

# Subasish Das, Ph.D. — CURRICULUM VITAE

Assistant Professor, Civil Engineering

Director, Artificial Intelligence in Transportation (AIT) Lab

Texas State University

Co-founder and Chief Project Advisor, ATX Science (Startup Company)

RFM 5210, 601 University Drive, San Marcos, TX- 78666, USA

Phone (office): 512-245-1826, Phone (cell): 225-288-9875

Email: subasish@txstate.edu; Website: <https://ait-lab.vercel.app>

Dr. Subasish Das, director of Artificial Intelligence in Transportation (AIT) Lab, is an Assistant Professor of Civil Engineering at Texas State University whose research advances roadway safety, traffic operations, and connected and automated vehicles using data-intensive methods spanning advanced statistical modeling, AI, web-GIS, visualization, and decision support tools.

- **Research Experience and Funding:** Served as an Associate Research Scientist at the Texas A&M Transportation Institute (2015–2022) in a research-intensive, faculty-equivalent role, leading around \$3M in sponsored projects, including work tied to the Highway Safety Manual (HSM) and Highway Capacity Manual (HCM). Overall has led more than \$7M in sponsored research as PI/Co-PI (over \$4.2M since 2022 at Texas State University), including five National Academies projects as PI. Filed 5 patents and started a startup company (ATX Science) in 2022.
- **Research Interests:** The overarching research vision is to build a safer, smarter, and more sustainable transportation ecosystem. Key research thrust areas: (i) Causal and Responsible AI in Transportation, (ii) Emerging Technologies, (iii) Transportation Safety, (iv) Safe System, Policy, and Public Health and (v) Advanced Computational Theory and Applications.
- **Publications:** 400+ publications, including peer-reviewed journal articles, conference papers, technical reports, two CRC Press books (2022, 2025), and two upcoming solo-authored books (2026 [CRC Press], 2027 [Elsevier]).
- **Scholarly Impact:** 14,279 citations, *h*-index = 43, *i10*-index = 165 (**G Scholar**). Included in Elsevier published Top 2% Scientists in the World (2022, 2023, 2024, 2025). ScholarGPS Highly Ranked Scholar Past Five Years (Ranked 4568 in All Fields).
- **Teaching Experience:** Four years of classroom teaching experience in courses such as Highway Engineering, Advanced Safety Engineering, Traffic Engineering, and AI in Civil Engineering, with an overall student evaluation rating above 4.2/5. More than 12 years of experience in workshops, professional training, and core competency development.
- **National and Professional Service:** Extensive professional service across key national entities, including TRB standing committees, multiple NCHRP/ACRP project panels, and leadership roles within ITE's Data-Driven Safety Analysis community. Significant editorial portfolio spanning editor positions for leading transportation and safety journals, complemented by active departmental and college service and advising/launching student organizations.
- **Lab Leadership:** AIT Lab serves as a multidisciplinary hub integrating AI, transportation engineering, and public health, mentoring undergraduate, M.S., and Ph.D. students on high-impact, externally funded projects.

## EDUCATION

Ph.D.	<b>Systems Engineering (Civil Engineering Focus)</b> , University of Louisiana at Lafayette, LA (2015) Dissertation: Effectiveness of Inexpensive Crash Countermeasures to Improve Traffic Safety
M.S.	<b>Civil Engineering</b> , University of Louisiana at Lafayette, LA (2012) Thesis: Evaluating Safety Improvement from Edge Lines on Rural Two-lane Highways
B.Sc.	<b>Civil Engineering</b> , Bangladesh University of Engineering & Technology (BUET), Dhaka (2007) Thesis: Scope of Intelligent Transportation Systems in the Developing Countries

## PROFESSIONAL APPOINTMENTS

2022–present	<b>Assistant Professor</b> , Civil Engineering, Texas State University, San Marcos, TX
2015–2022	<b>Assistant/Associate Research Scientist</b> , Texas A&M Transportation Institute, Bryan, TX
2010–2015	<b>Research Assistant/Research Fellow</b> , University of Louisiana at Lafayette, LA
2008–2010	<b>Quantity Surveyor</b> , Hennessey LLC, Dubai, U.A.E.

2007-2008      **Project Engineer**, Mak Estate Developments, Dhaka, Bangladesh

## AWARDS

---

2025	Presidential Distinction Award, College of Science and Engineering, Texas State University
2025	Research Big Spender Award, Texas State University
2025	Research Millionaire Award, Texas State University
2024	Research Millionaire Award, Texas State University
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), University of Louisiana Graduate Research STEM Core
2015	Data Incubator Data Science Fellowship, Semi-finalist
2014	SASHTO Outstanding Graduate Research Award
2014	AASHTO High-Value Research Sweet Sixteen Award
2013	Gulf Region ITS (GRITS) Scholarship, First Place Award
2012	Travel Award, 9th Postgraduate Academic Forum, Beihang University, China
2012	University of Louisiana Engineering Designing Leader
2011–2014	Deep South Institute of Transportation Engineers Scholarship

## LICENSES/CERTIFICATES

---

2016	Reasoning, Data Analysis, and Writing Specialization Certificate, Duke University
2014	Data Science Specialization Certificate, Johns Hopkins University

## 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

---

2025–2028	Member, TRB Standing Committee on Integrated Transportation Safety Management (ACD11)
2023–2025	Panel Member, NCHRP 23-39: Strategies for Construction Inspector Career Paths in State Transportation Agencies (STAs) for Retaining and Advancing Capabilities
2023–2025	Panel Member, NCHRP 19-24: Guide for Implementing Price Escalation to Balance Risk Sharing in DOT Construction Projects
2023–2025	Panel Member, NCHRP 08-177: Digitizing Bicycle and Pedestrian Treatments for Promoting Active Transportation Equity and Safety
2022–2024	Chair, Liaison and Technology Transfer Subcommittee, Data-Driven Safety Analysis Committee, ITE
2022–2024	Panel Member, ACRP 03-69: Identifying Congestion and Safety Risks Due to Heterogeneous Airport Curbside Activity and Remedial Solutions
2022–2024	Panel Member, NCHRP 05-26: Development of an Updated Warranting System for Roadway Lighting
2022–2024	Panel Member, NCHRP 08-172: Benefit Analysis of Private Health Sector Investments in Public/Human Transportation
2022–2023	Panel Member, NCHRP 08-141: Guidance for Local Truck Parking Regulations
2021–2023	Panel Member, ACRP 11-03/Topic S03-16: State Aviation Funding: Project Prioritization and Selection Processes
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) Subcommittee
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

---

2022–present	Search Committee member for Tenure-Track Assistant Professor (Electrical Engineering Program); Research Committee member; Personnel Committee member; Scholarship Committee member
2022–present	ITE Faculty Advisor, Texas State University.
2022–present	Coordinator for establishing ITE and ITS Student Chapters at Texas State University.
2018–2022	Editorial Member, <i>IATSS Research</i> (Elsevier).
2019–present	Associate Editor, <i>Frontiers in Future Transportation</i> .
2019–present	Area Editor (Highway Safety & Crash Data Analysis), <i>Journal of Transportation Safety &amp; Security</i> (Taylor & Francis).
2019–present	Editorial Board Member, <i>Transportation Research Interdisciplinary Perspectives</i> (Elsevier).
2019	Committee Member, 7th International Conference on Geology Resource Management and Sustainable Development (ICGRMSD 2019), Beijing, China.
2015–present	Reviewer: <i>Accident Analysis &amp; Prevention</i> ; <i>Nature Energy</i> ; <i>Transportation Research Part C: Emerging Technologies</i> ; <i>Journal of Safety Research</i> ; <i>Cities</i> ; <i>Transportmetrica A: Transportation Science</i> .
2012–2015	Treasurer, ITE Student Chapter, University of Louisiana at Lafayette.

## FUNDING

---

### As PI/Co-PI

As PI/Co-PI, led projects totaling over \$7 million; since joining TXST in 2022, secured around \$4.2 million in funding.

- **State DOT Projects:** 22; TxDOT: 17; MnDOT: 2; MDOT: 1; LaDOTD: 1; NJDOT: 1; [Total: \$2.8M]
- **NASEM Projects:** 6; 5 as PI (NCHRP 17-113; NCHRP 17-134; NCHRP 56-05; BTSCRP BTS-39; BTSCRP BTS-42; 1 as Co-PI (NCHRP 17-133); [Total: \$1.7M]
- **USDOT Projects:** 7; 4 as PI, 3 as Co-PI [Total: \$1.1M]
- **FRA Projects:** 2; 2 as PI [Total: \$0.52M]
- **FHWA Projects:** 3; 3 as PI [\$0.46M]
- **AAA Foundation of Safety Projects:** 2; 2 as Co-PI [Total: \$165,000]
- **NSF Project:** 1; 1 as PI [Total: \$61,000]
- **Other Agencies:** 8; 6 as PI, 2 as Co-PI [Total: \$261,000]

2026–2027	<b>(PI-TXST)</b> Telematics-Informed Crash Risk Modeling to Support Targeted Traffic Enforcement for CMV Safety, Federal Motor Carrier Safety Administration (\$100,000)
2025–2027	<b>(PI-TXST)</b> Examining the Pre-Crash Circumstances Leading to Pedestrian Fatalities, AAA Foundation (\$105,004)
2026–2028	<b>(PI)</b> BTSCRP BTS-42: Guidelines for Authorizing, Implementing, and Operating Automated Traffic Enforcement Programs, National Academies of Sciences, Engineering, and Medicine (\$450,000) [with JHU and Exponent]
2026–2027	<b>(PI-TXST)</b> TxDOT 0-7259: Perform Assessment of TxDOT Safety Scoring Tools to Determine Effectiveness and Calibration, TxDOT (\$70,008)
2026–2027	<b>(PI-TXST)</b> TxDOT 0-7275: Cost Effective Roundabouts: Evaluate Options for Reducing Roundabout Footprints and Construction Costs, TxDOT (\$40,007)
2026	<b>(PI)</b> Role of emerging transportation technologies and safety initiatives in mitigating crashes in coastal communities, USDOT (UTC CREATE) (\$79,909)
2025–2026	<b>(PI)</b> TinyVision-SLM: An On-Device Vision–Language Model for Real-Time Traffic Scene Understanding and Safety Alerts, BIAP, TXST (\$5,000)

2026	(PI) Sheaf-Theoretic Identifiability in Technology-Enhanced Multi-Sensor Safety Infrastructure, REP, TXST (\$12,000)
2025–2026	(PI) AVLocal: Safe AV Maneuvers on Local Roads, FIAP, TXST (\$11,000)
2025	(PI) PedSense: Alerting Pedestrians while Crossing Roads or Rail Grade Crossing, FIAP, TXST (\$11,000)
2025–2026	(PI-TXST) TxDOT 0-7274: Synthesis on Evaluate Effectiveness of Pedestrian Elements Constructed through Competitive Funding Mechanisms, TxDOT (\$65,000)
2025–2027	(PI) Developing Fatigue Management Decision Support System for the U.S. Rail Industry, Federal Railway Administration (FRA) (\$260,000)
2025–2027	(PI-TXST) TxDOT 0-7263: Optimize Tradeoffs between Centerline Buffers, Lane Width, and Shoulders for Rural Undivided Highways, TxDOT (\$40,007)
2025–2027	(PI-TXST) TxDOT 0-7265: Evaluate Emerging Transportation Technologies and Advancements in Engineering and Roadway Safety Efforts Impact on Crashes, TxDOT (\$114,680)
2025–2027	(PI) NCHRP 17-134: Center Line Buffer Areas for Safety: Implementation Guidelines and Tool, National Academies of Sciences, Engineering, and Medicine (\$250,000) [with TTI]
2025–2027	(PI) BTS-39: Toolkit for Reducing Substance-Impaired Driving for the Last Leg of the Journey, National Academies of Sciences, Engineering, and Medicine (\$250,000) [with PSU and Exponent]
2025–2027	(PI-TXST) NCHRP 17-133: Applicability of the 85th Percentile for Setting Speed Limits on Freeways, Expressways, and Rural Highways, National Academies of Sciences, Engineering, and Medicine (\$40,000)
2025–2027	(PI) NCHRP 56-05: Traffic Analysis Practices for Non-Motorized Modes (Vulnerable Road Users), National Academies of Sciences, Engineering, and Medicine (\$55,000)
2025–2027	(PI-TXST) Refining the Understanding of Parking Space Requirements and Its Impact on Vehicle Miles Travelled, MnDOT (\$44,999)
2024–2025	(PI) Big Data Leveraged Intersection Safety System (BLISS), FIAP, TXST (\$11,000)
2024–2028	(PI-TXST) TxDOT 0-7215: Predicting Field Performance of Pavement Markings Statewide in Texas, TxDOT (\$85,178.75)
2024–2027	(PI-TXST) TxDOT 0-7230: Improve Safety and Decrease Vehicle Fatalities by Improving Pavement Markings, TxDOT (\$74,292.50)
2024–2026	(PI-TXST) TxDOT 0-7226: Analyze Operational and Safety Improvements Associated with Implemented Innovative Intersections in Texas, TxDOT (\$36,000)
2024–2026	(PI-TXST) TxDOT 0-7222: Develop Crash Predictive Methods for Frontage Roads Including Ramp Terminals, and Intersections with Crossroads in Texas, TxDOT (\$70,000)
2024–2025	(Co-PI) Identification of Unprecedented Coastal Flooding Hotspots for Highway Network Durability and Social Justice, CREATE UTC, USDOT (\$151,448)
2024–2026	(PI-TXST) Social and Community Factors Contributing to Pedestrian Trespass Behaviors (and Motorist Incursions) on Railroad Systems, FRA (\$264,000)
2024–2026	(PI-TXST) Roadside Feature Placement and Pedestrian Safety on Low and Intermediate Speed Road, Minnesota DOT (\$58,891)
2023–2024	(PI) SafeR: Safe Routing Tool, NSF I-Corps (\$61,000)
2023–2025	(PI-TXST) TxDOT 0-7183: Develop Crash Modification Factors for Super 2 Highways, TxDOT (Sub-contractor to TTI) [TXST Budget: \$68,695]
2023–2025	(PI-TXST) TxDOT 0-7187: Exploring and Developing Innovative Methods for Estimating VMT on Local Roads in Texas, TxDOT (Sub-contractor to TTI) [TXST Budget: \$40,166]
2023–2025	(PI-TXST) TxDOT 0-7189: Safety Assessment of Shared Use Paths at Roadway Crossings using Exposure-based Models, TxDOT (Sub-contractor to TTI) [TXST Budget: \$77,000]
2023–2025	(PI-TXST) TxDOT 0-7171: Barrier Striping for the Reduction of Accidents, TxDOT (Sub-contractor to TTI) [TXST Budget: \$70,000]
2023–2025	(PI-TXST) Increasing Equity in Traffic Safety, AAA Foundation (Sub-contractor to UW Tacoma) [TXST Budget: \$60,000]
2023–2025	(PI) Run to R1 Postdoctoral Researcher Catalyst Program Award, TXST (\$160,000)

2023–2025	<b>(PI)</b> NCHRP 17-113: Incorporating Safe System Approach into the NCHRP Report 500 Series, National Academies (\$700,000) [with VHB and Rowan University]
2023–2025	<b>(PI-TXST)</b> Evaluation of NJDOT Hardened Traffic Paint Markings and Stripes Performance, NJDOT (Sub-contractor to Rowan University) [TXST Budget: \$83,000]
2022–2024	<b>(PI)</b> Develop a Real-Time Decision Support Tool for Urban Roadway Safety Improvements, TxDOT (\$465,010)
2022–2024	<b>(Co-PI)</b> Using Vehicle Probe Data to Evaluate Speed Limits on Texas Highways, TxDOT (\$400,000)
2021–2023	<b>(PI)</b> Developing AI-driven Safe Navigation Tool, USDOT UTC (\$330,000)
2021–2023	<b>(PI)</b> Leveraging AI Techniques to Detect, Forecast, and Manage Freeway Congestion (\$310,000) [with Texas Southern University]
2020–2022	<b>(PI)</b> Autonomous Delivery Vehicle as a Disruptive Technology: How to Shape the Future with a Focus on Safety?, USDOT UTC (\$300,000)
2019–2023	<b>(PI)</b> Safety Enhancements at Short-Storage-Space Railroad Crossings, Michigan DOT (\$110,000)
2020–2021	<b>(PI)</b> TCRP Synthesis SB-33: Uses of Social Media in Public Transportation, National Academies of Sciences, Engineering, and Medicine (\$45,000)
2019–2021	<b>(PI)</b> Develop a Real-Time Decision Support Tool for Rural Roadway Safety Improvements, TxDOT (\$300,000)
2019–2021	<b>(PI)</b> Develop Speed Crash Modification Factors (CMFs) from SHRP-2 Data, FHWA (\$189,891)
2019–2021	<b>(Co-PI)</b> Use of Disruptive Technologies to Support Safety Analysis and Meet New Federal Requirements, USDOT UTC (\$176,000)
2019	<b>(PI)</b> Innovative Data Sources for Real-time Crash Prediction, USDOT UTC (\$20,000)
2019–2020	<b>(Co-PI)</b> NCHRP 20-07 (Task 384): Core Competencies for Key Safety Training, National Academies of Sciences, Engineering, and Medicine (\$75,000)
2018–2019	<b>(PI)</b> Transportation Safety Planning Noteworthy Practices, FHWA (\$30,000)
2018–2019	<b>(PI)</b> Rural Speed Safety Project for USDOT Safety Data Initiative, FHWA (\$240,000)
2018–2020	<b>(Co-PI)</b> Louisiana's Alcohol-Impaired Driving Problem: An Analysis of Crash and Cultural Factors, LADOTD (\$175,000)
2017–2019	<b>(Co-PI)</b> NCHRP 14-40: Comparison of Cost, Safety, and Environmental Benefits of Routine Mowing and Managed Succession of Roadside Vegetation, National Academies (\$300,000)
2016	<b>(PI)</b> Safety Impacts of Reduced Visibility in Inclement Weather, USDOT UTC (\$44,000)
2016	<b>(PI)</b> Improper Passing-Related Crashes on Rural Roadways, TTI Strategic Research Program (\$21,000)
2016	<b>(Co-PI)</b> Urban Roadway Fatality Analysis, TTI (\$30,000)

## As Key Researcher

2021–2023	NCHRP 07-30: Methods for Assigning Short-Duration Traffic Volume Counts to Adjustment Factor Groups for Estimating AADT. National Academies of Sciences, Engineering, and Medicine.
2021–2022	NCHRP 17-71A: Proposed AASHTO Highway Safety Manual, Second Edition, National Academies of Sciences, Engineering, and Medicine.
2020–2023	NCHRP 15-76: Designing for Target Speed, National Academies of Sciences, Engineering, and Medicine.
2020–2022	Develop Highway Safety Manual (HSM) Safety Performance Functions (SPFs) and Calibration Factors for Texas, TxDOT
2019–2022	Enhancing Freeway Safety Prediction Models, TxDOT
2019–2022	Improving and Communicating Speed Management Practices, TxDOT
2019–2022	Quantifying the Value of Right of Way, TxDOT
2019–2022	Implementation of Automated Traffic Signal Performance Measures, TxDOT
2019–2022	Examine Trade-off between Centerline Separation and Shoulder Width Allotment, TxDOT
2019–2022	NCHRP 03-134: Determination of Encroachment Conditions in Work Zones. National Academies of Sciences, Engineering, and Medicine.

