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ACADEMIC QUALIFICATIONS

Michigan State University, East Lansing, MI, USA Doctor of Philosophy, Civil Engineering. Dissertation Title: Assessment of Operational and Safety Impacts of Speed Limit Increases in Michigan	Aug. 2019 – Aug. 2023 CGPA 4.0/4.0
National Institute of Technology Karnataka, India Master of Technology, Transportation Engineering. Thesis Title: Effect of Segregation of Motorcycles on Traffic Flow Operations on Urban Arterial Roads	Aug. 2017 – Jul. 2019 CGPA 9.2/10.0
Thapar University, India Bachelor of Engineering, Civil Engineering. Recipient of University Medal in Civil Engineering	Aug. 2013 – Jul. 2017 CGPA 9.8/10.0

PROFESSIONAL EXPERIENCE

Scientist-C, Traffic Engineering and Safety Division, CSIR-Central Road Research Institute (CSIR-CRRI), New Delhi, India	May 2026-Present
Assistant Research Scientist, Center for Transportation Safety, Texas A&M Transportation Institute (TTI), Bryan, TX, USA	Jul. 2025-Apr. 2026
Research Associate, Michigan State University, East Lansing, MI, USA	Oct. 2023-Jun. 2025
Graduate Teaching Assistant, Michigan State University, East Lansing, MI, USA	Aug. 2022-May. 2023
Graduate Research Assistant, Michigan State University, East Lansing, MI, USA	Aug. 2019-Aug. 2023

RESEARCH PROJECTS

- Projects undertaken as PI/Co-PI
 1. Enhancing Expressway Safety in Malaysia: Harnessing the International Road Safety Programme (iRAP) and Police Reported Crash Data, 11/24-12/25, (Funded by ASEAN NCAP), Co-PI.
- Projects contributed to as research team member/lead

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1. Develop Crash Predictive Methods for Frontage Roads including Ramp Terminals, and Intersections with Crossroads in Texas (funded by TxDOT), team member.
 2. Developing Clear Zone Guidelines for High Speed/Volume Roadways (funded by NCHRP), team member.
 3. Guide for Evaluating the Safety Performance of Shared Railway-Highway Interfaces (funded by NCHRP), team member.
 4. Exploring Longitudinal Driving Behavior in Autonomous and Human-Driven Vehicles: A Pilot Analysis Using Argoverse 2 Data (funded by Texas Transportation Institute), team lead.
 5. Improving Safety for People Walking and Biking at Roundabouts (funded by Michigan DOT), team lead.
 6. Identify Best Locations for New Flex Route Projects throughout the State of Michigan (funded by Michigan DOT), team lead.
 7. Speed Impacts from Roundabouts and Other Traffic Control Devices (funded by Minnesota DOT), team member.
 8. COVID and Traffic Crashes/Impacts on Safety Targets (funded by Michigan DOT), team member.
 9. Complete Streets Speed Impacts (funded by Minnesota DOT), team member.
 10. Decision-making Related to Work Zone Lane Merge Control (funded by FHWA), team member.
 11. Evaluating the Impacts of the 2017 Legislative Mandated Speed Limit Increases in Michigan (funded by Michigan DOT), team lead.
 12. Safety Insights: Development of Enhanced Functionality and Preparation for Large-Scale Deployment (funded by Ford Motor Company, USA), team lead.
 13. Incorporating Impacts of Driver Distraction into Highway Design and Traffic Engineering (funded by FHWA), team member.
 14. Update of the Policy on Geometric Design of Highways and Streets Guidance on Acceleration/Deceleration and Stopping Sight Distance Criteria (funded by NCHRP), team member.
 15. Evaluating the Performance and Safety Effectiveness of Roundabouts- An Update (funded by Michigan DOT), team lead.
 16. Effect of Segregation of Motorcycles on Traffic Flow Operations on Urban Arterial Roads (funded by CSIR-CRRI), MTech thesis.

