019-); Tamanna Tasnum, Construction Science, TAMU (2016);

### **Undergraduate Students**

Magdalena Theel, TAMU (2019-); Ly-Na Tran, TAMU (2019-); Jacob Bruce, Civil Engineering, TAMU (2019-); Anthony Teo, Computer Science and Engineering, TAMU (2018-19); Urel Djiogan, Computer Science and Engineering, TAMU (2019); Richard Padilla, Computer Science and Engineering, TAMU (2018-2019); Daxton Davidson, Civil Engineering, TAMU (2018); Michelle Zupancich, Civil Engineering, TAMU (2016);