2019–2024	NCHRP 17-92: Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures. National Academies of Sciences, Engineering, and Medicine.
2019–2023	ELCSI-PFS, Phase XI: Safety Evaluations of Mini-Roundabouts and Wrong Way Driving Improvements, FHWA
2019	Using Machine Learning Tools to Identify Pedestrian Crash Types, TTI
2019	Winter-Related Performance Analysis, PennDOT
2019–2022	NCHRP 06-18: Guide for Snow and Ice Control Operations. National Academies of Sciences, Engineering, and Medicine.
2019–2022	Transportation Pooled Fund Study TPF-5(361): SHRP2 Naturalistic Driving Study Pooled Fund: Advancing Implementable Solutions
2019–2023	Pre-Crash Modification Factors Study for Curb Extensions and Bicycle-Specific Intersection Markings, FHWA
2018–2020	Traffic Safety Improvements at Low Water Crossings, TxDOT
2018–2020	Evaluation of Roadside Treatments to Mitigate Roadway Departure Crashes, TxDOT
2018–2021	Development of Pedestrian Intersection Crash Modification Factors, FHWA
2018–2020	NCHRP 05-24: Guidelines for Vehicle and Equipment Color, Marking, and Lighting. National Academies of Sciences, Engineering, and Medicine.
2018–2020	NCHRP 14-41: Permanent Vegetation Control Treatments for Roadsides. National Academies of Sciences, Engineering, and Medicine.
2018	Evaluation of Bicycle and Pedestrian Monitoring Equipment to Establish Collection Database/Methodologies for Estimating Non-Motorized Transportation, TxDOT
2017–2019	Collection and Estimation of Annual Average Daily Traffic (AADT) on Lower-Volume Roads, FHWA
2017–2019	A Data-Driven Safety Analysis Framework for the Beaumont District, TxDOT
2017–2019	Identifying Infrastructure-Based Motorcycle Crash Countermeasures – Phase I, FHWA
2017–2019	Evaluation of Safety Improvement Projects and Countermeasures, TxDOT
2017–2019	Knowledge Extraction using Natural Language Processing from Farm Equipment Related Crash Narratives, NIOSH
2017–2019	Development of Crash Modification Factors for Different Separated Bike Lane (SBL) Configurations, FHWA
2017–2019	CV Pilot Deployment and Program Evaluation: Planning for SMEE Assessment of Smart Columbus Program, FHWA
2017–2018	Influences on Bicyclists and Motor Vehicle Operating Speed within a Corridor, UTC
2017	Measuring Automated Vehicle Safety, TTI
2017	Transit Automation Tech Reviews, Volpe
2016–2020	Field Evaluation of At-Grade Alternative Intersection Designs, FHWA
2016–2019	Technical Support for Focus Approach to Roadway Departure (RwD) Safety, FHWA
2016–2019	Pedestrian and Bike Scalable Risk Assessment Methodology (ScRAM), FHWA
2016–2018	NCHRP 17-76: Guidance for the Setting of Speed Limits. National Academies of Sciences, Engineering, and Medicine.
2016–2018	NCHRP 17-71: Proposed AASHTO Highway Safety Manual, Second Edition. National Academies of Sciences, Engineering, and Medicine.
2016	Safety Performance of Truck Lane Restrictions in Dallas–Fort Worth, TTI
2016	Analysis of the Shoulder Widening Need on the State Highway System, TxDOT
2016	Is Age a Factor in Crashes at Channelized Right-Turn Lanes? An Exploration of Potential Relationships, Atlas UTC, USDOT
2015	Developing a method for estimating AADT on all Louisiana roads, Louisiana Department of Transportation & Development
2013–2014	A Comprehensive Study on Pavement Edge Line Implementation, Louisiana Department of Transportation & Development
2012	Safety Improvement from Edge Lines on Rural Two-Lane Highways, Louisiana Department of Transportation & Development

2012	Developing Inexpensive Crash Countermeasures for Louisiana Local Roads, Louisiana Department of Transportation & Development
2011	Mining Potentially Interesting Positive and Negative Association Patterns from Traffic Safety Data, LTRC 2011 TIRE Award

## PUBLICATIONS

400 plus publications. \* indicates student/postdoc supervised by Dr. Das.

- **Books:** 2 (both published from CRC Press), 2 in development (1 from CRC Press, 1 from Elsevier)
- **Book Chapters:** 6
- **Peer-Reviewed Journal Articles:** 238. Key Publications in ACM Computing Surveys (IF: 23.8): 3; The Lancet (IF: 88.5): 6; Accident Analysis & Prevention (IF: 6.2): 32; Transportation Research Part F (IF: 4.4): 12; Transportmetrica A: Transport Science (IF: 3.1): n; Journal of Safety Research (IF: 3.9): n; Traffic Injury Prevention (IF: 1.9): 5; Cities (IF: 6.0): 3; Transport Policy (IF: 6.3): 3; Transportation Research Record (IF: 1.8): 58; Journal of Transportation Safety & Security (IF: 3.61): 18.
- **Peer-Reviewed Magazine Articles:** 8
- **Large Collaborative Health Studies (GBD):** 8
- **Peer-Reviewed Computer Science Conference Proceeding Papers:** 18. IEEE: 8 ACM: 4; Others: 6.
- **Peer Review Techinal Reports:** 45. CRP Reports: 7; FHWA Reports: 6; USDOT Reports: 8; State DOT Reports: 18; Other Reports: 6.
- **Peer-Reviewed Transportation Engineering Conference Papers:** [TRBAM: 216 (partial list in the resume), Other Conf: 26] TRBAM2026: 49; TRBAM2025: 24; TRBAM2024: 49; TRBAM2023: 30; TRBAM2022: 16; TRBAM2021: 27; TRBAM2020: 5; TRBAM2019: 2; TRBAM2018: 6; TRBAM2017: 5; TRBAM2016: 1; TRBAM2015: 1; TRBAM2014: 1; Others: 14
- **Under Review Paper Preprints:** 26

### Books

2027	[B04] <b>Das, S.</b> <i>Artificial Intelligence and Generative AI in Civil Engineering: A Practical Guide to Data-Driven Solutions</i> . CRC Press, Boca Raton, FL. (Contract complete; book development ongoing.)
2026	[B03] <b>Das, S.</b> <i>Artificial Intelligence in Highway Engineering: Optimizing Infrastructure and Mobility</i> . Elsevier, Cambridge, MA. (Contract complete; book development ongoing.)
2025	[B02] Huang, X., Ye, X., Stewart, K., <b>Das, S.</b> <i>Urban Human Mobility: Practices, Analytics, and Strategies for Smart Cities</i> . CRC Press, Boca Raton, FL. <a href="#">doi</a> <a href="#">Link</a>
2022	[B01] <b>Das, S.</b> <i>Artificial Intelligence in Highway Safety</i> . CRC Press, Boca Raton, FL. <a href="#">doi</a> <a href="#">Link</a>

### Book Chapters

2022	[BC06] <b>Das, S.</b> Chapter 10: Impact of COVID-19 on industries. In <i>COVID-19 and the Environment: Impact, Concerns &amp; Management</i> . Elsevier. <a href="#">doi</a> <a href="#">Link</a>
2020	[BC05] <b>Das, S.</b> , Chatterjee, S., Mitra, S. Improper passing and lane-change related crashes: Pattern recognition using association rules and negative binomial mining. Springer. <a href="#">doi</a> <a href="#">Link</a>
2020	[BC04] Dutta, A., <b>Das, S.</b> Tweets about self-driving cars: Deep sentiment analysis using long short-term memory (LSTM). Springer. <a href="#">doi</a> <a href="#">Link</a>
2020	[BC03] <b>Das, S.</b> , Dutta, A., Mudgal, A., Datta, S. Non-fear-based road safety campaign as a community service: Contexts from social media. In <i>Communication in Computer and Information Science</i> . Proceedings of I4CS (Jan. 12–14, 2020), Bhubaneswar, India, Vol. 717. Springer. <a href="#">doi</a> <a href="#">Link</a>
2020	[BC02] <b>Das, S.</b> Automobile safety inspection. In <i>International Encyclopedia of Transportation</i> . Elsevier, Amsterdam, Netherlands. <a href="#">doi</a> <a href="#">Link</a>
2018	[BC01] Jalayer, M., Zhou, H., <b>Das, S.</b> Exploratory analysis of run-off-road crash patterns. In <i>Data Analytics for Smart Cities</i> . CRC Press, Boca Raton, FL. <a href="#">doi</a> <a href="#">Link</a>

## Patents

- 2025 [P05] **Das, S.**, Somvanshi, S. *AVLocal: Safe AV maneuvers on local roads.* (pending)
- 2025 [P04] **Das, S.**, Islam, M. M. *PedSense: Pedestrian alert system for road and rail grade crossings.*(pending)
- 2024 [P03] Dutta, A., Tusti, A., **Das, S.** *Safe-T: Road safety application for teen drivers.*(pending)
- 2024 [P02] **Das, S.**, Chakraborty, R. *BLISS: Big data leveraged intersection safety system.*(pending)
- 2024 [P01] **Das, S.**, Mills, D. *SafeR: The safest routing tool.*(pending)

## Peer-Reviewed Journal Articles

- 2026 [J0242] Fitzpatrick, K., Avelar, R., **Das, S.**, Pratt, M., Le, M., and Venglar, S. Quantifying How Much Key Factors Influence Freeway Operational Speeds During Non-Congested Periods. *Journal of Traffic Control Device Research.* [doi](#) [Link](#)
- 2026 [J0241] Tamakloe, R., **Das, S.**. Fatal distracted driving pedestrian-involved crashes in Ghana: Exploring cluster-specific factor associations using cluster correspondence analysis. *African Transport Studies.*
- 2026 [J0240] Mimi, M.S.\*, **Das, S.**, and Dutta, A. Non-Spatial AI Modeling to Estimate Traffic Volume Measures on Local Roadways. *International Journal of Urban Sciences.*
- 2026 [J0239] Islam, M.\*, **Das, S.**, Jalayer, M., Pike, A., Chowshury, T.I., Chakraborty, R., and Islam, S. M. Vision-Based Infrastructure Monitoring: Pavement Marking Visibility Classification using Deep Neural Networks. *International Journal of Transportation Science and Technology.*
- 2026 [J0238] Hossain, A\*, Sakib, N., Somvanshi, S.\*., and **Das, S.**. Leveraging Explainable Machine Learning Techniques to Estimate Crash Severity for Different Pedestrian Actions. *Transportation Research Record.*
- 2026 [J0237] Tusti, A.G.\*., Chakraborty, R.\*., Chowdhury, T.I.\*., Islam, M.M.\*., Mimi, M.S.\*., and **Das, S.**. Uncovering Latent Structures of Crash Typology in Narcotic-Involved Fatal Crashes for Safe System Interventions. *Accident Analysis & Prevention.* [doi](#) [Link](#)
- 2026 [J0236] Somvanshi, S.\*., Islam, M. M.\*., Rafe, A.\*., Tusti, A. G.\*., Chakraborty, A.\*., Baitullah, A.\*., Chowdhury, T. I.\*., Alnawmasi, N., Dutta, A., and **Das, S.**. Bridging the Black Box: A Survey on Mechanistic Interpretability in AI. *ACM Computing Surveys.* [doi](#) [Link](#)
- 2026 [J0235] Javed, S. A.\*., Barua, S.\*., Tusti, A.G.\*., Polock, S.\*., Chowdhury, T. I.\*., and **Das, S.**. Built environment and injury risk: Association rule-based exploration of e-scooter crashes in Texas cities. *Cities.* [doi](#) [Link](#)
- 2026 [J0234] Somvanshi, S.\*., Liu, J.\*., Chakraborty, R.\*., Tamakloe, R., and **Das, S.**. Predicting Crash Severity Using Naturalistic Driving Data and Neural Networks. *International Journal of Intelligent Transportation Systems Research..* [doi](#) [Link](#)
- 2026 [J0233] Rahman, M.A., Tolford, T., Junaed, S., **Das, S.**, Hossain, A., Moomen, M., Mitran, E., and Codjoe, J. Pedestrian fatalities on U.S. interstates: a pattern mining approach to investigating pedestrian actions and policy implications. *Case Studies on Transport Policy.* [doi](#) [Link](#)
- 2025 [J0232] Somvanshi, S., Islam, M. M., Chhetri, G., Chakraborty, R., Mimi, M. M., Shuvo, S. A., Islam, K. S., Javed, S. A., Rafat, S. A., Dutta, A., and **Das, S.** *From Tiny Machine Learning to Tiny Deep Learning: A Survey.* *ACM Computing Surveys.* [doi](#) [Link](#)
- 2025 [J0231] Ye, X., Newman, G., Zhai, W., Retchless, D., **Das, S.**, Ham, Y., Zou, L., Huang, X., and Zhang, Z. Toward Coastal Infrastructure Resiliency: An AI-Enabled Decision Support Framework for Multiscale Comprehension and Stakeholder Empowerment. *Transactions of the American Philosophical Society.* [doi](#) [Link](#)
- 2025 [J0230] Banihashemi, M., **Das, S.**, Dadvar, S., and Liu, J.\* COVID-19 Era Crash Fatality/Severe Injury and Proven Speed–Crash Relations. *Transportation Research Record.* [doi](#) [Link](#)
- 2025 [J0229] Hossain, A.\*., Das, A., Javed, S. A.\*., **Das, S.**, and Mills, D.\* Analyzing Pedestrian–Automated Vehicle Crash Dynamics: A Comparative Study of Autonomous and Conventional Precrash Mode. *Transportation Research Record.* [doi](#) [Link](#)

- 2025 [J0228] Oliae, A. H., **Das, S.**, and Le, M. Automating Pedestrian Crash Typology Using Transformer Models. *Transportation Research Record*. doi Link
- 2025 [J0227] **Das, S.**, Chakraborty, R.\*, Sheykhfard, A., Kutela, B., and Ye, X. Using Perceptual Cycle Model and Text Mining to Investigate Ambulance Traffic Crashes. *Transportation Research Record*. doi Link
- 2025 [J0226] Liu, J.\*, Antariksa, G.\*, Somvanshi, S.\*., and **Das, S.** Revealing equity gaps in pedestrian crash data through explainable artificial intelligence clustering. *Transportation Research Part D: Transport and Environment*. doi Link
- 2025 [J0225] Geedipally, S., **Das, S.**, Wu, L., and Pratt, M. P. Safety Performance Functions for Frontage Roads. *Transportation Research Record*. doi Link
- 2025 [J0224] Sheykhfard, A., Haghghi, F., Saeidi, S., SafariTaherkhani, M., Fountas, G., and **Das, S.** Behavioral modeling of drivers near speed control cameras: A dual perspective from micro and macro data. *Transportation Research Record*. doi Link
- 2025 [J0223] Chakraborty, R.\*, **Das, S.**, Mimi, M.\*., and Kutela, B. Investigating Factor Associations in Barrier Crashes through Cluster Correspondence Analysis. *Transportation Research Record*. doi Link
- 2025 [J0222] Kinero, A., Kutela, B., **Das, S.**, and Hossain, A.\* Who should be responsible for setting standards for how automated vehicles are used? Insights of the US perspective from a 2021 Nationwide Survey. *Sustainable Futures*. doi Link
- 2025 [J0221] Hossain, A.\*, Dzinyela, R., Jafari, M.\*., Barua, S.\*., Chakraborty, R.\*., and **Das, S.** Assessing risk factors in ambulance-involved collisions: understanding the impact of COVID-19 pandemic. *Transportmetrica A: Transport Science*. doi Link
- 2025 [J0220] Sheykhfard, A., Haghghi, F., Aziz Zadeh, A., **Das, S.**, Oshanreh, M. M., Shaaban, K., and Soltani, A. Evaluating U-left turn and direct left turn movements at signalized intersections using traffic conflict indices. *Journal of Traffic and Transportation Engineering (English Edition)*. doi Link
- 2025 [J0219] Hossain, A.\*., **Das, S.**, Jafari, M.\*., Starewich, M.\*., Chakraborty, R.\*., and Kutela, B. Behavioral and psychological determinants of pedestrian collisions on arterial roads with evidence from random parameter models. *Scientific Reports*. doi Link
- 2025 [J0218] Barua, S.\*., Chakraborty, R.\*., Mimi, M.\*., Islam, M. M.\*., and **Das, S.** Linking driver fatigue, safety rest area closures, and crash severity using cluster correspondence analysis. *Journal of Transportation Safety & Security*. doi Link
- 2025 [J0217] **Das, S.**, Sakib, N., Geedipally, S. R., and Wei, Z. Understanding pedestrian hit-and-run crash patterns using Louisiana data. *Transportation Safety and Environment*. doi Link
- 2025 [J0216] Kutela, B., Chengula, T. J., Ngeni, F., Lippu, C., Kidando, E., Liu, J., and **Das, S.** Examining Patterns of GPS-Related Traffic Crashes: Insights from a Matched Case-Control Approach through Crash Narratives. *Journal of Transportation Engineering, Part A: Systems*. doi Link
- 2025 [J0215] Barua, S.\*., Mimi, M.\*., Javed, S. A.\*., Tamakloe, R.\*., and **Das, S.** Impact of temporal, spatial, and roadway factors on driver overrides in Level 2 automation: A bivariate binary probit model analysis. *Transportation Research Part F: Traffic Psychology and Behaviour*. doi Link
- 2025 [J0214] Barua, S.\*., Chakraborty, R.\*., Islam, M. M.\*., and **Das, S.** A data-driven approach to child pedestrian crash analysis using dimension reduction, clustering, and explainable AI. *Accident Analysis & Prevention*. doi Link
- 2025 [J0213] Sheykhfard, A., Jones, S., Sadeghvaziri, E., Koppel, S., **Das, S.**, and Nankali, M. Integrating Empirical and Subjective Evidence on Young Drivers' Risk Perceptions and Crash Factors. *Transportation Research Record*. doi Link
- 2025 [J0212] **Das, S.**, Liu, J.\*., Dzinyela, R., Dadashova, B., and Silvestri-Dobrovolsky, C. Clustering patterns of roadway departure related motorcycle crashes using dimension reduction analysis. *Journal of Transportation Safety & Security*. doi Link
- 2025 [J0211] Chakraborty, R.\*., Javed, S. A.\*., Hossain, A.\*., Mills, D.\*., and **Das, S.** Identifying patterns in backing maneuver crashes utilizing differential evolution optimization algorithm. *Journal of Transportation Safety & Security*. doi Link