AWARDS AND ACHIEVEMENTS

Best paper award, TRB Committee ACS10: Transportation Safety Management Systems	January 2024
Third place in Traffic Control Device Challenge for Students hosted by Transportation Research Board during 102 nd Annual Meeting	January 2023

Lifesavers Traffic Safety Scholarship	December 2022
First place in Traffic Control Device Challenge for Students hosted by Transportation Research Board during 101 st Annual Meeting	January 2022
Best paper by young author award, Traffic Control Device Committee, TRB 101 st Annual Meeting	January 2022
Outstanding paper award, Highway Traffic Monitoring Committee, TRB 100 th Annual Meeting	January 2021
Winning contributor to 2021 AT&T Faculty-Staff Instructional Technology Award	2021
Scholarship, Institute of Transportation Engineers, Michigan section	2020
Merit scholarship for three consecutive years, Thapar University, India	2014-2016
University medal recipient for Civil Engineering, Thapar University, India	2017

ACADEMIC CONTRIBUTION

- Guest editor for Special Issue in Systems Journal (Q1, IF 3.1)
- Journal Reviewer
 - Transportation Research Record
 - Accident Analysis and Prevention
 - Transportation Research Part F: Psychology and Behaviour
 - Transport Policy
 - Traffic Safety Research
 - Journal of Transportation Engineering Part A: Systems
 - Transportation Research Board Annual Meeting
 - Discover Civil Engineering
 - Springer Nature Scientific Reports

JOURNAL PUBLICATIONS (SCI Only)

1. Gupta, G., Gupta, N., Mohammadpour, M., Savolainen, P. T., Gates, T. J., Congress, S. C., Dasgar, Y. (2026). Driver Merging and Lane Utilization Behavior under Zipper Merge Lane Control. *J. Transp. Eng. Part A Syst.*, 152(5). <https://doi.org/10.1061/JTEPBS.TEENG-9273>
2. Abatan, A., Gupta, N., Jashami, H., Hill, D., Meza, A., Shah, P., Rousch, K., Joshi, N., Yancovitz, C., & Savolainen, P. (2026). Examining the Performance of Automatic Emergency Braking Systems. *Transportation Research Record: Journal of the Transportation Research Board*, 0(0). <https://doi.org/10.1177/03611981251362144>
3. Megat-Johari, M. U., Sangar, N., Megat-Johari, N., Gupta, N., & Law, T. H. (2026). Enhancing variable message sign design policy in Malaysia through a stated driver preference survey. *Transport Policy*, 180. <https://doi.org/10.1016/j.tranpol.2026.104032>
4. Gupta, N., Megat-Johari, M. U., Megat-Johari, N. (2025). Evaluating the Impacts of Cellphone Use Policies on Cellphone-Distracted Fatal Crashes. *Journal of Safety Research*, 94, 329-339.
5. Gupta, N., Mohammadpour, M., Imosemi, S., Dasgar, Y., Gupta, G., Savolainen, P., Gates, T. (2025) Examining Speed Selection and Driver Yielding Behavior Towards