- 2025 [J0210] Sheykhfard, A., Azmoodeh, M., **Das, S.**, Ye, X., and Koppel, S. Exploring factors influencing user re-ride intentions in shared autonomous shuttle vehicles. *Transport Policy*. doi Link
- 2025 [J0209] Javed, S. A.\*, Polock, S.\*, Aghabayk, K.\*, Barua, S.\*., and **Das, S.** Pattern Recognition and Risk Analysis in U-Turn Crashes. *Transportation Research Record*. doi Link
- 2025 [J0208] Javed, S. A.\*, Chakraborty, R.\*, Hossain, A.\*., and **Das, S.** Uncovering risk patterns in single and multiple ambulance crashes with association rules mining: evidence from Texas crash data. *Transportmetrica A: Transport Science*. doi Link
- 2025 [J0207] Chukwu, M., Huang, X., Audu, K., Wang, H., and **Das, S.** Unequal Paths to Nature: Mobile-Phone Insights into Park Visits in Nine Major Cities in the United States. *Urban Forestry & Urban Greening*. doi Link
- 2025 [J0206] Jafari, M.\*, Starewich, M.\*., **Das, S.**, Barua, S.\*., and Tamakloe, R. Temporal stability analysis of crash injury severity in school zones: A mixed logit modeling approach. *IATSS Research*. doi Link
- 2025 [J0205] Chakraborty, R.\*, Liu, J.\*., Tusti, A. G.\*., Mimi, M.\*., and **Das, S.** Impact of lighting conditions on nighttime crash severity among older and elderly drivers. *Journal of Transportation Safety & Security*. doi Link
- 2025 [J0204] Mimi, M.\*., Islam, M.\*., Sheykhfard, A., and **Das, S.** Crash Risk Patterns among Older Bicyclists: Insights from Hybrid XGBoost–Cluster Correspondence Analysis. *Journal of Safety Research*. doi Link
- 2025 [J0203] Chakraborty, R.\*., Polock, S.\*., Shuvo, S.\*., Pandey, B.\*., Dey, K., and **Das, S.** Uncovering Contextual Risk Patterns in Cannabis-Involved Fatal Crashes: A Data-Driven Approach to Public Health-Oriented Road Safety. *Journal of Safety Research* (in press). doi Link
- 2025 [J0202] Somvanshi, S.\*., Javed, S. A.\*., Islam, M. M.\*., Pandit, D.\*., and **Das, S.** A Survey on Kolmogorov–Arnold Network. *ACM Computing Surveys*. doi Link
- 2025 [J0201] Jafari, M.\*., **Das, S.**, Tamakloe, R., Khan, M. N., and Hossain, A\*. Uncovering Individual Heterogeneity in Pedestrian Crash Severity with Mixed Logit Models: A Louisiana Case Study. *Transportation Research Record*. doi Link
- 2025 [J0200] **Das, S.**, Sakib, N., Geedipally, S., and Wei, Z\*. Understanding Pedestrian Hit and Run Crash Patterns using Louisiana Data. *Transportation Safety and Environment*. doi Link
- 2025 [J0199] Kutela, B., **Das, S.**, Kabir, N.\*., and Vierkant, V\*. The autopilot paradox: public perception of sleeping while driving semi-automated cars. *Applied Mobilities*. doi Link
- 2025 [J0198] **Das, S.**, Jafari, M.\*., Dzinyela, R., Khan, M. N.\*., Applying hybrid dimension reduction and econometric model to investigate rider behaviors in roadway departure motorcycle crashes. *Transportation Letters*. doi Link
- 2025 [J0197] Sakib, N., Paul, T., **Das, S.**, and Hossain, A\*. Exploring the factors affecting injury severity in highway and non-highway crashes in Bangladesh applying machine learning and SHAP. *IATSS Research*. doi Link
- 2025 [J0196] Hossain, A.\*., **Das, S.**, Sun, X., Hasan, A. S., and Jalayer, M. A Hybrid Data Mining Framework to Investigate Roadway Departure Crashes on Rural Two-Lane Highways: Applying Fast and Frugal Tree with Association Rules Mining. *Accident Analysis & Prevention*. doi Link
- 2025 [J0195] Jafari, M.\*., **Das, S.**, Barua, S.\*., Mimi, M. S.\*., and Starewich, M.\* Crash outcomes of yellow school buses: Random parameter and correlated random parameter logit models with heterogeneity in means. *Accident Analysis & Prevention*. doi Link
- 2025 [J0194] Sheykhfard, A., Qiao, F., **Das, S.**, and Lord, D. A predictive analysis of crash proneness among freight drivers: insight into latent risk dimensions. *Transportation Research Part F: Traffic Psychology and Behaviour*. doi Link
- 2025 [J0193] Tamakloe, R., Khorasani, M., **Das, S.**, and Kim, I. Pattern recognition in crash clusters involving vehicles with advanced driving technologies. *Accident Analysis & Prevention*. doi Link
- 2025 [J0192] Liu, J.\*., Chakraborty, R.\*., Somvanshi, S.\*., and **Das, S.** Impact of operating speed, roadway curvature, and precipitation on roadway departure risk in rural two-lane roads. *Travel Behaviour and Society*. doi Link

- 2025 [J0191] Islam, M. M.\*, Liu, J.\*, Chakraborty, R.\* , and **Das, S.** Evaluating crash risk factors of farm equipment vehicles on county and non-county roads using interpretable tabular deep learning (TabNet). *Accident Analysis & Prevention*. doi Link
- 2025 [J0190] Chakraborty, R.\*, Tusti, A. G.\* , Hossain, A.\* , Salehian, M., Javed, S. A.\* , and **Das, S.** Uncovering the role of restraint usage in driver ejection: a data mining investigation of fatal and injury crashes. *Traffic Injury Prevention*. doi Link
- 2025 [J0189] Kutela, B., **Das, S.**, Javed, S. A.\* , Sheykhfard, A., Ngeni, F., Lyimo, S. M., Shita, H., and Langa, N. Understanding the intersection of transportation safety and quality of life: Insights from community surveys in Austin, Texas. *Cities*. doi Link
- 2025 [J0188] Agheli, A., Aghabayk, K., Sadeghi, M., and **Das, S.** E-scooter crash severity in the United Kingdom: A comparative analysis using machine learning techniques and random parameters logit with heterogeneity in means and variances. *IATSS Research*. doi Link
- 2025 [J0187] Chakraborty, R.\* , Mills, D.\* and **Das, S.** Children on wheels: Identifying crash determinants using cluster correspondence analysis. *Accident Analysis & Prevention*. doi Link
- 2025 [J0186] Jafari, M.\* , Starewich, M.\* , Hossain, A.\* , Barua, S.\* , Alnavmasi, N., Ye, X., and **Das, S.** Assessing motorcyclist injury severity on curved road segments with temporal dynamics and unobserved heterogeneity. *Scientific Reports*. doi Link
- 2025 [J0185] Antariksa, G.\* , Koeshidayatullah, A., **Das, S.**, and Lee, J.\* XAI-driven contamination for self-supervised denoising with pixel-level anomaly detection in seismic data. *Journal of Applied Geophysics*. doi Link
- 2025 [J0184] Hossain, A.\* , Barua, S.\* , **Das, S.**, and Starewich, M.\* Ambulance crash risk dynamics: a baseline (2017–2019) vs. pandemic-era (2020–2022) comparative study using a random parameter logit model. *Transportmetrica A: Transport Science*. doi Link
- 2025 [J0183] Kinero, A., Kasubi, F., Hossain, A.\* , **Das, S.**, and Kutela, B. Perception of cyber attacks on automated vehicles and its influence on road sharing and ridership: Insights of the US perspective from a 2021 nationwide survey. *Transportation Research Part F: Traffic Psychology and Behaviour*. doi Link
- 2025 [J0182] Jafari, M.\* , **Das, S.**, Starewich, M.\* , and Barua, S.\* SUV-pedestrian crash severity modelling considering unobserved heterogeneity in means and variances. *Transportmetrica A: Transport Science*. doi Link
- 2025 [J0181] Antariksa, G.\* , Tamakloe, R., Liu, J.\* , and **Das, S.** Automated and Explainable Artificial Intelligence to Enhance Prediction of Pedestrian Injury Severity. *IEEE Transactions on Intelligent Transportation Systems*. doi Link
- 2025 [J0180] Dzinyela, R., Dadashova, B., Westfall, G., **Das, S.**, Silvestri-Dobrovolsky, C., Adanu, K. E., and Lord, D. Analysis of motorcyclists crash severity using cluster correspondence and hierarchical binary logit models. *Multimodal Transportation*. doi Link
- 2025 [J0179] Kutela, B., Kinero, A., Shita, H., **Das, S.**, Ruseruka, C., Chengula, T. J., and Novat, N. Understanding spatial-temporal attributes influencing electric vehicle charging stations utilization: A multi-city study. *Green Energy and Intelligent Transportation*. doi Link
- 2025 [J0178] Mimi, M. S.\* , Chakraborty, R.\* , Barua, S.\* , **Das, S.**, Khan, M. N.\* , and Dadashova, B. Demographic risk factors and injury severity scores in substance-use behaviour related traffic crashes. *Transportation Research Part F: Traffic Psychology and Behaviour*. doi Link
- 2025 [J0177] Sheykhfard, A., Azmoekeh, M., **Das, S.**, and Kutela, B. Analyzing purchase intentions of used electric vehicles through consumer experiences: A structural equation modeling approach. *Transport Policy*. doi Link
- 2025 [J0176] Kinero, A., Kutela, B., **Das, S.**, and Hossain, A.\* Who should be responsible for setting standards for how automated vehicles are used? Insights from the nationwide survey. *Sustainable Futures*. doi Link
- 2025 [J0175] Mimi, M. S.\* , Chakraborty, R.\* , Liu, J.\* , Barua, S.\* , and **Das, S.** Exploring patterns in older pedestrian involved crashes during nighttime. *Accident Analysis & Prevention*. doi Link
- 2024 [J0174] **Das, S.**, Barua, S.\* , and Hossain, A.\* Unraveling the complex relationship between weather conditions and traffic safety. *Journal of Transportation Safety & Security*. doi Link

- 2024 [J0173] Hossain, A.\*, Sun, X., Islam, S., Rahman, A., and **Das, S.** Single-vehicle roadway departure crashes at rural two-lane highway curved segments: a diagnosis using pattern recognition. *International Journal of Transportation Science and Technology*. doi [Link](#)
- 2024 [J0172] Chakraborty, R.\*, Javed, S. A.\* **Das, S.**, Kutela, B., and Khan, M. N.\* Impact of Level 2 automation on driver behavior: A study using association rules mining. *Transportation Research Part F: Traffic Psychology and Behaviour*. doi [Link](#)
- 2024 [J0171] **Das, S.**, Dzinyela, R., Liu, J., Dadashova, B., and Silvestri-Dobrovolny, C. Understanding patterns of factor influences in motorcycle crashes with fixed objects. *Journal of Transportation Safety & Security*. doi [Link](#)
- 2024 [J0170] Rahman, M. A., Chakraborty, R.\* **Das, S.**, Mohammed, N., Hossain, M. M., and Junaed, S. Identifying attribute associations in fatal speeding crashes using latent class clustering and association rule mining. *Journal of Transportation Safety & Security*. doi [Link](#)
- 2024 [J0169] Kavianpour, S., Haghghi, F., Sheykhard, A., **Das, S.**, Fountas, G., and Oshanreh, M. M. Assessing the risk of pedestrian crossing behavior on suburban roads using structural equation model. *Journal of Traffic and Transportation Engineering*. doi [Link](#)
- 2024 [J0168] Kutela, B., Salum, J. H., Seif, R., **Das, S.**, and Kidando, E. Navigating the blame game: Investigating automated vehicle fault in collisions under mixed traffic conditions. *Robotics and Autonomous Systems*. doi [Link](#)
- 2024 [J0167] Kutela, B., Shita, H., **Das, S.**, Kapaya, L., and Tarimo, E. Exploring the role of sponsoring agencies in shaping the MUTCD using supervised and unsupervised text mining. *American Society of Civil Engineers*. doi [Link](#)
- 2024 [J0166] Sheykhard, A., Haghghi, F., Saeidi, S., SafariTaherkhani, M., and **Das, S.** Understanding the influence of environmental factors on driver speed: A structural equation modeling analysis. *IATSS Research*. [2024 Top Cited Paper]. doi [Link](#)
- 2024 [J0165] Dzinyela, R., Jafari, M.\* **Das, S.**, Shimu, T., Alnawmasi, N., and Lord, D. Unconstrained and partially constrained temporal modelling of pedestrian injury severities. *Transportmetrica A: Transport Science*. doi [Link](#)
- 2024 [J0164] **Das, S.**, Rahman, M., Liu, J.\*, Ye, X., and Kutela, B. Association patterns of work zone crashes using Bayesian network. *Transportation Research Record*. doi [Link](#)
- 2024 [J0163] Kutela, B., Novat, N., Shita, H., Kalambay, P., and **Das, S.** Exploring diversity of activities on shared-use paths: Factors and implications for planning and design. *Journal of Transportation Engineering*. doi [Link](#)
- 2024 [J0162] Dzinyela, R.\*, Shirazi, M., **Das, S.**, and Lord, D. The Negative Binomial–Lindley model with time-dependent parameters: Accounting for temporal variations and excess zero observations in crash data. *Accident Analysis & Prevention*. doi [Link](#)
- 2024 [J0161] Chakraborty, R.\* **Das, S.**, and Khan, M.\* Uncovering pedestrian midblock crash severity patterns using association rules mining. *Transportmetrica A: Transport Science*. doi [Link](#)
- 2024 [J0160] Ye, X., Li, S., **Das, S.**, and Du, J. Enhancing route selection with real-time weather data integration in spatial decision support systems. *Spatial Information Research*. doi [Link](#)
- 2024 [J0159] Kutela, B., Menon, N., Herman, J., Ruseruka, C., and **Das, S.** A regression–content analysis approach to assess public satisfaction with shared mobility measures against the COVID-19 pandemic. *Journal of Transport & Health*. doi [Link](#)
- 2024 [J0158] Dzinyela, R.\*, Adanu, E. K., Gupta, H., Koirala, P., Alnawmasi, N., **Das, S.**, and Lord, D. Analyzing fatal crash patterns of recidivist drivers across genders and age groups: A hazard-based duration approach. *Accident Analysis & Prevention*. doi [Link](#)
- 2024 [J0157] Liu, J.\* **Das, S.**, Zhan, F., and Khan, M.\* Spatial analysis of geographical disparities in pedestrian safety. *Transport Policy*. doi [Link](#)
- 2024 [J0156] Hossain, A.\*, Sun, X., **Das, S.**, Jafari, M.\* and Codjoe, J. Investigating older driver crashes on high-speed roadway segments: A hybrid approach with extreme gradient boosting and random parameter model. *Transportmetrica A: Transport Science*. doi [Link](#)

- 2024 [J0155] Kutela, B., Novat, N., Kinero, A., Samuel, O., and **Das, S.** Understanding user behaviors and safety concerns on shared-use paths in Edmonton, Canada. *Cities*. doi Link
- 2024 [J0154] Rahman, M., **Das, S.**, Hossain, A., Codjoe, J., Mitran, E., and Sun, X. Exploring attribute associations in pedestrian-involved hit-and-run crashes through cluster correspondence analysis. *Transportation Research Record*. doi Link
- 2024 [J0153] Sheykhfard, A., Azmoodeh, M., Kutela, B., **Das, S.**, and Fountas, G. From self-reports to observations: Unraveling digital billboard influence on drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*. doi Link
- 2024 [J0152] **Das, S.**, Jafari, M.\*, Hossain, A.\*, Chakraborty, R.\*, and Mimi, M. S.\* Toll road crash severity using mixed logit model incorporating heterogeneous mean structures. *Transportmetrica A: Transport Science*. doi Link
- 2024 [J0151] Khan, N.\*, and **Das, S.** Advancing traffic safety through the Safe System approach: A systematic review. *Accident Analysis & Prevention*. doi Link
- 2024 [J0150] Khan, N.\*, **Das, S.**, and Liu, J.\* Predicting pedestrian-involved crash severity using Inception-V3 deep learning model. *Accident Analysis & Prevention*. doi Link
- 2024 [J0149] Faroughi, S., Pawar, N., Fernandes, C., Raissi, M., **Das, S.**, Kalantari, N., and Mahjour, S. Physics-guided, physics-informed, and physics-encoded neural networks and operators in scientific computing: Fluid and solid mechanics. *Journal of Computing and Information Science in Engineering*. [One of 2024 ASME Journals' Most Accessed Articles]. doi Link
- 2024 [J0148] Hossain, A.\*, Sun, X., **Das, S.**, Jafari, M.\*, and Rahman, A. Investigating pedestrian–vehicle crashes on interstate highways: Applying random parameter binary logit model with heterogeneity in means. *Accident Analysis & Prevention*. doi Link
- 2024 [J0147] Kutela, B., Ngeni, F., Novat, N., Shita, H., Ngotonie, M., Mwekh’iga, R., Langa, N., and **Das, S.** Understanding socio-demographic factors associated with shared-use-paths (SUPs) utilization. *Journal of Cycling and Micromobility Research*. doi Link
- 2024 [J0146] Wei, Z., **Das, S.**, Wu, Y., Li, Z., and Zhang, Y. Modeling the lagged impacts of hourly weather and speed variation factors on the segment crash risk of rural interstate freeways: Applying a space–time-stratified case-crossover design. *Accident Analysis & Prevention*. doi Link
- 2024 [J0145] Liu, J.\*, **Das, S.**, and Khan, M. Decoding the impacts of contributory factors and addressing social disparities in crash frequency analysis. *Accident Analysis & Prevention*. doi Link
- 2024 [J0144] Hossain, M., Zhou, H., Sun, X., Hossain, A.\*, and **Das, S.** Crashes involving distracted pedestrians: Identifying risk factors and their relationships to pedestrian severity levels and distraction modes. *Accident Analysis & Prevention*. doi Link
- 2023 [J0143] Tamakloe, R., Adanu, E., Atandzi, J., **Das, S.**, Lord, D., and Park, D. Stability of factors influencing walking-along-the-road pedestrian injury severity outcomes under different lighting conditions: A random parameters logit approach with heterogeneity in means and out-of-sample predictions. *Accident Analysis & Prevention*. doi Link
- 2023 [J0142] Hossain, A.\*, Sun, X., Alam, S., **Das, S.**, and Skeykhfard, A. Crash contributing factors and patterns associated with fatal truck-involved crashes in Bangladesh: Findings from text mining approach. *Transportation Research Record* (in press). doi Link
- 2023 [J0141] Tamakloe, R., **Das, S.**, Adanu, E., and Park, D. Key factors affecting motorcycle–barrier crash severity: An innovative cluster–regression technique. *Transportmetrica A: Transport Science*. doi Link
- 2023 [J0140] **Das, S.**, Khodadadi, A.\*, and Liu, J.\* Short-duration crash modeling to understand the impact of operating speed on freeway crashes during COVID-19. *Transportation Research Record*. doi Link
- 2023 [J0139] Al-Gharabi, A., Zubaidi, H., and **Das, S.** A scientometric analysis and bibliometric review of driver injury severity crash studies. *Al-Qadisiyah Journal for Engineering Sciences* 16(1). doi Link
- 2023 [J0138] **Das, S.**, and Zubaidi, H. City transit rider tweets: Understanding sentiments and politeness. *Journal of Urban Technology* 30(1). doi Link
- 2023 [J0137] Kutela, B., **Das, S.**, and Sener, I. Exploring the shared use pathway: A review of the design and demand estimation approaches. *Urban, Planning and Transport Research* 11(1). doi Link

- 2023 [J0136] Sheykhfard, A., Haghghi, F., **Das, S.**, and Fountas, G. Evasive actions to prevent pedestrian collisions in varying space/time contexts in diverse urban and non-urban areas. *Accident Analysis & Prevention*. doi [Link](#)
- 2023 [J0135] **Das, S.**, Kutela, B., and Menon, N. Unlocking the narrative: Using text mining to reveal the hidden factors behind suicide-related traffic crashes. *Archives of Suicide Research*. doi [Link](#)
- 2023 [J0134] **Das, S.**, Dutta, A., Tamakloe, R., and Khan, M. Analyzing the time-varying patterns of contributing factors in work zone-related crashes. *Journal of Transportation Safety & Security*. doi [Link](#)
- 2023 [J0133] Sheykhfard, A., Haghghi, F., Papadimitriou, E., **Das, S.**, and Gelder, P. Exploring the influence of signal countdown timers on driver behavior: An analysis of pedestrian–vehicle conflicts at signalized intersections. *Transportation Research Record*. doi [Link](#)
- 2023 [J0132] **Das, S.**, Kong, X., Wei, Z.\*, Xiao, X., Mills, D.\*, and Hossain, A. Probing into driver speeding patterns and their influence on child occupancy in urban areas. *Transportation Research Record*. doi [Link](#)
- 2023 [J0131] **Das, S.**, Hossain, A., Rahman, M., Sheykhfard, A., and Kutela, B. Case study on the traffic collision patterns of e-scooter riders. *Transportation Research Record*. doi [Link](#)
- 2023 [J0130] Hossain, M., Zhou, H., and **Das, S.**. Data mining approach to explore emergency vehicle crash patterns: A comparative study of crash severity in emergency and non-emergency response modes. *Accident Analysis & Prevention*. doi [Link](#)
- 2023 [J0129] Kutela, B., Msechu, K., Kidando, E., **Das, S.**, and Kitali, A. Eliciting the influence of roadway and traffic conditions on hurricane evacuation decisions using regression–content analysis approach. *Travel Behaviour and Society*. doi [Link](#)
- 2023 [J0128] **Das, S.**, Sheykhfard, A., Liu, J.\*, and Khan, M. Understanding non-motorists' views on automated vehicle safety through Bayesian network analysis and latent Dirichlet allocation. *International Journal of Transportation Science and Technology*. doi [Link](#)
- 2023 [J0127] Kong, X., Zhang, Y., Chen, X., **Das, S.**, and Sheykhfard, A. Case study on the relationship between socio-demographic characteristics and work-from-home behavior before, during, and after the COVID-19 pandemic. *Transportation Research Record*. doi [Link](#)
- 2023 [J0126] Sheykhfard, A., Haghghi, F., and **Das, S.**. How does talking with passengers threaten pedestrian life? An analysis of drivers' performance based on real-world driving data. *Transportation Research Part F: Traffic Psychology and Behaviour* 95. doi [Link](#)
- 2023 [J0125] **Das, S.**, Hossein, A., Vierkant, V., and Liu, J.\* Using Bidirectional Encoder Representations from Transformers (BERT) to classify traffic crash severity types. *Natural Language Processing* 3. doi [Link](#)
- 2023 [J0124] Rahman, M., **Das, S.**, Codjoe, J., Mitran, E., Sun, X., Abedi, K., and Hossain, M. Applying data mining methods to explore animal–vehicle crashes. *Transportation Research Record*. doi [Link](#)
- 2023 [J0123] **Das, S.**, Vierkant, V., Gonzalez, J., Kutela, B., and Sheykhfard, A. Bayesian network for motorcycle crash severity analysis. *Transportation Research Record*. doi [Link](#)
- 2023 [J0122] Hasan, A., Jalayer, M., **Das, S.**, and Kabir, M. Application of machine learning models and SHAP to examine crashes involving young drivers in New Jersey. *International Journal of Transportation Science and Technology* [2025 Most Cited Paper Award]. doi [Link](#)
- 2023 [J0121] **Das, S.**, Khodadadi, A., and Liu, J.\* Scientometric and bibliographic analysis of pedestrian safety research. *Transportation Research Record*. doi [Link](#)
- 2023 [J0120] **Das, S.**, Hossain, A., Le, M., Pratt, M., and Wu, J. Classifying pedestrian maneuver types using the advanced language model. *Transportation Research Record: Journal of the Transportation Research Board*. doi [Link](#)
- 2023 [J0119] **Das, S.**, Tamakloe, R., Zubaidi, H., Obaid, I., and Rahman, M. Bicyclist injury severity classification using a random parameter logit model. *International Journal of Transportation Science and Technology*. doi [Link](#)
- 2023 [J0118] **Das, S.**, Rahman, M., Kabir, N.\*, Oviedo-Trespalacios, O., Dey, K., and Hossain, M. Do people act differently while using ridesharing services with children? *Transportation Research Part A: Policy and Practice* 171. doi [Link](#)

- 2023 [J0117] Hossain, A., Sun, X., Thapa, R., Hossain, M., and **Das, S.** Exploring association of contributing factors to pedestrian fatal and severe injury crashes under dark–no-streetlight condition. *IATSS Research*. doi Link
- 2023 [J0116] Rahman, M., Dey, K., Pyrialakou, V., and **Das, S.** Factors influencing safety perceptions of sharing roadways with autonomous vehicles among vulnerable roadway users. *Journal of Safety Research*. doi Link
- 2023 [J0115] Sheykhfard, A., Haghghi, F., Fountas, G., **Das, S.**, and Khanpour, A. How do driving behavior and attitudes toward road safety vary between developed and developing countries? Evidence from Iran and the Netherlands. *Journal of Safety Research*. doi Link
- 2023 [J0114] Rahman, M., **Das, S.**, and Sun, X. Understanding the drowsy driving crash patterns from correspondence regression analysis. *Journal of Safety Research* 84. doi Link
- 2023 [J0113] Dey, K., Rahman, M., **Das, S.**, and Williams, A. Left-turn phasing selection considering vehicle-to-vehicle and vehicle-to-pedestrian conflicts. *Journal of Traffic and Transportation Engineering* 10(1). doi Link
- 2023 [J0112] Weng, Y., **Das, S.**, and Paal, S. Applying few-shot learning in classifying pedestrian crash typing. *Transportation Research Record: Journal of the Transportation Research Board*. doi Link
- 2023 [J0111] **Das, S.**, Tabesh, M., Dadashova, B., and Dobrovolny, C. Diagnosis of encroachment-related work-zone crashes by applying pattern recognition. *Transportation Research Record: Journal of the Transportation Research Board*. doi Link
- 2022 [J0110] Hosseini, P., Khoshirat, S., Jalayer, M., **Das, S.**, and Zhou, H. Application of text mining techniques to identify actual wrong-way driving crashes in police reports. *International Journal of Transportation Science and Technology*. doi Link
- 2022 [J0109] Rahman, M., **Das, S.**, and Sun, X. Using cluster correspondence analysis to explore rainy weather crashes in Louisiana. *Transportation Research Record: Journal of the Transportation Research Board* 2676(8). doi Link
- 2022 [J0108] **Das, S.**, Tamakloe, R., Kutela, B., and Hossain, A. Pattern recognition from injury severity types of frontage roadway crashes. *Journal of Transportation Safety & Security*. doi Link
- 2022 [J0107] Rahman, M., **Das, S.**, Sun, X., Sun, M., and Hossain, M. Using unsupervised learning to investigate injury-associated factors of animal–vehicle crashes. *International Journal of Injury Control and Safety Promotion*. doi Link
- 2022 [J0106] Rahman, S., **Das, S.**, and Sun, X. Single-vehicle run-off-road crashes because of cellphone distraction: Finding patterns with rule mining. *Transportation Research Record: Journal of the Transportation Research Board*. doi Link
- 2022 [J0105] **Das, S.**, Kong, X., and Hossain, M. Exploration on prior driving modes for automated vehicle collisions. *International Journal of Urban Sciences* 177. doi Link
- 2022 [J0104] Sohrabi, S., Wang, Y., **Das, S.**, and Paal, S. Safe route-finding: A review of literature and future directions. *Accident Analysis & Prevention* 177. doi Link
- 2022 [J0103] Kong, X., **Das, S.**, Zhang, Y., Wu, L., and Wallis, J. In-depth understanding of pedestrian–vehicle near-crash events at signalized intersections: An interpretable machine learning approach. *Transportation Research Record: Journal of the Transportation Research Board*. doi Link
- 2022 [J0102] Hasan, A., Jalayer, M., and **Das, S.** Severity modeling of work zone crashes in environmental factors using machine learning models. *Journal of Transportation Safety & Security*. doi Link
- 2022 [J0101] **Das, S.**, Sarkar, S., and Park, E. Impact of operating speed measures on traffic crashes: Annual and daily level models for rural two-lane and rural multilane roadways. *Journal of Transportation Safety & Security*. doi Link
- 2022 [J0100] **Das, S.**, and Sarkar, S. News media mining to explore speed–crash–traffic association during COVID-19. *Transportation Research Record: Journal of the Transportation Research Board*. doi Link
- 2022 [J0099] **Das, S.**, Aman, J., and Rahman, A. Content analysis on homelessness issues at airports by news media mining. *Transportation Research Record: Journal of the Transportation Research Board*. doi Link

- 2022 [J0098] Hossain, M., Zhou, H., Rahman, M., **Das, S.**, and Sun, X. Cellphone-distracted crashes of novice teen drivers: Understanding associations of contributing factors for crash severity levels and cellphone usage types. *Traffic Injury Prevention* 23(7). [doi](#) [Link](#)
- 2022 [J0097] **Das, S.**, Hossain, M., Rahman, A., Kong, X., Sun, X., and Mamun, G. Understanding patterns of moped and seated motor scooter (50 cc or less) involved fatal crashes using cluster correspondence analysis. *Transportmetrica A: Transport Science*. [doi](#) [Link](#)
- 2022 [J0096] Hossain, M., Zhou, H., **Das, S.**, Sun, X., and Hossain, A. Young drivers and cellphone distraction: Pattern recognition from fatal crashes. *Journal of Transportation Safety & Security*. [doi](#) [Link](#)
- 2022 [J0095] Tamakloe, R., Sam, E., Bencekri, M., **Das, S.**, and Park, D. Young drivers and cellphone distraction: Pattern recognition from fatal condition roads considering different lighting status. *Traffic Injury Prevention*. [doi](#) [Link](#)
- 2022 [J0094] Obaid, I., Alnedawi, A., Aboud, G., Tamakloe, R., Zuabidi, H., and **Das, S.** Factors associated with driver injury severity of motor vehicle crashes on sealed and unsealed pavements: Random parameter model with heterogeneity in means and variances. *International Journal of Transportation Science and Technology*. [doi](#) [Link](#)
- 2022 [J0093] Wei, Z.\*, **Das, S.**, and Zhang, Y. Short-duration crash prediction for rural two-lane roadways: Applying explainable artificial intelligence. *Transportation Research Record: Journal of the Transportation Research Board*. [doi](#) [Link](#)
- 2022 [J0092] **Das, S.**, Le, M., Fitzpatrick, K., and Wu, D. Did operating speeds during COVID-19 result in more fatal and injury crashes on urban freeways? *Transportation Research Record: Journal of the Transportation Research Board*. [doi](#) [Link](#)
- 2022 [J0091] Khodadadi, A.\*, Lord, D., Tsapakis, I., Shirazi, A., and **Das, S.** Derivation of the empirical Bayes method for the Negative Binomial–Lindley generalized linear model: Application in various safety analyses. *Accident Analysis & Prevention* 170. [doi](#) [Link](#)
- 2022 [J0090] Tamakloe, R., Park, D., and **Das, S.** Factors affecting motorcycle crash casualty severity at signalized and non-signalized intersections in Ghana: Insights from a data mining and binary logit regression approach. *Accident Analysis & Prevention* 165. [doi](#) [Link](#)
- 2022 [J0089] **Das, S.**, Sun, X., Dadashova, B., and Rahman, M. Identifying patterns of key factors in sun glare-related traffic crashes. *Transportation Research Record: Journal of the Transportation Research Board* 2676(2), 165–175. [doi](#) [Link](#)
- 2022 [J0088] Tsapakis, I., **Das, S.**, Jessberger, S., Holik, W., and Anderson, P. Improving stratification procedures to estimate annual average daily traffic for non-Federal-Aid-System roads. *Transportation Research Record: Journal of the Transportation Research Board* 2676(2), 393–406. [doi](#) [Link](#)
- 2022 [J0087] **Das, S.**, Sun, X., Goel\*, S., Sun, M., Rahman, A., and Dutta, A. Flooding-related traffic crashes: Findings from association rules. *Journal of Transportation Safety & Security* 14(1), 111–129. [doi](#) [Link](#)
- 2022 [J0086] **Das, S.**, Kong, X. Quantifying bridge element vulnerability over time. *Transportation Research Record: Journal of the Transportation Research Board* 2676(1), 460–471. [doi](#) [Link](#)
- 2022 [J0085] **Das, S.**, Dutta, A. Twelve-year analysis of Transportation Research Board Annual Meeting's official hashtag. *Transportation Research Record: Journal of the Transportation Research Board* 2676(1), 763–772. [doi](#) [Link](#)
- 2022 [J0084] Kong, X., Zhang, A., Xiao, X., **Das, S.**, and Zhang, Y. Work from home in the post-COVID world. *Case Studies on Transport Policy*. [doi](#) [Link](#)
- 2022 [J0083] Kong, X., Li, Z., Zhang, Y., and **Das, S.** Bridge deck deterioration: Reasons and patterns. *Transportation Research Record: Journal of the Transportation Research Board*. [doi](#) [Link](#)
- 2021 [J0082] **Das, S.**, Mousavi, S., and Shirinzad, M. Pattern recognition in speeding-related motorcycle crashes. *Journal of Transportation Safety & Security*. [doi](#) [Link](#)
- 2021 [J0081] Sun, M., Sun, X., Rahman, M., Akter, M., and **Das, S.** Modeling two-way stop-controlled intersection crashes with zero-inflated models on Louisiana rural two-lane highways. *IATSS Research* 45(3), 303–309. [doi](#) [Link](#)

- 2021 [J0080] **Das, S.** Understanding fatal crash reporting patterns in Bangladeshi online media using text mining. *Transportation Research Record: Journal of the Transportation Research Board* 2675(10), 960–971. [doi](#) [Link](#)
- 2021 [J0079] **Das, S.**, Datta, S., Zubaidi, H., and Obaid, I. Applying interpretable machine learning to classify tree- and utility-pole-related crash injury types. *IATSS Research* 45(3), 310–316. [doi](#) [Link](#)
- 2021 [J0078] **Das, S.**, Tamakloe, R., Zubaidi, H., Obaid, I., and Alnedawi, A. Fatal pedestrian crashes at intersections: Trend mining using association rules. *Accident Analysis & Prevention* 160. [doi](#) [Link](#)
- 2021 [J0077] Kutela, B., Dadashova, B., and **Das, S.** Mining patterns of autonomous vehicle crashes involving vulnerable road users to understand the associated factors. *Accident Analysis & Prevention* 165. [doi](#) [Link](#)
- 2021 [J0076] Kong, X.\*, **Das, S.**, Zhou, H., and Zhang, Y. Patterns of near-crash events in a naturalistic driving dataset: Applying rules mining. *Accident Analysis & Prevention* 161(3). [doi](#) [Link](#)
- 2021 [J0075] **Das, S.**, Dutta, A., and Rahman, M. Pattern recognition from light delivery vehicle crash characteristics. *Journal of Transportation Safety & Security*. [doi](#) [Link](#)
- 2021 [J0074] **Das, S.**, Dey, K., and Rahman, M. Pattern recognition from cyclist under influence (CUI) crash events: application of block cluster analysis. *Journal of Substance Use*. [doi](#) [Link](#)
- 2021 [J0073] Kong, X.\*, **Das, S.**, and Zhang, Y. Mining patterns of near-crash events with and without secondary tasks. *Accident Analysis & Prevention* 157. [doi](#) [Link](#)
- 2021 [J0072] **Das, S.** Autonomous vehicle safety: Understanding perceptions of pedestrians and bicyclists. *Transportation Research Part F: Traffic Psychology and Behaviour* 81, 41–54. [doi](#) [Link](#)
- 2021 [J0071] **Das, S.**, Wei, Z.\*, Kong, X.\*, and Xiao, X.\* Mining crowdsourced data on bicycle safety critical events. *Transportation Research Interdisciplinary Perspectives* 10. [doi](#) [Link](#)
- 2021 [J0070] Zubaidi, H.\*, Obaid, I.\*, Alnedawi, A., **Das, S.**, and Haque, M. M. Temporal instability assessment of injury severities of motor vehicle drivers at give-way controlled unsignalized intersections: A random parameters approach with heterogeneity in means and variances. *Accident Analysis & Prevention* 156. [doi](#) [Link](#)
- 2021 [J0069] Kong, X.\*, **Das, S.**, Zhou, H., and Zhang, Y. Lessons learned from pedestrian–driver communication and yielding patterns. *Transportation Research Part F: Traffic Psychology and Behaviour* 79, 35–38. [doi](#) [Link](#)
- 2021 [J0068] Khodadadi, A.\*, Tsapakis, I., **Das, S.**, and Lord, D. Application of different Negative Binomial parameterizations to develop safety performance functions for non-Federal Aid System roads. *Accident Analysis & Prevention* 156. [doi](#) [Link](#)
- 2021 [J0067] Rahman, M., Dey, K., **Das, S.**, and Sherfinski, M. Sharing the road with autonomous vehicles: A qualitative analysis of the perceptions of pedestrians and bicyclists. *Transportation Research Part F: Traffic Psychology and Behaviour* 78, 433–445. [doi](#) [Link](#)
- 2021 [J0066] Park, E., Fitzpatrick, K., **Das, S.**, and Avelar, R. Exploration of the relationship among roadway characteristics, operating speed, and crashes for city streets using path analysis. *Accident Analysis & Prevention* 150. [doi](#) [Link](#)
- 2021 [J0065] Zubaidi, H.\*, Obaid, I.\*, Alnedawi, A., and **Das, S.** Motor vehicle driver injury severity analysis utilizing a random parameter binary probit model considering different types of driving licenses in 4-leg roundabouts in South Australia. *Safety Science* 134. [doi](#) [Link](#)
- 2021 [J0064] **Das, S.**, Kong, X.\*, Lavrenz, S., Jalayer, M., and Wu, L. Fatal crashes at highway–rail grade crossings: A US-based study. *International Journal of Transportation Science and Technology*. [doi](#) [Link](#)
- 2021 [J0063] Rahman, M., Sun, X., **Das, S.**, and Khanal, S. 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* 10(2), 167–183. [doi](#) [Link](#)
- 2021 [J0062] **Das, S.**, Tsapakis, I., and Khodadadi, A.\* Safety performance functions for low-volume rural minor collector two-lane roadways. *IATSS Research* 45(3), 347–356. [doi](#) [Link](#)
- 2021 [J0061] **Das, S.** An exploratory analysis of unmanned aircraft sightings using text mining. *Transportation Research Record: Journal of the Transportation Research Board* 2675(5), 291–300. [doi](#) [Link](#)

- 2021 [J0060] **Das, S.**, Dutta, A., and Tsapakis, I. Topic models from crash narrative reports of Motorcycle Crash Causation Study. *Transportation Research Record: Journal of the Transportation Research Board* 2675(9), 449–462. [doi](#) [Link](#)
- 2021 [J0059] Fitzpatrick, K., **Das, S.**, Gates, T., Dixon, K., and Park, E. Considering roadway context in setting posted speed limits. *Transportation Research Record: Journal of the Transportation Research Board* 2675(8), 590–602. [doi](#) [Link](#)
- 2021 [J0058] **Das, S.**, Sun, X., and Sun, M. Rule-based safety prediction models for rural two-lane run-off-road crashes. *International Journal of Transportation Science and Technology* 10(3), 235–244. [doi](#) [Link](#)
- 2021 [J0057] **Das, S.**, Dutta, A., and Geedipally, S. Applying Bayesian data mining to measure the effect of vehicular defects on crash severity. *Journal of Transportation Safety & Security* 13(6). [doi](#) [Link](#)
- 2021 [J0056] **Das, S.**, Geedipally, S., and Fitzpatrick, K. Inclusion of speed and weather measures in safety performance functions for rural roadways. *IATSS Research* 45(1), 60–69. [doi](#) [Link](#)
- 2021 [J0055] Kong, X., **Das, S.**, Zhou, H., and Zhang, Y. Characterizing phone usage while driving: Safety impact from road and operational perspectives using factor analysis. *Accident Analysis & Prevention* 152, 1–17. [doi](#) [Link](#)
- 2021 [J0054] **Das, S.**, Kong, X.\*, and Tsapakis, I. Hit-and-run crash analysis using association rules mining. *Journal of Transportation Safety & Security* 13(2), 123–142. [doi](#) [Link](#)
- 2020 [J0053] **Das, S.**, Dutta, A., Dey, K., Jalayer, M., and Mudgal, A. Vehicle involvements in hydroplaning crashes: Applying interpretable machine learning. *Transportation Research Interdisciplinary Perspectives* 6. [doi](#) [Link](#)
- 2020 [J0052] Jalayer, M., Pour-Rouholamin, M., Patel, D., **Das, S.**, and Parvardeh, H. A penalized-likelihood approach to characterizing bridge-related crashes in New Jersey. *Traffic Injury Prevention* 22(1), 63–67. [doi](#) [Link](#)
- 2020 [J0051] **Das, S.** Traffic volume prediction in low-volume roadways: Cubist approach. *Transportation Planning and Technology* 44(1), 93–110. [doi](#) [Link](#)
- 2020 [J0050] **Das, S.**, Dutta, A., Dey, K., Jalayer, M., and Mudgal, A. Vehicle involvements in hydroplaning crashes: Applying interpretable machine learning *Transportation Research Interdisciplinary Perspectives* 6. [doi](#) [Link](#)
- 2020 [J0049] **Das, S.**, and Dutta, A. Characterizing public emotions and sentiments in COVID-19 environment: A case study of India. *Journal of Human Behavior in the Social Environment* 31(1–4), 167–183. [doi](#) [Link](#)
- 2020 [J0048] Kong, X., **Das, S.**, Jha, K., and Zhang, Y. Understanding speeding behavior from naturalistic driving data: Applying classification-based association mining. *Accident Analysis & Prevention* 144. [doi](#) [Link](#)
- 2020 [J0047] **Das, S.** Identifying key patterns in motorcycle crashes: Findings from taxicab correspondence analysis. *Transportmetrica A: Transport Science* 17(4), 593–614. [doi](#) [Link](#)
- 2020 [J0046] **Das, S.**, Le, M., and Dai, B. Application of machine learning tools in classifying pedestrian crash types: A case study. *Transportation Safety and Environment* 2(2), 106–119. [doi](#) [Link](#)
- 2020 [J0045] **Das, S.**, Ashraf, S.\*, Tran, L.\*, and Dutta, A. Pedestrians under influence crashes: Patterns from correspondence regression analysis. *Journal of Safety Research* 75, 14–23. [doi](#) [Link](#)
- 2020 [J0044] **Das, S.**, Tran, L.\*, and Theel, M.\* Understanding patterns in marijuana-impaired traffic crashes. *Journal of Substance Use* 26(1), 21–29. [doi](#) [Link](#)
- 2020 [J0043] **Das, S.**, and Dutta, A. Extremely serious crashes on urban roadway networks: Patterns and trends. *IATSS Research* 44(3), 248–252. [doi](#) [Link](#)
- 2020 [J0042] **Das, S.**, and White, L. Rural Speed Safety X: Interactive decision support tool to improve safety. *SoftwareX* 11. [doi](#) [Link](#)
- 2020 [J0041] Rahman, M., Sun, X., and **Das, S.**. Reconfiguring urban undivided four-lane highways to five-lane: An unideal but very effective solution for crash reduction. *Journal of Transportation Engineering, Part A: Systems* 146(10). [doi](#) [Link](#)
- 2020 [J0040] **Das, S.**, and Griffin, G. Investigating the role of big data in transportation safety. *Transportation Research Record: Journal of the Transportation Research Board* 2674(6), 244–252. [doi](#) [Link](#)