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- Pedestrians and Bicyclists at Roundabouts. *Transportation Research Record*. Online first. <https://doi.org/10.1177/03611981251342778>
6. Gupta, N., Cai, Q., Jashami, H., Savolainen, P., Gates, T., Barrette, T., Powell, W. (2025). A Comparison of Traffic Crash and Connected Vehicle Event Data on a Freeway Corridor with Hard-Shoulder Running. *Accident Analysis and Prevention*, 211. <https://doi.org/10.1016/j.aap.2024.107900>
 7. Bamney, A., Gupta, N., Keshari, S., Joshi, M. (2025). Analyzing Pedestrian Fatalities in the United States: A Comparative Study of Pedestrian and Census Tract Level Factors Across Pre-, During, and Late-Pandemic Periods. *Journal of Safety Research*, 95, 10-24.
 8. Megat-Johari, M. U., Gupta, N., Mahmud, M., Bamney, A., Jashami, H., Savolainen, P., Gates, T. (2025). Revisiting the Design Parameters Related to Stopping Sight Distance and Vertical Curve Length using Probabilistic Analyses. *Transportation Research Record*, Online first. <https://doi.org/10.1177/03611981251342786>.
 9. Imosemi, S., Gupta, G., Gupta, N., Megat-Johari, M. U., Savolainen, P., Gates, T. (2025). An Examination of Roadway Characteristics Affecting Driver Speed Selection in Speed Transition Zones. Accepted for publication in *Transportation Research Record*.
 10. Bahrami, V., Detweiler, A., Keshari, S., Gupta, N., Hankin, J., Chakraborty, M., Gates, T. J., & Savolainen, P. (2025). Driver Comprehension of Driveway Assistance Devices for Work Zones: Evidence from a Nationwide Survey. *Transportation Research Record*, Online First. <https://doi.org/10.1177/03611981251380267>
 11. Megat-Johari, M. U., Megat-Johari, N., Gupta, N., Jashami, H., & Law, T. H. (2025). Mid-to-Post-Pandemic Mobility Patterns: A Case Study of Malaysia Highlighting Differential Trends in Work and Non-Work Trips. *Pertanika Journal of Science & Technology*, 33 (6), 2615-2639. <https://doi.org/10.47836/pjst.33.6.10>
 12. Gupta, N., Jashami, H., Savolainen, P. T., Gates, T. J., Barrette, T., & Powell, W. (2024). Examining the Relationship between Connected Vehicle Driving Event Data and Police-Reported Traffic Crash Data at the Segment- and Event Level. *Transportation Research Record*, 2678(11), 1378-1394. <https://doi.org/10.1177/03611981241243329>
 13. Rostami A., Kamjoo, E., Bamney, A., Gupta, N., Savolainen, P. & Zockaie, A. (2023). Investigating Changes in Travel Behavior over Time in Response to the COVID-19 Pandemic. *Transportation Research Part F: Traffic Psychology and Behavior*, 96.
 14. Shakir Mahmud, M., Jashami, H., Usamah Megat Johari, M., Gupta, N., Bamney, A., Gates, T. J., & Savolainen, P. (2024). Effects of Speed Feedback Trailer Positioning and Police Enforcement on Vehicular Speeds in Freeway Work Zone Lane Closures. *Transportation Research Record*, 2678(9), 423-434. <https://doi.org/10.1177/03611981241230319> .
 15. Gupta, N., Bamney, A., Rostami, A., Kamjoo, E., & Savolainen, P. T. (2023). How did the COVID-19 pandemic affect driver speed selection and crash risk on rural freeways? *Transportation research part F: traffic psychology and behaviour*, 97, 181-206.
 16. Gupta, N., Mahmud, M. S., Jashami, H., Savolainen, P. T., & Gates, T. J. (2023). Evaluating the Impacts of Freeway Speed Limit Increases on Various Speed Measures: Comparisons Between Spot-Speed, Permanent Traffic Recorder, and Probe Vehicle

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- Data. *Transportation Research Record*, 2677(2).
<https://doi.org/10.1177/03611981221106481>
17. Gupta, N., Megat Johari, M. U., Jashami, H., & Savolainen, P. (2022). How is traffic safety affected by changes in traffic speeds following speed limit increases? An evaluation with probe vehicle data. *Traffic Safety Research*, 3, 000017.
<https://doi.org/10.55329/xsjw3584>
 18. Bamney, A., Gupta, N., Jashami, H., Megat-Johari, M.-U. & Savolainen, P. (2022) An Analysis of Changes in County-Level Travel Behavior Considering COVID-19–Related Travel Restrictions, Immunization Patterns, and Political Leanings. *J. Transp. Eng. Part A Syst.*, 148, <https://doi.org/10.1061/JTEPBS.0000748>
 19. Mahmud, M. S., Gupta, N., Safaei, B., Jashami, H., Gates, T. J., Savolainen, P. T., & Kassens-Noor, E. (2021). Evaluating the Impacts of Speed Limit Increases on Rural Two-Lane Highways Using Quantile Regression. *Transportation Research Record*, 2675(11), 740–753. <https://doi.org/10.1177/03611981211019732>
 20. Bamney, A., Jashami, H., Sonduru Pantangi, S., Ambabo, J., Megat-Johari, M. U., Cai, Q., Gupta, N. & Savolainen, P. T. (2023). Examining Impacts of COVID-19-Related Stay-At-Home Orders through a Two-Way Random Effects Model. *Transportation Research Record*, 2677(4), <https://doi.org/10.1177/03611981211046921>
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PAPERS IN CONFERENCE PROCEEDINGS

1. Gupta, Nischal and Savolainen, Peter T., "Unintended Consequences: Changes in Driver Behavior Associated with the Adoption of Advanced Driver Assistance Systems" (2024). Kentucky Transportation Center Presentations. 47. *9th International Conference on Road Safety and Simulation*, Oct. 28-31, Lexington, Kentucky, USA.
 2. Gupta, N., Ravi Sekhar, C., Ravi Shankar, A.U. (2022). Speed and Headway Behaviour of Motorcycles on an Exclusive Motorcycle Lane. *Proceedings of the Fifth International Conference of Transportation Research Group of India*. Lecture Notes in Civil Engineering, vol 219. Springer, Singapore. https://doi.org/10.1007/978-981-16-8259-9_4
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RESEARCH REPORT PUBLICATIONS