- 2020 [J0039] **Das, S.**, Dutta, A., and Tsapakis, I. Automated vehicle collisions in California: Applying Bayesian latent class model. *IATSS Research* 44(4), 300–308. doi [Link](#)
- 2020 [J0038] **Das, S.**, Dutta, A., and Brewer, M. Case Study of Trend Mining in Transportation Research Record Articles. *Transportation Research Record: Journal of the Transportation Research Board* 2674(10), 1–14. doi [Link](#)
- 2020 [J0037] **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* 2674(9), 742–754. doi [Link](#)
- 2020 [J0036] 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* 2674(9), 358–370. doi [Link](#)
- 2020 [J0035] Dadashova, B., Griffin, G., **Das, S.**, Turner, S., and Sherman, B. Estimation of average annual daily bicycle counts using crowdsourced Strava data. *Transportation Research Record: Journal of the Transportation Research Board* 2674(11), 390–402. doi [Link](#)
- 2020 [J0034] **Das, S.**, and Tsapakis, I. Interpretable machine learning approach in estimating traffic volume on low-volume roadways. *International Journal of Transportation Science and Technology* 9(1), 76–88. doi [Link](#)
- 2020 [J0033] **Das, S.**, Le, M., Pratt, M., and Morgan, C. Safety effectiveness of truck lane restrictions: A case study on Texas urban corridors. *International Journal of Urban Sciences* 24(1), 35–49. doi [Link](#)
- 2019 [J0032] **Das, S.**, and Bibeka, A.\* Understanding crime and demographic influence on non-motorized trips: Macro-level analysis. *Journal of Human Behavior in the Social Environment* 30(3), 251–264. doi [Link](#)
- 2019 [J0031] **Das, S.**, Storey, B., Shimu, T.\*, Mitra, S., Theel, M.\*, and Maraghepour, B.\* Severity analysis of tree and utility pole crashes: Applying fast and frugal heuristics. *IATSS Research* 44(2), 85–93. doi [Link](#)
- 2019 [J0030] **Das, S.**, Kyle, L., Wu, L., and Henk, R. Understanding crash potential associated with teen driving: Survey analysis using multivariate graphical method. *Journal of Safety Research* 70, 213–222. doi [Link](#)
- 2019 [J0029] **Das, S.**, Dutta, A., and Sun, X. Patterns of rainy weather crashes: Applying rules mining. *Journal of Transportation Safety & Security* 12(9), 1083–1105. doi [Link](#)
- 2019 [J0028] **Das, S.**, Tsapakis, I., and Datta, S.\* Safety performance functions of low-volume roadways. *Transportation Research Record: Journal of the Transportation Research Board* 2673(12), 798–810. doi [Link](#)
- 2019 [J0027] **Das, S.**, Jha, K., Fitzpatrick, K., Brewer, M., and Shimu, T.\* Pattern Identification from Older Bicyclist Fatal Crashes. *Transportation Research Record: Journal of the Transportation Research Board* 2673(6), 638–649. doi [Link](#)
- 2019 [J0026] Trueblood, A., Pant, A., Kim, J., Kum, H., Perez, M., **Das, S.**, and Shipp, E. A semi-automated tool for identifying agricultural roadway crashes in crash narratives. *Traffic Injury Prevention* 20(4), 413–418. doi [Link](#)
- 2019 [J0025] **Das, S.**, Dutta, A., Lindheimer, T., Jalayer, M., and Elgart, Z. YouTube as a source of information in understanding autonomous vehicle consumers: A natural language processing study. *Transportation Research Record: Journal of the Transportation Research Board* 2673(8), 242–253. doi [Link](#)
- 2019 [J0024] Fitzpatrick, K., McCourt, R., and **Das, S.** Current attitudes among transportation professionals with respect to the setting of posted speed limits. *Transportation Research Record: Journal of the Transportation Research Board* 2673(4), 778–788. doi [Link](#)
- 2019 [J0023] **Das, S.**, Bibeka, A.\*, Sun, X., Zhou, T., and Jalayer, M. Aging pedestrian fatal crash-related contributing factors: Applying Empirical Bayes geometric mean method. *Transportation Research Record: Journal of the Transportation Research Board* 2673(8), 254–263. doi [Link](#)
- 2019 [J0022] **Das, S.**, Geedipally, S., Dixon, K., Sun, X., and Ma, C.\* Measuring the Effectiveness of Vehicle Inspection Regulations in Different States of the U.S. *Transportation Research Record: Journal of the Transportation Research Board* 2673(5), 208–219. doi [Link](#)

- 2019 [J0021] **Das, S.**, Dutta, A., Avelar, R., Dixon, K., Sun, X., and Jalayer, M. Supervised association rules mining on pedestrian crashes in urban areas: Identifying patterns for appropriate countermeasures. *International Journal of Urban Sciences* 23(1), 30–48. doi [Link](#)
- 2019 [J0020] **Das, S.**, Bibeka, A., Sun, X., Zhou, H., and Jalayer, M. Elderly pedestrian fatal crash-related contributing factors: Applying Empirical Bayes geometric mean method. *Transportation Research Record: Journal of the Transportation Research Board* 2673(8), 242–253. doi [Link](#)
- 2018 [J0019] **Das, S.**, Dutta, A., Kong, X.\*, and Sun, X. Hit-and-run crashes: Knowledge extraction from bicycle-involved crashes using fast and frugal tree. *International Journal of Transportation Science and Technology* 8(2), 146–160. doi [Link](#)
- 2018 [J0018] **Das, S.**, Dutta, A., Medina, G., Minjares-Kyle, L., and Elgart, Z. Extracting patterns from Twitter to promote biking. *IATSS Research* 43(1), 51–59. doi [Link](#)
- 2018 [J0017] **Das, S.**, Dutta, A., Jalayer, M., Bibeka, A.\*, and Wu, L. Factors influencing the patterns of wrong-way driving crashes on freeway exit ramps and median crossovers: Exploration using Eclat association rules. *International Journal of Transportation Science and Technology* 7(2), 114–123. doi [Link](#)
- 2018 [J0016] **Das, S.**, Avelar, R., Dixon, K., and Sun, X. Investigation on the wrong-way driving crash patterns using multiple correspondence analysis. *Accident Analysis & Prevention* 111, 43–55. doi [Link](#)
- 2018 [J0015] **Das, S.**, Dutta, A., Dixon, K., Minjares-Kyle, L., and Gillette, G. Using deep learning in severity analysis of at-fault motorcycle rider crashes. *Transportation Research Record: Journal of the Transportation Research Board* 2672(34), 122–134. doi [Link](#)
- 2018 [J0014] **Das, S.**, Mudgal, A., Dutta, A., and Geedipally, S. Vehicle consumer complaint reports involving severe incidents: Mining large contingency tables. *Transportation Research Record: Journal of the Transportation Research Board* 2672(32), 77–82. doi [Link](#)
- 2018 [J0013] **Das, S.**, Sun, X., Dixon, K., and Rahman, A. Safety effectiveness of roadway conversion with a two-way left-turn lane. *Journal of Traffic and Transportation Engineering* 5(5), 309–317. doi [Link](#)
- 2017 [J0012] **Das, S.**, Brimley, B., Lindheimer, T., and Zupancich, M.\* Association of reduced visibility with crash outcomes. *IATSS Research* 42(3), 143–151. doi [Link](#)
- 2017 [J0011] **Das, S.**, Dixon, K., Sun, X., Dutta, A., and Zupancich, M.\* Trends in transportation research: Exploring content analysis in topics. *Transportation Research Record: Journal of the Transportation Research Board* 2614, 27–38. doi [Link](#)
- 2016 [J0010] **Das, S.**, Sun, X., and Dutta, A. Text mining and topic modeling on compendium papers from Transportation Research Board Annual Meetings. *Transportation Research Record: Journal of the Transportation Research Board* 2552, 48–56. doi [Link](#)
- 2016 [J0009] **Das, S.**, and Sun, X. Association knowledge for fatal run-off-road crashes by multiple correspondence analysis. *IATSS Research* 39(2), 146–155. doi [Link](#)
- 2015 [J0008] **Das, S.**, and Sun, X. Factor association with multiple correspondence analysis in vehicle–pedestrian crashes. *Transportation Research Record: Journal of the Transportation Research Board* 2519, 95–103. doi [Link](#)
- 2015 [J0007] **Das, S.**, Sun, X., Wang, F., and Leboeuf, C. Estimating likelihood of future crashes for crash-prone drivers. *Journal of Traffic and Transportation Engineering* 2(3), 145–157. doi [Link](#)
- 2015 [J0006] Khattak, M., Khattab, A., Rizvi, H., **Das, S.**, and Bhuyan, M. Image-based discrete element modeling of hot mix asphalt mixtures. *Materials and Structures* 48(8), 2417–2430. doi [Link](#)
- 2015 [J0005] **Das, S.**, Sun, X., and Dutta, A. Investigating user ridership sentiments for bike sharing programs. *Journal of Transportation Technologies* 5(2), 69–75. doi [Link](#)
- 2014 [J0004] Sun, X., **Das, S.**, Zhang, Z., Wang, F., and Leboeuf, C. Investigating safety impact of edgelines on narrow, rural two-lane highways by Empirical Bayes method. *Transportation Research Record: Journal of the Transportation Research Board* 2433, 121–128. doi [Link](#)
- 2014 [J0003] Sun, X., **Das, S.**, and He, Y. Analyzing crash-prone drivers in multiple crashes for better safety educational and enforcement strategies. *Journal of Transportation Technologies* 4(1), 93–100. doi [Link](#)

- 2013 [J0002] **Das, S.**, Sun, X., He, Y., Wang, F., and Leboeuf, C. Investigating the safety impact of raised pavement markers on freeways in Louisiana. *International Journal of Engineering Research & Innovation* 5(2), 74–80. [doi](#) [Link](#)
- 2013 [J0001] Sun, X., **Das, S.**, Fruge, N., Bertinot, R., and Magri, D. Four-lane to five-lane urban roadway conversions for safety. *Journal of Transportation Safety & Security* 5(2), 106–117. [doi](#) [Link](#)

## Peer-Reviewed Magazine Articles

- 2023 [M08] **Das, S.** TCRP Synthesis 156: How Do Transit Agencies Use Social Media? *TR News*. [doi](#) [Link](#)
- 2022 [M07] Fitzpatrick, K., A. Do, **Das, S.**, R. Avelar, and M. Pratt. Improving Pedestrian Safety at Signalized Intersections: Impacts of Corner Radius. *ITE Journal*, Vol. 92(6). [doi](#) [Link](#)
- 2021 [M06] **Das, S.**, and H. Zubaidi\*. Last Forty Years of *ITE Journal* Articles: A Scientometric Overview. *ITE Journal Online Exclusive*. [doi](#) [Link](#)
- 2021 [M05] **Das, S.** Data Dive into *Transportation Research Record* Articles: Authors, Coauthorships, and Research Trends. *TR News*, Iss. 331, pp. 25–31. [doi](#) [Link](#)
- 2020 [M04] **Das, S.**, and S. Geedipally. Rural Speed Safety Project for USDOT Safety Data Initiative: Findings and Outcomes. *ITE Journal*, Vol. 90(9), pp. 38–42. [doi](#) [Link](#)
- 2019 [M03] McCourt, R., K. Fitzpatrick, P. Koonce, and **Das, S.** Speed Limits: Leading to Change. *ITE Journal*, Vol. 89(4), pp. 38–43. [doi](#) [Link](#)
- 2019 [M02] Jalayer, M., and **Das, S.** Application of Unmanned Aerial Vehicle to Inspect and Inventory Interchange Assets to Mitigate Wrong-Way Entries. *ITE Journal*, Vol. 8(2), pp. 146–160. [doi](#) [Link](#)
- 2019 [M01] **Das, S.** #TRBAM: Social Media Interactions from Transportation's Largest Conference. *TR News*, Iss. 324, pp. 18–23. [doi](#) [Link](#)

## Peer-Reviewed Technical Reports

- 2025 [TR048] Kitali, A., Kalambay, P., Miyaho, M., Sesko, A., Kidando, E., Lippu, C. O., **Das, S.** and Liu, J. *Social and Infrastructure Factors Shaping Road Safety: A Multi-Level Analysis of Crashes in Ohio, Texas, and Washington*. AAA Foundation for Traffic Safety. [url](#) [Link](#)
- 2025 [TR047] Finley, M., Lopez, N., **Das, S.**, Wei, H., Lin, W., Nian, D., and Ash, J. *Investigation of Commercial Motor Vehicle (CMV)-Related Crashes in Ohio Work Zones*. Ohio DOT. [url](#) [Link](#)
- 2025 [TR046] Brewer, M., Geedipally, S., **Das, S.**, Javed, S. A., and Fitzpatrick, K. *Crash Modification Factors for Super 2 Highways*. TxDOT. [url](#) [Link](#)
- 2024 [TR045] **Das, S.**, Dadvar, S., Wu, L., Dimaiuta, M., and Weng, Y. *Development of Speed Crash Modification Factors (CMFs) using SHRP2 Roadway Information Database (RID), Volume I*. FHWA Final Report. FHWA. [doi](#) [Link](#)
- 2024 [TR044] **Das, S.**, Dadvar, S., Wu, L., Dimaiuta, M., and Weng, Y. *Development of Speed Crash Modification Factors (CMFs) using SHRP2 Roadway Information Database (RID), Volume II*. FHWA Appendices. FHWA. [doi](#) [Link](#)
- 2024 [TR043] Fitzpatrick, K., Venglar, S., **Das, S.**, Pratt, M., Park, E., Avelar, R., and Le, M. *Speed Limits in Texas*. TxDOT. [url](#) [Link](#)
- 2023 [TR042] Le, M., Pratt, M. P., Oliae, A. H., **Das, S.**, Ramezani, M., Wu, J., and Guo, S. *Applying Advanced Techniques to Datamine Pedestrian Crash Data*. TTI. [url](#) [Link](#)
- 2023 [TR041] **Das, S.**, Tsapakis, I., Khan, M., Liu, J., Mills, D., Miller, M., Balke, K., Wu, J., Azimi, M., and Qi, Y. *Leveraging Artificial Intelligence (AI) Techniques to Detect, Forecast, and Manage Freeway Congestion*. TxDOT. [url](#) [Link](#)
- 2023 [TR040] Pratt, M., Geedipally, S., Le, M., Wu, L., Avelar, R., **Das, S.**, and Lord, D. *Enhancing Freeway Safety Prediction Models*. TxDOT. [url](#) [Link](#)
- 2023 [TR039] Dobrovolny, C., Dadashova, B., Tabesh, M., **Das, S.**, Kwon, H., Bligh, R., Riexinger, L., Smith, C., Gabler, H., and Hallmark, S. *Addressing Encroachment-Related Safety Issues in Work Zones: A Guide*. NCHRP Research Report, Issue 1055, 43 p. NASEM. [doi](#) [Link](#)

- 2023 [TR038] Dobrovolny, C., Dadashova, B., Tabesh, M., **Das, S.**, Kwon, H., Bligh, R., Rieuxinger, L., Smith, C., Gabler, H., and Hallmark, S. *Determination of Work Zone Encroachments*. NCHRP Web-Only Report, Issue 361, 168 p. NASEM. [doi](#) [Link](#)
- 2023 [TR037] McFalls, J., Storey, B., **Das, S.**, Habermann, J., and Bullard, L. *Long-Term Vegetation Management Strategies for Roadsides and Roadside Appurtenances*. NCHRP Web-Only Report, Issue 350, 121 p. NASEM. [doi](#) [Link](#)
- 2023 [TR036] **Das, S.**, Tsapakis, I., Torbic, D., Li, S., and Wang, Y. *Developing AI-driven Safe Navigation Tool*. SafeD UTC, USDOT. [url](#) [Link](#)
- 2023 [TR035] **Das, S.**, Lavrenz, S., Warner, J., and Khanal, B. *Safety Enhancements at Short-Storage-Space Railroad Crossings*. MDOT. [url](#) [Link](#)
- 2022 [TR034] Habermann, J., Holik, W., Huang, W., **Das, S.**, and Clonch, D. *NCHRP 06-18 Report: Guide for Snow and Ice Control Operations*. NASEM. [url](#) [Link](#)
- 2022 [TR033] Geedipally, S., Dixon, K., Wu, L., Pratt, M., Avelar, R., **Das, S.**, Tsapakis, I., Lord, D., and Saini, G. *Calibrating the Highway Safety Manual Predictive Methods for Texas Highways*. TxDOT. [url](#) [Link](#)
- 2022 [TR032] **Das, S.**, Wei, Z., and Ravuri, V. *Safety and Operations of Automated Delivery Vehicles*. SafeD, UTC, USDOT. Final Report.
- 2022 [TR031] Dixon, K., Park, E., Brewer, M., Wu, L., Geedipally, S., Srinivasan, R., Lan, B., Zegeer, C., **Das, S.**, and Rista, E. *NCHRP Report 995: Guidelines for Treatments to Mitigate Opposite Direction Crashes*. NASEM. [doi](#) [Link](#)
- 2022 [TR030] **Das, S.**, Trisha, N., Sener, I., and Walk, M. *TCRP Synthesis 156: Uses of Social Media in Public Transportation*. NASEM. [doi](#) [Link](#)
- 2022 [TR029] **Das, S.**, Fitzpatrick, K., Wu, L., Wei, Z., Tsapakis, I., Paal, S., Geedipally, S., and Park, E. *Develop a Real-Time Decision Support Tool for Rural Roadway Safety Improvements*. TxDOT. [url](#) [Link](#)
- 2022 [TR028] Geedipally, S., Brewer, M., Wunderlich, R., Pratt, M. P., Wu, L., **Das, S.**, and Florence, D. *Examine Trade-Offs between Center Separation and Shoulder Width Allotment for a Given Roadway Width*. TxDOT. 146 p. [url](#) [Link](#)
- 2021 [TR027] Tsapakis, I., Holik, W., **Das, S.**, Kraus, E., and Anderson, P. *Informational Guide on Data Collection and Annual Average Daily Traffic (AADT) Estimation for Non-Federal Aid-System (NFAS) Roads*. FHWA. [doi](#) [Link](#)
- 2021 [TR026] Dobrovolny, C., Balke, K., Bligh, R., Hurlebaus, S., Shi, S., Pike, A., **Das, S.**, Charara, H., and Mott, C. *Traffic Safety Improvements at Low Water Crossings*. TxDOT. [url](#) [Link](#)
- 2021 [TR025] Dixon, K., **Das, S.**, and Potts, I. *National Cooperative Highway Research Program (NCHRP) 20-07 (384): Core Competencies for Key Safety Analysis*. NASEM. [url](#) [Link](#)
- 2021 [TR024] Fitzpatrick, K., Avelar, R., Pratt, M., **Das, S.**, and Lord, D. *Crash Modification Factor for Corner Radius, Right-Turn Speed, and Prediction of Pedestrian Crashes at Signalized Intersections*. FHWA Report. 136 p. FHWA. [doi](#) [Link](#)
- 2021 [TR023] Fitzpatrick, K., **Das, S.**, Pratt, M. P., Dixon, K. K., and Gates, T. J. *Posted Speed Limit Setting Procedure and Tool: User Guide*. NCHRP Research Report, Issue 966, 71 p. NASEM. [doi](#) [Link](#)
- 2020 [TR022] Storey, B., **Das, S.**, McFalls, J., Avelar, R., and Dadashova, B. *Comparison of Cost, Safety, and Environmental Benefits of Routine Mowing and Managed Succession of Roadside Vegetation*. NCHRP 14-40 Report. NASEM. [url](#) [Link](#)
- 2020 [TR021] Fitzpatrick, K., **Das, S.**, Gates, T. J., Park, E. S., Pratt, M. P., Dixon, K. K., Kay, J., and Chakraborty, M. *Development of the Posted Speed Limit Setting Procedure and Tool*. NCHRP Web-Only Report, Issue 291, 190 p. NASEM. [doi](#) [Link](#)
- 2020 [TR020] Dixon, K., Geedipally, S., Park, E., Srinivasan, R., Lan, B., Brewer, M., **Das, S.**, Wu, L., Zegeer, C., and Rista, E. *Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes*. NCHRP 17-66 Report. NASEM. [doi](#) [Link](#)
- 2020 [TR019] Avelar, R., Geedipally, S., **Das, S.**, Wu, L., and Kutela, B. *Evaluation of Roadside Treatments to Mitigate Roadway Departure Crashes*. TxDOT. [url](#) [Link](#)

- 2020 [TR018] **Das, S.**, Avelar, R., Geedipally, S., Wu, L., Lord, D., and Banihashemi, M. *Rural Speed Safety Project for USDOT Safety Data Initiative (SDI)*. USDOT. [url](#) [Link](#)
- 2019 [TR017] Tsapakis, I., Sharma, S., Geedipally, S., Dadashova, B., and **Das, S.** *Evaluation of Highway Safety Improvement Projects and Countermeasures*. TxDOT. [url](#) [Link](#)
- 2018 [TR016] Turner, S., Sener, I., Marin, M., White, L., **Das, S.**, Hampshire, R., Colety, M., Fitzpatrick, K., and Wijesundera, R. *Guide for Scalable Risk Assessment Methods for Pedestrians and Bicyclists*. FHWA. [url](#) [Link](#)
- 2018 [TR015] Turner, S., Dadashova, B., Griffin, G., and **Das, S.** *Improving the Amount and Availability of Pedestrian and Bicyclist Count Data in Texas*. TxDOT. [url](#) [Link](#)
- 2018 [TR014] Fitzpatrick, K., and **Das, S.** *Influences on Bicyclists and Motor Vehicle Operating Speed within a Corridor*. Safed UTC, UDSOT. [url](#) [Link](#)
- 2018 [TR013] Pratt, M., Geedipally, S., **Das, S.**, and Lord, D. *Pavement Safety-based Guidelines for Horizontal Curve Safety*. TxDOT. [url](#) [Link](#)
- 2018 [TR012] Mensar, M., Trueblood, A., Shipp, E., and **Das, S.** *MCCS Data Analysis and Literature Review*. FHWA. [url](#) [Link](#)
- 2017 [TR011] **Das, S.**, Brimley, B., and Pant, A. *Safety Impacts of Reduced Visibility in Inclement Weather*. Report No.: ATLAS-2017-19. USDOT. [url](#) [Link](#)
- 2017 [TR010] Turner, S., Sener, I., Marin, M., **Das, S.**, Shipp, E., Hampshire, R., Fitzpatrick, K., Molnar, L., Wijesundera, R., Colety, M., and Robinson, S. *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. FHWA. [url](#) [Link](#)
- 2017 [TR009] Le, M., **Das, S.**, and Pratt, M. *Safety Performance of Truck Lane Restrictions in Dallas-Fort Worth*. TTI.
- 2017 [TR008] Dixon, K., and **Das, S.** *Measuring and Benchmarking Automated Vehicle Safety*. TTI.
- 2016 [TR007] Dixon, K., Fitzpatrick, K., Avelar, R., and **Das, S.** *Analysis of the Shoulder Widening Need on the State Highway System*. Report No.: 0-6840-1. TxDOT. [url](#) [Link](#)
- 2016 [TR006] Fitzpatrick, K., and **Das, S.** *Is Age a Factor in Crashes at Channelized Right-Turn Lanes? An Exploration of Potential Relationships*. Report No.: ATLAS-2016-14. USDOT. [url](#) [Link](#)
- 2015 [TR005] Sun, X., **Das, S.**, Ragbhan, V., and Benton, R. *User Sentiment Analysis with Louisiana Social Media Data for Better and Effective Crash Countermeasures*. Report No.: 14-4TIRE. LaDOTD. [url](#) [Link](#)
- 2015 [TR004] Sun, X., and **Das, S.** *Developing a Method for Estimating AADT on All Louisiana Roads*. Report No.: FHWA/LA.15/14-3SA. LaDOTD. [url](#) [Link](#)
- 2014 [TR003] Sun, X., and **Das, S.** *A Comprehensive Study on Pavement Edge Line Implementation*. Report No.: FHWA/LA.13/508. LaDOTD. (2014 AASHTO High Value Research Sweet Sixteen Award). [url](#) [Link](#)
- 2013 [TR002] Sun, X., and **Das, S.** *Developing Crash Modification Factor for Louisiana*. Report No.: FHWA/LA.12/506. LaDOTD. [url](#) [Link](#)
- 2011 [TR001] Sun, X., and **Das, S.** *Safety Improvement from Edge Lines on Rural Two-Lane Highways*. Report No.: FHWA/LA.11/487. LaDOTD. [url](#) [Link](#)

## Large Collaborative Health Studies (GBD)

- 2024 [GBD8] GBD 2019 Blindness and Vision Impairment Collaborators, **Das, S.** Burden of disease scenarios for 204 countries and territories, 2022–2050: a forecasting analysis for the Global Burden of Disease Study 2021. *The Lancet*. [doi](#) [Link](#)
- 2024 [GBD7] GBD 2019 Blindness and Vision Impairment Collaborators, **Das, S.** Global estimates on the number of people blind or visually impaired by cataract: A meta-analysis from 2000 to 2020. *Eye*. [doi](#) [Link](#)
- 2024 [GBD6] GBD 2021 Risk Factors Collaborators, **Das, S.** Global burden and strength of evidence for 88 risk factors in 204 countries and 811 subnational locations, 1990–2021: A systematic analysis for the Global Burden of Disease Study 2021. *The Lancet*. [doi](#) [Link](#)

- 2024 [GBD5] GBD 2021 Causes of Death Collaborators, **Das, S.** Global burden of 288 causes of death and life expectancy decomposition in 204 countries and territories and 811 subnational locations, 1990–2021: A systematic analysis for the Global Burden of Disease Study 2021. *The Lancet*. doi Link
- 2024 [GBD4] GBD 2021 Nervous System Disorders Collaborators, **Das, S.** Global, regional, and national burden of disorders affecting the nervous system, 1990–2021: A systematic analysis for the Global Burden of Disease Study 2021. *The Lancet Neurology*. doi Link
- 2023 [GBD3] GBD 2019 Bangladesh Burden of Disease Collaborators, **Das, S.** The burden of diseases and risk factors in Bangladesh, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. *The Lancet Global Health*. doi Link
- 2023 [GBD2] GBD 2021 Carbon Monoxide Poisoning Collaborators, **Das, S.** Global, regional, and national mortality due to unintentional carbon monoxide poisoning, 2000–2021: Results from the Global Burden of Disease Study 2021. *The Lancet Public Health*. doi Link
- 2023 [GBD1] GBD Collaborators, **Das, S.** Global Burden of Cardiovascular Diseases and Risks, 1990–2022. *Journal of the American College of Cardiology*. doi Link

## Peer-Reviewed Computer Science Conference Proceeding Papers

- 2026 [CC018] Chhetri, G.\*, **Das, S.**, and Chowdhury, T. I.\* WISE: Web Information Satire and Fakeness Evaluation. *WEB&GRAPH 2026: First Workshop on Web & Graphs, Responsible Intelligence, and Social Media*, co-located with ACM WSDM 2026, Boise, Idaho, USA.
- 2026 [CC017] Chhetri, G.\*, **Das, S.**, and Chowdhury, T. I.\* SPARK: Search Personalization via Agent-Driven Retrieval and Knowledge-sharing. *WEB&GRAPH 2026: First Workshop on Web & Graphs, Responsible Intelligence, and Social Media*, co-located with ACM WSDM 2026, Boise, Idaho, USA.
- 2025 [CC016] Mimi, M. S., Islam, M. M., Tusti, A. G., Somvanshi, S., and **Das, S.** ST-GraphNet: A Spatio-Temporal Graph Neural Network for Understanding and Predicting Automated Vehicle Crash Severity. *Spatial-Connect '25: Proceedings of the 1st ACM SIGSPATIAL International Workshop on Spatial Intelligence for Smart and Connected Communities*. doi Link
- 2026 [CC015] Chhetri, G.\*, Dutta, A., and **Das, S.** CognitiveSky: Scalable sentiment and narrative analysis for decentralized social media. *The 59th Hawaii International Conference on System Sciences (HICSS)*, Hyatt Regency Maui, Jan. 6–9.
- 2026 [CC014] Chakraborty, R., and **Das, S.** A Dimensionality-Reduced XAI Framework for Roundabout Crash Severity Insights. *The 59th Hawaii International Conference on System Sciences (HICSS)*, Hyatt Regency Maui, Jan. 6–9.
- 2025 [CC013] Somvanshi, S., Hebli, P., Chhetri, G., and **Das, S.** Tabular data with class imbalance: Predicting electric vehicle crash severity with pretrained transformers (TabPFN) and Mamba-based models. *The 24th IEEE International Conference on Machine Learning and Applications (ICMLA)*, Florida, USA, Dec. 3–5.
- 2025 [CC012] Chhetri, G., Anderson, D., Kutela, B., and **Das, S.** A transformer-based cross-platform analysis of public discourse on the 15-minute city paradigm. *The 24th IEEE International Conference on Machine Learning and Applications (ICMLA)*, Florida, USA, Dec. 3–5.
- 2025 [CC011] Somvanshi, S.\*, Chakraborty, R.\*, **Das, S.**, and Dutta, A. Crash severity analysis of child bicyclists using Arm-Net and MambaNet. *2025 IEEE Conference on Artificial Intelligence (CAI)*, Santa Clara, CA. doi Link
- 2025 [CC010] Somvanshi, S.\*, Liu, J.\*., and **Das, S.** A survey on generative AI in transportation systems management and operation. *2025 IEEE Conference on Artificial Intelligence (CAI)*, Santa Clara, CA. doi Link
- 2025 [CC009] Antariksa, G., Tamakloe, R., Liu, J.\*., and **Das, S.** Automated and explainable artificial intelligence to enhance prediction of pedestrian injury severity. *2025 IEEE Conference on Artificial Intelligence (CAI)*, Santa Clara, CA. doi Link

- 2025 [CC008] Somvanshi, S.\*, Tusti, A. G.\*, Chakraborty, R.\*, and **Das, S.** Applying tabular deep learning models to estimate crash injury types of young motorcyclists. *2025 IEEE Conference on Artificial Intelligence (CAI)*, Santa Clara, CA. [doi](#) [Link](#)
- 2025 [CC007] Barua, S.\*, Dutta, A., and **Das, S.** Modeling distracted driving: Analyzing driver gaze, vehicle positioning, and psychological response for enhanced traffic safety. *2025 IEEE Conference on Artificial Intelligence (CAI)*, Santa Clara, CA. [doi](#) [Link](#)
- 2025 [CC006] Antariksa, G., Chakraborty, R.\*, Somvanshi, S.\*., **Das, S.**, Jalayer, M., and Patel, D. R. Comparative analysis of advanced AI-based object detection models for pavement marking quality assessment during daytime. *2025 IEEE Conference on Artificial Intelligence (CAI)*, Santa Clara, CA. [doi](#) [Link](#)
- 2025 [CC005] **Das, S.** HyperSumm-RL: A dialogue summarization framework for modeling leadership perception in social robots. *HT 2025: 36th ACM Conference on Hypertext and Social Media*. [doi](#) [Link](#)
- 2021 [CC004] **Das, S.**., and Zubaidi, H. Autonomous vehicles and pedestrians: A case study of human-computer interaction. *International Conference on Human-Computer Interaction*. [doi](#) [Link](#)
- 2021 [CC003] Zubaidi, H., Obaid, I., Mohammed, H., **Das, S.**., and Al-Bdairi, N. S. S. Hot spot analysis of crash locations at roundabouts through the application of GIS. *Journal of Physics: Conference Series*, 1895(1). [doi](#) [Link](#)
- 2020 [CC002] Wang, R.\*, **Das, S.**., and Mudgal, A. Patterns of origin-destination distributions: Rules mining using massive GPS trajectory data. *Proceedings of the First International Conference on Urban Data Science*, Madras, India, Jan. 20–21. [doi](#) [Link](#)
- 2012 [CC001] He, Y., Sun, X., Du, L., Jinmei, R., and **Das, S.** Level of service for parking facilities. *15th International IEEE Conference on Intelligent Transportation Systems*, Anchorage, AK. [doi](#) [Link](#)

## Peer-Reviewed Transportation Engineering Conference Papers and Proceedings

### TRB Annual Meetings (Partial List)

[Note: Representative 57 papers are listed out of 216 peer-reviewed accepted papers (either poster or lectern sessions) at TRBAM.]

- 2026 [TRB057] Barua, S.\*, Chhetri, G., Chowdhury, T. I., Pandey, B., and **Das, S.** Temporal patterns and risk factors in food delivery vehicle crashes: Evidence from structural topic modeling of daytime and nighttime incidents. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB056] Somvanshi, S., Hebli, P., Chhetri, G., and **Das, S.** Attention-based and state-space models for predicting electric vehicle crash severity. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB055] Javed, S. A.\*, Barua, S., Tusti, A. G., Polock, S. B. B., Chowdhury, T. I., and **Das, S.** Uncovering patterns in e-scooter crash severity using the lift increase criterion in association rule mining. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB054] Starewich, M.\*, Barua, S., Tusti, A. G., Javed, S. A., Polock, S. B. B., Chowdhury, T. I., and **Das, S.** On any Sunday and beyond: A SHAP-enabled random-parameters analysis of older motorcyclist injury severity. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB053] Chakraborty, R.\*, Chowdhury, T. I., Chakraborty, A., Baitullah, A., Kutela, B., and **Das, S.** Identifying latent structures in fatal highway-rail grade crossing crashes using dimensionality reduction methods. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB052] Mimi, M. S.\*, Islam, M. M., Chowdhury, T. I., Tusti, A. G., and **Das, S.** Understanding contributing factors to pedestrian failure-to-yield fatal crashes: Maneuvers classification using AutoML and model interpretability techniques. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB051] Islam, M. M.\*, Barua, S.\*., Chowdhury, T. I.\*., Tusti, A. G.\*., and **Das, S.** Understanding pedestrian trespassing at U.S. highway-rail grade crossings: A decade-long analysis integrating topic modeling and spatial tools. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.

- 2026 [TRB050] Islam, M. M.\*, Chowdhury, T. I.\*, Tusti, A. G.\* , and **Das, S.** Deep learning-based trespassing surveillance system for enhancing safety at highway-rail grade crossings. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB049] Islam, M. M.\* , Mimi, M. S.\* , Somvanshi, S.\* , Tusti, A. G.\* , Chhetri, G.\* , and **Das, S.** Prompting without labels: Zero- and few-shot LLM performance on e-scooter crash prediction tasks. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB048] Islam, M. M.\* , Chakraborty, R.\* , Tusti, A. G.\* , Aghabayk, K., and **Das, S.** A multidimensional analysis of e-scooter crash severity: Integrating cluster correspondence and SHAP interpretability. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15.
- 2026 [TRB047] Islam, M. M.\* , Tusti, A. G.\* , Mimi, M. S.\* , Somvanshi, S.\* , and **Das, S.** Crash risk analysis of non-motorists using interpretable tabular deep learning. *105th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 11–15, 2026.
- 2025 [TRB046] Dzinyela, R., Shirazi, M., **Das, S.**, and Lord, D. Time-Dependent Negative Binomial-Lindley Model for Addressing Temporal Variations and Excess Zeros in Crash Data. *104th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 5–9, 2025.
- 2025 [TRB045] Sheykhard, A., **Das, S.**, Saeedi, S., Oshanreh, M. M., and Kutela, B. Adapting Vision Zero for Improving Pedestrian Safety in Developing Countries: Strategies and Priorities for Urban Roads. *104th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 5–9, 2025.
- 2025 [TRB044] Kutela, B., Ngotonie, M., Ngeni, F., **Das, S.**, and Lyimo, S. Understanding Sun Glare Crashes from Driver's Perspective: A Matched Case-Control Exploratory Study. *104th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 5–9, 2025.
- 2025 [TRB043] Rahman, M. A., Mohammed, N.-H., Mimi, M.S., **Das, S.**, Moomen, M., and Codjoe, J. Mining Patterns of Pedestrian Crashes at Signalized and Stop-Controlled Intersections. *104th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 5–9, 2025.
- 2025 [TRB042] Rahman, M. A., Junaed, S., Dzinyela, R., Hossain, A., **Das, S.**, and Moomen, M. Role of Gender and Other Influencing Factors in Unlicensed Novice Driver Crashes Using a Correlated Random Parameters with Heterogeneity in Means Approach. *104th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 5–9, 2025.
- 2025 [TRB041] Hossain, A., **Das, S.**, Sakib, N., and Somvanshi, S. Leveraging Explainable Machine Learning Techniques to Estimate Crash Severity for Different Pedestrian Actions. *104th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 5–9, 2025.
- 2024 [TRB040] Tamakloe, R., and **Das, S.**. Patterns of Critical Factors Linked to Automated Vehicle–Involved Crashes: A Comparative Analysis of Intersection and Non-Intersection Crash Scenarios. *103rd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11, 2024.
- 2024 [TRB039] **Das, S.**, Hossain, A., Rahman, M., and Sun, X. Exploring Factors Contributing to Frontage Roadway Crashes Using a Probabilistic Graphical Model. *103rd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11, 2024.
- 2024 [TRB038] Hossain, A., Sun, X., **Das, S.**, Jafari, M., and Codjoe, J. Investigating Older Driver Crashes on High-Speed Roadway Segments Using Random Parameter Ordered Probit Model. *103rd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11, 2024.
- 2024 [TRB037] Khan, M. N., **Das, S.**, and Liu, J. Investigating Seasonal Variability Patterns in Motorcycle Crash Injury Types Using Association Rules Mining. *103rd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11, 2024.
- 2024 [TRB036] **Das, S.**, and Rahman, M. A. Examining Encroachment-Related Work Zone Crash Contributing Factors Using Probabilistic Graphical Method. *103rd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11, 2024.
- 2024 [TRB035] **Das, S.**, and Vierkant, V. Exploring Special Case Investigation Reports Associated with Ambulances. *103rd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11, 2024.