1. Savolainen, P., Gates, T., Imosemi, S., Gupta, N., Imosemi, S., Mohammadpour, M., Dasgar, Y., Gupta, G. (2025). *Improving Safety of People Walking and Biking at Roundabouts*. Report No. MN 2025-27, Minnesota Department of Transportation. <https://rosap.ntl.bts.gov/view/dot/85626>
2. Savolainen, P., Gates, T., Imosemi, S., Gupta, N., Abatan, A., Hill, M., Ceifetz, A., Zockaie, A., Kamjoo, E., Ghamami, M. (2025). *Identify Best Locations for New Flex-Route Projects Throughout the State of Michigan*. Report No. SPR-1751, Michigan Department of Transportation. <https://rosap.ntl.bts.gov/view/dot/85296>
3. Savolainen, P.T., Gates, T.J., Brown, H., Edara, P. K., Sun C., Gupta, G., Gupta, N., Mohammadpour, M., Qing, Z., Chang, D. Y. (2024) *Improving the Effectiveness of Zipper Merge Lane Control in Freeway Work Zones*. Smart Work Zone Deployment Initiative, Federal Highway Administration, US Department of Transportation. <https://rosap.ntl.bts.gov/view/dot/80869>

4. Savolainen, P.T., Gates, T.J., Imosemi, S., Gupta, N., Gupta, G., Megat-Johari, M.U. (2024). *Complete Streets Speed Impacts*. Office of Research and Innovation, Minnesota Department of Transportation. <https://rosap.ntl.bts.gov/view/dot/75514>
5. Savolainen, P.T., Gates, T.J., Megat-Johari, M.U., Bamney, A., Jashami, H., Gupta, N., Abatan, A., Donnell, E., Guler, S.I., Sengupta, A., Smaglik, E., Gooch, J. and Hallmark, S. (2024). *NCHRP Report 1081: Acceleration, Deceleration, and Stopping Sight Distance Criteria for Geometric Design of Highways and Streets*. Transportation Research Board, Washington, DC. <https://doi.org/10.17226/27490>
6. Savolainen, P.T., Gates, T.J., Gupta, N., Megat-Johari, M.U., Cai, Q., Imosemi, S., Ceifetz, A., McArthur, A., Hagel, E., Smaglik, E. (2023). *Evaluating the Performance and Safety Effectiveness of Roundabouts-An Update*. Research Administration, Michigan Department of Transportation. <https://rosap.ntl.bts.gov/view/dot/68864>
7. Savolainen, P.T., Gates, T.J., Kassens-Noor, E., Gupta, N., Mahmud, M. S., Kay, J., Megat-Johari, M.U., Jashami, H., Lord, D., Geedipally, S. (2022). *Evaluating the Impacts of the 2017 Legislative Mandated Speed Limit Increases*. Research Administration, Michigan Department of Transportation. <https://rosap.ntl.bts.gov/view/dot/66076>
8. Gupta, N., Jashami, H., Savolainen, P.T., Abouali, M., Barrette, T., Coplai, C. and Powell, W. (2021). *Connected Vehicle Data Validation: How Do CV Events Relate to Collision Trends?* White Paper, Ford Motor Company. https://innovationcenter.msu.edu/wp-content/uploads/2022/03/SafetyInsights_w4.pdf.

INVITED LECTURES

1. “Count Data Modeling”, Loughborough University, School of Architecture, Building and Civil Engineering, England, November 2024.
2. “Examining Speed Impacts of Various Roadway Cross-Sectional Design Elements in Speed Transition Zones”, TransPedia Research Talk, KSCSTE-National Transportation Planning and Research Centre (NATPAC). March 26, 2025.

MEDIA COVERAGE

1. Research paper “A Comparison of Traffic Crash and Connected Vehicle Event Data on a Freeway Corridor with Hard-Shoulder Running” (team lead; PI: Dr. Peter Savolainen) featured in " New cars can monitor your near-misses. Here’s how Michigan traffic experts are using the data", Capitol News Service, Feb. 14, 2025.
 2. Research paper “How is traffic safety affected by changes in traffic speeds following speed limit increases? An evaluation with probe vehicle data” (team lead; PI: Dr. Peter Savolainen) featured in “Study: Crashes, deaths increased after Michigan’s speed limit hikes to 75 mph”, Detroit Free Press, Nov. 28, 2022.
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