- 2023 [TRB034] **Das, S.**, Tipsword, J., and Gonzalez, J. Encroachment-related work zone crash injury analysis using data-driven Bayesian network. *102nd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2023 [TRB033] **Das, S.**, Kong, X., and Dutta, A. Do patterns of contributing factors differ temporarily in work zone related crashes? *102nd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2023 [TRB033] Hossain, M., Zhou, H., Hossain, A., **Das, S.**, and Sun, X. Crashes involving distracted pedestrians: Exploring association of contributing factors by pedestrian injury severity and modes of distraction. *102nd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2023 [TRB032] **Das, S.**, Rahman, M., Dey, K., Kabir, N., Sheykfard, A., and Tamakloe, R. Qualitative analysis of urban air mobility as a disruptive technology. *102nd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2023 [TRB031] Hossain, A., Sun, X., Islam, S., Rahman, M., and **Das, S.**. Exploring association knowledge in single-vehicle roadway departure crashes on curved segment of rural two-lane highways. *102nd Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2022 [TRB030] **Das, S.**, and Trisha, N.\* Understanding social media usage patterns by transit agencies. *101st Transportation Research Board Annual Meeting*, Washington, D.C., Jan 9–13.
- 2022 [TRB029] **Das, S.**, Wei, Z.\*, and Dutta, A. Rules mining and narrative analysis of consumer complaints on hybrid electric vehicles. *101st Transportation Research Board Annual Meeting*, Washington, D.C., Jan 9–13.
- 2022 [TRB028] **Das, S.**, Tabesh, M.\*, Dadashova, B., and Dobrovolsky, C. Understanding patterns of contributing factors in encroachment-related work zone crashes. *101st Transportation Research Board Annual Meeting*, Washington, D.C., Jan 9–13.
- 2022 [TRB027] **Das, S.**, Tamakloe, R., Zubaidi, H., and Vierkant, V.\* Virtual public engagement and communications in a transportation conference during COVID-19. *101st Transportation Research Board Annual Meeting*, Washington, D.C., Jan 9–13.
- 2021 [TRB026] **Das, S.**. Traffic fatalities by American generations: Exploratory evaluation using person level data. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB025] **Das, S.**, and Wang, R.\* Racism discussed in transportation research: Bibliometric analysis and topic modeling. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB024] **Das, S.**, and Theel, M.\* Pandemic and transportation research: Bibliometric analysis and topic modeling. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB023] Kong, X.\*, **Das, S.**, Zhou, H., and Zhang, Y. Patterns of near-crash events in naturalistic driving dataset: Applying rules mining. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB022] Rahman, M., Dey, K., **Das, S.**, and Sherfinski, M. Sharing the road with autonomous vehicles: A qualitative analysis of the perceptions of pedestrians and bicyclists. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB021] Sun, M., Sun, X., Rahman, M., and **Das, S.**. Calibration and development of safety performance functions for rural two-lane two-way stop-controlled intersections in Louisiana. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB020] Hosseini, P., Jalayer, M., and **Das, S.**. A multiple correspondence approach to identify contributing factors related to work zone crashes. *100th Transportation Research Board Annual Meeting* (virtual).
- 2021 [TRB019] Hosseini, P., Jalayer, M., and **Das, S.**. Identifying wrong-way driving (WWD) crashes in police reports using text mining techniques. *100th Transportation Research Board Annual Meeting* (virtual).
- 2020 [TRB018] Mahmoudzadeh, A., Elgart, Z., Arezoumand, S., Hansen, T., and **Das, S.**. Designing transit agency job descriptions for optimal roles: An analytical text-mining approach. *ASCE International Conference on Transportation and Development* (virtual), pp. 356–368.
- 2020 [TRB017] **Das, S.**, and Dutta, A. Co-author networks in transportation research: Findings from TRID data. *99th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 12–16.
- 2020 [TRB016] Dutta, A., and **Das, S.**. Framework of a job lexicon for future transportation workforce. *99th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 12–16.

- 2020 [TRB015] **Das, S.**, Kong, X.\*, Wang, R.\* , and Mahmoudzadeh, A.\* Pedestrian collisions with bicyclist: Emotion mining using YouTube data. *99th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 12–16.
- 2020 [TRB014] **Das, S.**, Jha, K.\* , and Dutta, A. Vision Zero hashtags in social media: Understanding end-user needs from natural language processing. *99th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 12–16.
- 2020 [TRB013] Sun, M., Sun, X., Rahman, M., Akter, M., and **Das, S.**. Safety performance functions for rural two-way stop-controlled intersections. *99th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 12–16.
- 2020 [TRB012] Sun, M., Sun, X., Rahman, M., Akter, M., and **Das, S.**. Two-way stop-controlled intersection analysis with zero-inflated models. *99th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 12–16.
- 2019 [TRB011] Jalayer, M., O'Connell, M., Zhou, H., Szary, P., and **Das, S.**. Application of unmanned aerial vehicle to inspect and inventory interchange assets to mitigate wrong-way entries. *98th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 13–17.
- 2019 [TRB010] Sun, M., Sun, X., Shan, D., Armstrong, D., and **Das, S.**. Louisiana pedestrian crash analysis with multinomial logit model and Bayesian network. *98th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 13–17.
- 2019 [TRB009] **Das, S.**, and Dutta, A. Data curation using deep learning. *98th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 13–17.
- 2018 [TRB008] **Das, S.**, and Dutta, A. Knowledge extraction from transportation research thesaurus. *97th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11.
- 2018 [TRB007] Minjares-Kyle, L., **Das, S.**, Medina, G., and Henk, R. Knowledge about crash risk factors and self-reported driving behavior: Exploratory analysis on multi-state teen driver survey. *97th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 7–11.
- 2017 [TRB006] **Das, S.**, Dixon, K., Avelar, R., and Fitzpatrick, K. Using machine learning techniques to estimate non-motorized trips for rural roadways. *96th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2017 [TRB005] Avelar, R., Lindheimer, T., Dixon, K., Miles, J., and **Das, S.**. Safety evaluation of the seasonality of crashes with tire debris on highways and freeways. *96th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 8–12.
- 2016 [TRB004] **Das, S.**, and Sun, X. Estimating traffic volume of non-state roadways with support vector regression. *95th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 10–14.
- 2016 [TRB003] **Das, S.**. Effectiveness of inexpensive crash countermeasures to improve traffic safety. *95th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 10–14.
- 2015 [TRB002] **Das, S.**, and Sun, X. Zero-inflated models for different severity types in rural two-lane crashes. *94th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 10–14.
- 2015 [TRB001] **Das, S.**, and Sun, X. Determining the knowledge gap in performance based analysis of geometric design and condition incorporating safety. *94th Transportation Research Board Annual Meeting*, Washington, D.C., Jan 10–14.

#### Other Transportation Engineering Conferences

- 2026 [TC018] Barua, S., Kutela, B., and **Das, S.**. Association Patterns of Key Factors in SUV Type Vehicle involved Pedestrian Crashes. *ASCE T&DI Transportation Conferences*, Detroit, MI, Jun 28–Jul 1.
- 2026 [TC017] Javed, S.A., Chakraborty, R., Barua, S., **Das, S.**, and Sheykhfard, A. Identifying Patterns in Body Injury Locations and Injury Types in Impaired Vulnerable Road Users. *ASCE T&DI Transportation Conferences*, Detroit, MI, Jun 28–Jul 1.
- 2026 [TC016] Javed, S.A, Tosti, A.G., Pandey, B., and **Das, S.**. Revisiting U-Turn Configurations: A Systematic Review of Design Innovations and Safety Implications. *ASCE T&DI Transportation Conferences*, Detroit, MI, Jun 28–Jul 1.

- 2026 [TC015] Chakraborty, R., Hossain, A., Javed, S.A., Kalambay, P., and **Das, S.**. A Data Mining Approach to Understanding Racial Disparities in Midblock Pedestrian Fatal and Serious Injury Crashes. *ASCE T&DI Transportation Conferences*, Detroit, MI, Jun 28–Jul 1.
- 2024 [TC014] **Das, S.**, Tipsword, J., and Kutela, B. Unlocking urban sentiments about 15-min city through hashtags. *ASCE International Conference on Transportation and Development*, Atlanta, Georgia, Jun 15–18.
- 2024 [TC013] Kutela, B., Li, S., **Das, S.**, and Liu, J.\* Is ChatGPT a reliable source of transportation equity information for scientific writing? *ASCE International Conference on Transportation and Development*, Atlanta, Georgia, Jun 15–18.
- 2024 [TC012] **Das, S.** Mapping communication patterns of transit agencies on social media. *ASCE International Conference on Transportation and Development*, Atlanta, Georgia, Jun 15–18.
- 2024 [TC011] **Das, S.**, Chakraborty, R.\*, and Mimi, M.\* Unraveling crash causation: A deep dive into non-motorists on personal conveyance. *ASCE International Conference on Transportation and Development*, Atlanta, Georgia, Jun 15–18.
- 2024 [TC010] **Das, S.**, Hossain, A., Barua, S.\*, Kavianpour, S., and Sheykhfard, A. Causal insights into speeding crashes. *ASCE International Conference on Transportation and Development*, Atlanta, Georgia, Jun 15–18.
- 2024 [TC009] **Das, S.**, and Kutela, B. Delivering tomorrow: Analyzing automated delivery vehicle narratives through media mining. *ASCE International Conference on Transportation and Development*, Atlanta, Georgia, Jun 15–18.
- 2023 [TC008] Al-Gharabi, A., Zubaidi, H., and **Das, S.** Traffic safety risk assessment for selected roads in Al-Qadisiyah Province. *IOP Conference Series: Earth and Environmental Science*.
- 2019 [TC007] Sun, X., and **Das, S.** Estimating annual average daily traffic for low-volume roadways. *12th TRB International Conference on Low Volume Roads*, Kalispell, Montana, Sep 15–18.
- 2018 [TC006] **Das, S.**, Minjares-Kyle, L., Avelar, R., and Bommanayakanahalli, B.\* Improper passing related crashes: Identifying patterns using negative binomial precise rules. *7th International Symposium on Naturalistic Driving Research (NDRS 2018)*, Blacksburg, VA, Aug 28–30.
- 2018 [TC005] **Das, S.**, Fitzpatrick, K., and M., C.\* Vehicle speeds in presence of bicyclists. *Joint Western and Texas District Meeting*, Keystone, CO, Jun 24–27.
- 2017 [TC004] **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.
- 2017 [TC003] **Das, S.**, Sun, X., and Dixon, K. 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 (Urban Street Symposium Best Paper Award).
- 2016 [TC002] Sun, X., **Das, S.**, and Broussard, N. Developing crash models with supporting vector machine for urban transportation planning. *17th Road Safety on Five Continents (RS5C) Conference*, Rio de Janeiro, Brazil, May 17–19.
- 2014 [TC001] **Das, S.** Analyzing at-fault crash-prone drivers of Louisiana associated with multiple crashes. *SASHTO 2014 Annual Conference*, New Orleans, LA, Aug 23–27 (SASHTO Outstanding Graduate Research Award).

## Under-review Paper Preprints

- 2025 [PR26] Magidanga, V., Kutela, B., Novat, N., and **Das, S.** Understanding the lifecycle of federal-level artificial intelligence (AI) tools: A case of Department of Homeland Security. *SSRN Working Paper*, January 23, 2025. [doi](#) [Link](#)
- 2025 [PR25] Javed, S. A., and **Das, S.** Uncovering behavioral risk patterns in U-turn crash severity using multimodal data and lift increase criterion in association rule mining. *SSRN Working Paper*, 2025. [doi](#) [Link](#)
- 2025 [PR24] Javed, S. A., Barua, S., Tusti, A. G., Polock, S. B. B., Chowdhury, T. I., and **Das, S.** Behavioral patterns and severity outcomes in e-scooter crashes: An association rule mining approach using the lift increase criterion. *SSRN Working Paper*, 2025. [doi](#) [Link](#)

- 2025 [PR23] Somvanshi, S., Sheley, R., Shuvo, S. A., Rafe, A., and **Das, S.** A survey on automated vehicles in low visibility and infrastructure-limited roadway settings. *SSRN Working Paper*, August 01, 2025. [doi](#) [Link](#)
- 2025 [PR22] Polock, S. B. B., Starewich, M., Barua, S., Tusti, A. G., Somvanshi, S., Alnawmasi, N., and **Das, S.** Behavioral and temporal dynamics of child pedestrian crash injury patterns: Evidence from random parameter modeling. *SSRN Working Paper*, 2025. [doi](#) [Link](#)
- 2025 [PR21] Javed, S. A., Chakraborty, R., Polock, S. B. B., Geedipally, S. R., Tamakloe, R., and **Das, S.** Uncovering age-specific patterns in cannabis-involved fatal crashes: A behavior-oriented association rule mining approach. *SSRN Working Paper*, 2025. [doi](#) [Link](#)
- 2025 [PR20] Polock, S. B. B., **Das, S.**, Chakraborty, R., Somvanshi, S., Islam, M. M., and Sheykhfard, A. Who leaves, when, and how? Dissecting evacuation choices from a survey of at-risk residents in the Western U.S. *SSRN Working Paper*, 2025. [doi](#) [Link](#)
- 2025 [PR19] Shevtkar, S., Maurya, C., Sil, G., and **Das, S.** Proactive fall detection for powered two-wheelers safety interventions: A cross-dataset benchmark on simulation collision data. *SSRN Working Paper*, October 15, 2025. [doi](#) [Link](#)
- 2025 [PR18] Tusti, A. G., Starewich, M., Barua, S., Chowdhury, T. I., Polock, S. B. B., Alnawmasi, N., and **Das, S.** Hybrid dimension reduction and random parameter logit models to classify crash severity in glare induced traffic crashes. *SSRN Working Paper*, 2025. [doi](#) [Link](#)
- 2025 [PR17] Brotee, S., Chhetri, G., Polock, S. B. B., Bellamkonda, V. S., Rafe, A., and **Das, S.** A Survey on Joint Embedding Predictive Architectures and World Models. *SSRN Working Paper*, November 16, 2025. [doi](#) [Link](#)
- 2025 [PR16] Chhetri, G., Somvanshi, S., Mimi, M. S., Ansari, M. W., Islam, M. M., Barua, S., and **Das, S.** Realism and causality in synthetic data generation: A survey. *SSRN Working Paper*, October 27, 2025. [doi](#) [Link](#)
- 2025 [PR15] Chhetri, G., Somvanshi, S., Hebli, P., Brotee, S., and **Das, S.** Post-Quantum Cryptography and Quantum-Safe Security: A Comprehensive Survey. *arXiv Preprint arXiv:2510.10436*, 2025. [doi](#) [Link](#)
- 2025 [PR14] Chhetri, G., Somvanshi, S., Islam, M. M., Brotee, S., Mimi, M. S., Koirala, D., Pandey, B., and **Das, S.** Model Context Protocols in Adaptive Transport Systems: A Survey. *arXiv Preprint arXiv:2508.19239*, 2025. [doi](#) [Link](#)
- 2025 [PR13] Somvanshi, S., Tusti, A. G., Mimi, M. S., Islam, M. M., Polock, S. B. B., Dutta, A., and **Das, S.** Applying MambaAttention, TabPFN, and TabTransformers to Classify SAE Automation Levels in Crashes. *arXiv Preprint arXiv:2506.03160*, 2025. [doi](#) [Link](#)
- 2025 [PR12] Hossain, A., Sakib, N., Asif, A. A., and **Das, S.** Patterns associated with fatal motorcycle-involved crashes in Bangladesh: Applying text mining techniques and structural topic modeling. *SSRN Working Paper*, October 17, 2025. [doi](#) [Link](#)
- 2025 [PR11] Somvanshi, S., Islam, M. M., Javed, S. A., Chhetri, G., Islam, K. S., Chowdhury, T. I., Polock, S. B. B., Dutta, A., and **Das, S.** A Review on Influx of Bio-Inspired Algorithms: Critique and Improvement Needs. [doi](#) [Link](#)
- 2025 [PR10] Somvanshi, S., Islam, M. M., Mimi, M. S., Polock, S. B. B., Chhetri, G., and **Das, S.** From S4 to Mamba: A Comprehensive Survey on Structured State Space Models. *arXiv preprint arXiv:2503.18970*. [doi](#) [Link](#)
- 2025 [PR09] Tusti, A. G., Dutta, A. K., Javed, S. A., and **Das, S.** Driving Education Advancements of Novice Drivers: A Systematic Literature Review. *arXiv preprint arXiv:2503.05762*. [doi](#) [Link](#)
- 2025 [PR08] Somvanshi, S., Barua, S., Liu, J., and **Das, S.** Gen-AI for Transportation Planning. *SSRN (preprint)*. [doi](#) [Link](#)
- 2025 [PR07] Somvanshi, S., Islam, M. M., Polock, S. B. B., Chhetri, G., Anderson, D., Dutta, A., and **Das, S.** Quantum Computing in Transportation Engineering: A Survey. *SSRN (preprint)*. [doi](#) [Link](#)
- 2025 [PR06] Javed, S. A., Tusti, A. G., Pandey, B., and **Das, S.** From Maneuver to Mishap: A Systematic Literature Review on U-Turn Safety Risks. *arXiv preprint arXiv:2502.12556*. [doi](#) [Link](#)

- 2025 [PR05] Somvanshi, S., Antariksa, G., and **Das, S.** *Enhanced Balanced-Generative Adversarial Networks to Predict Pedestrian Injury Types*. SSRN (preprint). doi [Link](#)
- 2025 [PR03] Hossain, A., **Das, S.**, Jafari, M., Junaed, S., and Codjoe, J. *Behavioral Insights into Older Driver Involved Crashes at High-Speed Signalized Intersections: A Random Parameter Ordered Probit Approach*. SSRN (preprint). doi [Link](#)
- 2024 [PR01] Somvanshi, S., **Das, S.**, Javed, S.A., Antariksa, G., and Hossain, A. *A Survey on Deep Tabular Learning*. arXiv preprint arXiv:2410.12034. doi [Link](#)

## TALKS/WORKSHOPS

---

- 2022 [T22] Autonomous Delivery Vehicle as a Disruptive Technology: How to Shape the Future with a Focus on Safety? SafeD Virtual Webinar. Oct. 22.
- 2022 [T21] Texas Based Safety Research Projects. Virtual Webinar, UTSA. Apr. 21.
- 2021 [T20] A Real-Time Decision Support Tool for Rural Roadways. Austin. Nov. 29.
- 2021 [T19] New Frontiers in Highway Safety Research. UL Lafayette Civil Engineering Department Invited Talk (virtual). Nov. 24.
- 2021 [T18] Naturalistic Driving Studies with Focus on Novice Teenage Drivers: Research Challenges and Opportunities. American Statistical Association Invited Talks (virtual). Nov. 3.
- 2021 [T17] Application of Big Data in Highway Safety Modeling. Transportation Data Science Seminar Series, Texas A&M University Institute of Data Science, College Station. Mar. 11.
- 2019 [T16] Application of Natural Language Processing (NLP) in Transportation Studies. Texas A&M University ITE General Meeting, College Station, TX. Feb. 2.
- 2019 [T15] TxDOT Roadway Departure Safety Implementation Workshop. Lubbock, TX. Nov. 4.
- 2019 [T14] AADT Estimation Errors in Predicting Safety of Low-Volume Roadways. 98th TRB Annual Meeting, Washington, DC. Jan. 13.
- 2019 [T13] YouTube as a Source of Information in Understanding Autonomous Vehicle Consumers: An NLP Study. 98th TRB Annual Meeting, Washington, DC. Jan. 14.
- 2019 [T12] Injury Severity Analysis from Crash Narratives of Tree- and Utility Pole-Associated Crashes: An Interpretable Machine Learning Approach. 98th TRB Annual Meeting, Washington, DC. Jan. 15.
- 2019 [T11] Estimation of Traffic Volumes on Low-Volume Roads: Interpretable Machine Learning Approach. 98th TRB Annual Meeting, Washington, DC. Jan. 16.
- 2018 [T10] Using Deep Learning in Severity Analysis of At-Fault Motorcycle Rider Crashes. 97th TRB Annual Meeting, Washington, DC. Jan. 9.
- 2018 [T09] #TRBAM: Understanding Communication Patterns and Research Trends by Twitter Mining. 97th TRB Annual Meeting, Washington, DC. Jan. 9.
- 2017 [T08] Developing a Method for Estimating AADT on Local Roads. 2017 TRC Transportation Engineering Conference, Hot Springs, AR. May 17.
- 2017 [T07] Text Mining on 100 Years of Air Crash Narratives: Key Findings. 96th TRB Annual Meeting, Washington, DC. Jan. 11.
- 2017 [T06] Workshop on Text Mining in R: Understanding 100 Years of Air Crash Narratives. Texas A&M University ITE General Meeting, College Station, TX. Feb. 9.
- 2017 [T05] Workshop on R in Transportation Safety Research: Case Studies. Texas A&M University ITE General Meeting, College Station, TX. Feb. 7.
- 2017 [T04] Visualization Lightning Talk: Visual Analytics Using Web GIS Tools in Transportation Decision Making. 96th TRB Annual Meeting, Washington, DC. Jan. 11.
- 2016 [T03] Modeling in Roadway Safety: The Two Cultures. Texas A&M University ITE General Meeting, College Station, TX. May 17.
- 2015 [T02] Two-Day Workshop on Interactive Highway Safety Design Model (IHSDM). Civil Engineering Department, University of Louisiana at Lafayette, LA. Mar.
- 2014 [T01] Two-Day Workshop on Interactive Highway Safety Design Model (IHSDM). Civil Engineering Department, University of Louisiana at Lafayette, LA. Mar.

## COURSES TAUGHT

---

2026	CE 7363: Road Infrastructure Safety, Texas State University (Spring session)
2024-2025	CE 7393: AI in Civil Engineering, Texas State University (Fall sessions)
2024-2025	CE 4362: Traffic Engineering, Texas State University (Fall sessions)
2022-2025	CE 4361: Highway Engineering, Texas State University (Fall and Spring sessions)

## COURSES SUPERVISED

---

2013	Teaching Assistant, graduate-level course "Highway Safety Fundamental Course," University of Louisiana at Lafayette.
2012	Teaching Assistant, graduate-level course "Highway Safety Fundamental Course," University of Louisiana at Lafayette.
2011	Teaching Assistant, graduate-level course "Highway Safety Fundamental Course," University of Louisiana at Lafayette.

## MEDIA

---

2025	Interview on Car Warranty. <a href="#">url</a> Link
2025	Interview on Motor Vehicle Safety Inspection. <i>Marketplace</i> . <a href="#">url</a> Link
2022	TTI News feature: "TTI's Das Publishes Book on <i>Artificial Intelligence in Highway Safety</i> ." <a href="#">url</a> Link
2021	TTI News feature: "Das Publishes Transportation Research Record Analysis in TR News." <a href="#">url</a> Link
2021	Texas Transportation Research special issue: "Big Data Goes Country: Integrating Speed and Weather Measures to Study Rural Roadway Safety." <a href="#">url</a> Link
2020	TTI News feature: "Winfree, Das Featured in <i>Traffic Technology International</i> ." <a href="#">url</a> Link
2020	Interview featured in <i>Traffic Technology International</i> (September issue). <a href="#">url</a> Link
2020	Interview featured in <i>Star Tribune</i> (March 21). <a href="#">url</a> Link
2018	#TRBAM analysis featured by NASEM TRB official social media handles.
2016	TRB Committee ABG40 newsletter <i>Kaleidoscope</i> featured Subasish's text mining paper.
2015	Eno Transportation Center online annual report highlighted Subasish's Eno fellowship.
2014	AASHTO newsletter "Research Makes Difference" featured Subasish's 2014 AASHTO Sweet Sixteen High Value Research award.
2014	AASHTO Research Impact 2014 newsletter featured Subasish's "4U to 5T" project.
2014	LTRC newsletter featured Subasish's 2014 AASHTO Sweet Sixteen High Value Research award.
2013	GRITS newsletter highlighted Subasish's First Place Scholarship for Academic Excellence.

## MENTORING

---

### Dissertation Supervision

- [07] Chair, *Analysis of Association between Demographic, Socioeconomic, and Built Environment Factors and Pedestrian Safety using Traditional and AI Approaches*. Ph.D. Dissertation, Shriyank Somvanshi (MSEC), Texas State University, Spring 2026.
- [06] Co-Chair, *Using Real-Time Ground Truth Data to Assess Estimated Air Pollution on Transportation Routes in the Greater Austin, Texas Area*. Ph.D. Dissertation, David Mills (Geography), Texas State University, Spring 2026.
- [05] Committee Member, *AI-driven modelling and simulator-based analysis of unsafe riding behavior and fall/collision detection for motorized two-wheeler riders*. Ph.D. Dissertation, Sumit S. Shevtkar (Computer Science), Indian Institute of Technology Indore, India, 2026.
- [04] External Reviewer, *Driver Merging Preference, Behaviour and Strategies in Work Zones*. Ph.D. Dissertation, Sajani Dias Wickramaratne Siriwardene (Civil Engineering), Deakin University, Australia, 2025.
- [03] Committee Member, *Lateral distribution of Internal Combustion Engine and Electric Vehicle mixed traffic*. Ph.D. Dissertation, Md Mahede Hasan Khan (Civil Engineering), Texas State University, Spring 2026.
- [02] Committee Member, *Managing Mixed Traffic with Electric Vehicles: Lessons for Future Traffic Control and Operations*. Ph.D. Dissertation, Tasnim Majumder (Civil Engineering), Texas State University, Spring 2026.
- [01] Co-Chair, *Analysis of Association between Demographic, Socioeconomic, and Built Environment Factors and Pedestrian Safety using Traditional and AI Approaches*. Ph.D. Dissertation, Jinli Liu (Geography), Texas State University, Fall 2024.

## Thesis Supervision

- [20] Chair, *AI-Augmented Traffic Conflict Analysis Using Video-Based Surrogate Safety Metrics*. M.S. Thesis, Md Monzurul Islam (Civil Engineering), Texas State University, Spring 2026.
- [19] Chair, *Bike lane involved crash severity: Heterogeneity, Temporal Stability, and Policy Implications*. M.S. Thesis, Sazzad Bin Bashar Polock (Civil Engineering), Texas State University, Spring 2026.
- [18] Co-Chair, *Assessing Roadway Network Risk to Compound Flooding in Galveston County, Texas: An Integrated Hydrodynamic and Machine Learning Approach*. M.S. Thesis, Md Shah Mominul Islam Momin (Civil Engineering), Texas State University, Spring 2026.
- [17] Committee Member, *A Scalable and Decentralized Reinforcement Learning Framework for Domain-Agnostic and Uncertainty-Aware Multi-Agent System*. M.S. Thesis, Kazi Sifatul Islam (Electrical Engineering), Texas State University, Spring 2026.
- [16] Committee Member, *Behavior of Transverse Cracks in Continuously Reinforced Concrete Pavement under Environmental Loadings*. M.S. Thesis, Md Saiful Islam (Civil Engineering), Texas State University, Spring 2026.
- [15] Chair, *Artificial Intelligence and Spatial Modeling to Estimate Traffic Volume Measures on Local Roadways*. M.S. Thesis, Mahmuda Sultana Mimi (Civil Engineering), Texas State University, Summer 2025.
- [14] Chair, *Analyzing Motorcycle Crashes on Rural Undivided Roads: A Data-Driven Approach*. M.S. Thesis, Swastika Barua (Civil Engineering), Texas State University, Summer 2025.
- [13] Chair, *Exploring Latent Patterns in U-Turn Crashes: A Dual-Model Approach Using Association Rules Mining and Cluster Correspondence Analysis*. M.S. Thesis, Sayed Aaqib Javed (Civil Engineering), Texas State University, Summer 2025.
- [12] Chair, *Evaluating Crash Characteristics and Safety Outcomes at Roundabouts: Implications for Safer Intersections*. M.S. Thesis, Rohit Chakraborty (Civil Engineering), Texas State University, Summer 2025.
- [11] Committee Member, *The Innovative Use of Phase Change Material Covers in Mitigating Early Age Thermal Cracks in Concrete Pavement*. M.S. Thesis, Alif Bin Hussain (Civil Engineering), Texas State University, 2025.
- [10] Committee Member, *Investigating the Impact of COVID-19 on Mobility Condition*. M.S. Thesis, Sandip Acharya (Transportation Engineering), Texas Southern University, 2022.
- [09] Committee Member, *Geo-informed Deep Learning for Spatial Downscaling of Solute Transport in Heterogeneous Porous Media*. M.S. Thesis, Nikhil Pawar (Civil Engineering), Texas State University, 2022.
- [08] Committee Member, *Predicting Critical Shear Stress of Riverbed Soils with Plasticity*. M.S. Thesis, Muhammad Tasnim Alam (Civil Engineering), Texas State University, 2022.
- [07] Committee Member, *Investigating the Impact of Roadway Geometry, Speed Distribution, and Weather Condition on Roadway Daily Crash Occurrence and Severity using Machine Learning Methods*. M.S. Thesis, Zihang Wei (Civil Engineering), Texas A&M University, 2021.
- [06] Committee Member, *Vehicle Category Classification based on GPS Trajectory Data*. M.S. Thesis, Ruihong Wang (Computer Science), Texas A&M University, 2020.
- [05] Mentor, *Investigating Safety Effectiveness of Centerline Rumble Strips on Rural Two-Lane Roads in Louisiana with Empirical Bayes Method*. M.S. Thesis, M. A. Rahman (Civil Engineering), University of Louisiana at Lafayette, 2016.
- [04] Mentor, *Development of Crash Prediction Models for Transportation Planning Analysis*. M.S. Thesis, N. Broussard (Civil Engineering), University of Louisiana at Lafayette, 2015.
- [03] Mentor, *Estimating Annual Average Daily Traffic for Non-State Roads in Louisiana*. M.S. Thesis, C. W. LeBoeuf (Civil Engineering), University of Louisiana at Lafayette, 2014.
- [02] Mentor, *Analyzing the Safety Impact of Crash-Prone Drivers in Louisiana*. M.S. Thesis, F. Wang (Civil Engineering), University of Louisiana at Lafayette, 2013.
- [01] Mentor, *Safety Effectiveness of Raised Pavement Markers*. M.S. Thesis, S. Rasel (Civil Engineering), University of Louisiana at Lafayette, 2012.

## Postdoctoral Research Associates

- [05] Amir Rafe, Ph.D., Texas State University (Sept. 2025–present).
- [04] Jinli Liu, Ph.D., Texas State University (Jan. 2025–June 2025). *Assistant Professor, Zhejiang Normal University, China (current position)*
- [03] Ahmed Hossain, Ph.D., Texas State University (2024–Feb. 2025). *Traffic Safety Engineer, AZDOT (current position)*
- [02] Gian Antariksa, Ph.D., Texas State University (Jan. 2023–Dec. 2024). *Senior AI & Data Scientist at PT Mitra Solusi Telematika, Indonesia (current position)*
- [01] Md. Nasim Khan, Ph.D., Texas State University (2022–2023). *Senior Transportation Engineer at AtkinsRéalis (current position)*

## Ph.D. Students

- [14] Sawgat Ahmed Shuvo (Civil Engineering), Texas State University (2025–present).
- [13] Shriyank Somvanshi (MSEC), Texas State University (2023–present).
- [12] M. M. Mahabubur Rahman (Computer Science), Texas State University (2023).
- [11] Jinli Liu (Geography), Texas State University (2022–2024).
- [10] David Mills (Geography), Texas State University (2022–present). *CEO of ATX Science (current position)*
- [09] Amir Hossein Oliaee (Architecture), Texas A&M University (2022).
- [08] Nuzhat Kabir (Civil Engineering), Texas A&M University (2022).
- [07] Musfira Rahman (Civil Engineering), Texas A&M University (2021).
- [06] Yanmo Wang (Civil Engineering), Texas A&M University (2021–2022). *Postdoctoral Researcher, Rice University (current position)*
- [05] Zihang Wei (Civil Engineering), Texas A&M University (2020–2022). *Transportation Research Engineer, Leidos (current position)*
- [04] Ali Khodadadi (Civil Engineering), Texas A&M University (2019–2021). *Assistant Research Scientist, Texas A&M Transportation Institute (current position)*
- [03] Shruti Ashraf (Civil Engineering), Texas A&M University (2018–2019). *Senior Consultant, WSP (current position)*
- [02] Chaolun Ma (Civil Engineering), Texas A&M University (2018–2019). *Senior Data Scientist, Procter & Gamble (current position)*
- [01] Songjukta Datta (Civil Engineering), Texas A&M University (2017–2018). *Transportation Engineering, Washington DOT (current position)*

## M.S. Students

- [39] Arka Chakraborty (Civil Engineering), Texas State University (2025–present).
- [38] Anika Baitullah (Civil Engineering), Texas State University (2025–present).
- [37] Sharif Ahmed Rafat (Civil Engineering), Texas State University (2025–present).
- [36] Shamyo Brotee (Computer Science), Texas State University (2025–present).
- [35] Salma Akter Laboni (MBA), Texas State University (2025–present).
- [34] Md. Wasim Ansari (Data Analytics and Information Systems), Texas State University (2025–present).
- [33] Venkata Surya Bellamkonda (DAIS), Texas State University (2025–present).
- [32] Pavan Helbi (Data Analytics and Information Systems), Texas State University (2025–present).
- [31] Tausif Islam Chowdhury (Civil Engineering), Texas State University (2025–present).
- [30] Sazzad Bin Bashar Polock (Civil Engineering), Texas State University (2024–present).
- [29] Anannya Ghosh Tusti (Civil Engineering), Texas State University (2024–present).
- [28] Md Monzurul Islam (Civil Engineering), Texas State University (2024–present).
- [27] Rawand Almadi (Civil Engineering), Texas State University (Aug. 2024–Dec. 2024).
- [26] Michael Starewich (Mathematics), Texas State University (2024–present).
- [25] Rohit Chakraborty (Civil Engineering), Texas State University (2023–present).
- [24] Mahmuda Sultana Mimi (Civil Engineering), Texas State University (2023–present).
- [23] Syed Aaqib Javed (Civil Engineering), Texas State University (2023–present).
- [22] Swastika Barua (Civil Engineering), Texas State University (2023–present).
- [21] Monire Jafari (Data Analytics and Information Systems), Texas State University (2023–2025).
- [20] Catalina Gonzalez (Civil Engineering), Texas State University (2023).
- [19] Maheshchandra S. Churi (Data Analytics and Information Systems), Texas State University (2023).
- [18] Chandrika Reddy Kamjula (Data Analytics and Information Systems), Texas State University (2022).
- [17] Janakiram Saripalli (Computer Science), Texas State University (2022).
- [16] Vikram Agarwal (Civil Engineering), Texas A&M University (2020–2021).
- [15] Ruihong Wang (Electrical and Computer Engineering), Texas A&M University (2019–2020).
- [14] Nabila Nazneen (Chemical Engineering), Texas A&M University (2019–2020).
- [13] Samia Tasnim (Public Health), Texas A&M University (2018–2019).
- [12] Nusrat Trisha (Public Health), Texas A&M University (2019–2021).
- [11] Tahmida Shimu (Civil Engineering), Texas A&M University (2018–2019).
- [10] Bita Maraghehpour (Public Health), Texas A&M University (2017–2019).
- [09] Apoorba Bibeka (Civil Engineering), Texas A&M University (2016–2019).

- [08] Yucong Du (Civil Engineering), Texas A&M University (2016–2017).
- [07] Sadia Najneen (Public Health), Texas A&M University (2018–2019).
- [06] Isha Narsaria (Civil Engineering), Texas A&M University (2018–2019).
- [05] Noor-A Nazia (Computer Science), Texas A&M University (2018–2019).
- [04] Condor Manaswini (Civil Engineering), Texas A&M University (2018–2019).
- [03] Alence Poudel (Civil Engineering), Texas A&M University (2018–2019).
- [02] Bharadwaj Bommanayakanahalli (Civil Engineering), Texas A&M University (2016–2017).
- [01] Tamanna Tasnum (Construction Science), Texas A&M University (2016).

## **Undergraduate Students**

- [31] Bidisha Shresta (Civil Engineering), Texas State University (2025–present).
- [30] Irfan Sarwar Pranjol (Industrial Engineering), Texas State University (2025–present).
- [29] Pradicta Bhattacharjee (Industrial Engineering), Texas State University (2025–present).
- [28] Dipti Koirala (Electrical Engineering), Texas State University (2025–present).
- [27] Gaurab Chhetri (Computer Science), Texas State University (2025–present).
- [26] Biplov Pandey (Civil Engineering), Texas State University (2025–present).
- [25] Nick Hardin (Computer Science), Texas State University (2024).
- [24] Jett Tipsword (Computer Science), Texas State University (2023–2025).
- [23] Darrel Anderson (Civil Engineering), Texas State University (2023–present).
- [22] Khaled Aly Abousabaa (Civil Engineering), Texas State University (2023–2024).
- [21] Diana Mendez Garcia (Civil Engineering), Texas State University (2023–2024).
- [20] Manan Patel (Civil Engineering), Texas State University (2023).
- [19] Juan Gonzalez (Civil Engineering), Texas A&M University (2022–2023).
- [18] Valerie Vierkant (Psychology), Texas A&M University (2019–2023).
- [17] Jaxson Murray (Civil Engineering), Texas A&M University (2022).
- [16] Ashley Trujillo (Civil Engineering), Texas A&M University (2021–2022).
- [15] Vinesh Ravuri (Computer Science), Texas A&M University (2021).
- [14] Magdalena Theel (Psychology), Texas A&M University (2017–2020).
- [13] Turzo Bose (Chemical Engineering), HUST (2018).
- [12] Jared Wheeler (Computer Science), Texas A&M University (2018).
- [11] Tyler Sizemore (Mechanical Engineering), Texas A&M University (2018–2019).
- [10] Matthew Foley (Civil Engineering), Texas A&M University (2018–2019).
- [09] Christopher Lira (Civil Engineering), Texas A&M University (2017–2018).
- [08] Ly-Na Tran (Biomedical Science), Texas A&M University (2017–2019).
- [07] Jacob Bruce (Civil Engineering), Texas A&M University (2019–present).
- [06] Elizabeth Clark (Civil Engineering), Virginia Tech (2017).
- [05] Anthony Teo (Computer Science and Engineering), Texas A&M University (2018–2019).
- [04] Urel Djigan (Computer Science and Engineering), Texas A&M University (2019).
- [03] Richard Padilla (Computer Science and Engineering), Texas A&M University (2018–2019).
- [02] Daxton Davidson (Civil Engineering), Texas A&M University (2018).
- [01] Michelle Zupancich (Civil Engineering), Texas A&M University (2016).

CV Date: 12/28/2025