Guillermo Basulto-Elias, PhD	
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EDUCATION

- PhD, Statistics, Iowa State University, Ames, IA, 2011–2016
- MS, Probability and Statistics, Center for Research in Mathematics, Guanajuato (Mexico), 2009–2011
- BS, Mathematics, Center for Research in Mathematics, Guanajuato (Mexico), 2004–2009

PROFESSIONAL EXPERIENCE

- Research Scientist, Institute for Transportation, Iowa State University, 2019–present
- Postdoctoral Appointment, Institute for Transportation, Iowa State University, 2019
- Postdoctoral Appointment, Center for Statistics and Applications in Forensic Evidence (CSAFE), Iowa State University, 2016–2018
- Graduate Assistant, Iowa State University, 2011–2016

SELECTED RESEARCH PROJECTS

- *Development of an Analytical Tool for Work Zone Performance, sponsored by the Smart Work-Zone Deployment Initiative* (Smart Work Zone Deployment Initiative/Federal Highway Administration): 2024–2025, PI
- *Developing a Crash Modification Factor for Reflective Treatment on Signposts* (Iowa Department of Transportation): 2023–2025
- *Low-Cost Safety Strategies for Unpaved Rural Roads* (Iowa Department of Transportation): 2023–present, Co-PI
- *Monitoring Real-World Driver Behavior for Classification and Early Prediction of Alzheimer's Disease* (National Institute of Health through the University of Nebraska): 2020–2025, Statistician
- *Highway System Information System* (Federal Highway Administration through VHB): 2021–present, Data Analyst
- Developed various crash analysis and visualization tools for the Real-Time Analytics of Transportation Data (REACTOR) Laboratory: 2021–present
- *BTS-17: Determining Effectiveness of Combined High Visibility Enforcement (HVE), sponsored by Behavioral Traffic Safety* (National Academies): 2022–2023, Statistician

SELECTED PUBLICATIONS

- Lawton, B. P., S. L. Hallmark, G. Basulto-Elias, D. A. Obeng, and W. Ackaah. 2024. Understanding the relationship between road users and the roadway infrastructure in Ghana. *Accident Analysis & Prevention*, Vol. 198.

- Kandiboina, R., V. Ravichandra-Mouli, G. Basulto-Elias, S. Knickerbocker, N. Hawkins, and A. Sharma. 2024. Real-Time Freeway Crash Detection Framework using Connected Vehicle Waypoint Data. *Transportation Research Record: Journal of the Transportation Research Board*.
- Hallmark, S., G. Basulto-Elias, N. Oneyear, and O. Smadi. 2024. Evaluation of the Impact of Driver Behavior on Back of Queues Events in Work Zones Using the SHRP2 Naturalistic Driving Study Data. *Journal of Transportation Technologies*, Vol. 14, No. 2, pp. 179–194.
- Basulto-Elias, G., S. Hallmark, A. Barnwal, A. Sharma, M. Rizzo, and J. Merickel. 2023. Strategy and safety at stop intersections in older adults with mild cognitive impairment and Visual Decline. *Transportation Research Interdisciplinary Perspectives Journal*.
- Hallmark, S., G. Basulto-Elias, N. Oneyear, A. Goswamy, R. Thapa, S. Chrysler, and O. Smadi. 2023. Evaluation of the Impact of Work Zone Traffic Control Devices on Change of Speed Using the SHRP2 Naturalistic Driving Study Data. *Transportation Research Record: Journal of the Transportation Research Board*.
- Oneyear, N., S. Hallmark, A. Goswamy, R. Thapa, and G. Basulto-Elias. 2023. Analysis of Stopping Behavior at Rural T-Intersections Using Naturalistic Driving Study Data. *Journal of Transportation Technologies*, Vol. 13, No. 2, pp. 208–221.
- Basulto-Elias, G., A. Carriquiry, K. De Brabanter, and D. Nordman. 2020. Bivariate kernel deconvolution with panel data. *Sankhya B: The Indian Journal of Statistics*.

SELECTED PEER-REVIEWED REPORTS

- Oneyear, N., S. Hallmark, A. Goswamy, R. Thapa, and G. Basulto-Elias. 2024. *Evaluating the Relationship Between the Driver and the Roadway to Address Rural Intersection Safety by Using SHRP2 Naturalistic Driving Study Data and the Roadway Information Database*, FHWA-HRT-24-140. Federal Highway Administration, Washington, DC.
- Hallmark, S., J. Wood, G. Basulto-Elias, Z. Hans, T. Litteral, N. Oneyear, and M. R. Kunert. 2024. *Combined High-Visibility Enforcement: Determining the Effectiveness*, BTSCRP Project BTS-17. Behavioral Traffic Safety Cooperative Research Program, Washington, DC.
- Hallmark, S., G. Basulto-Elias, N. Oneyear, O. Smadi, S. Chrysler, and G. Ullman. 2022. *Evaluation of Work Zone Safety Using the SHRP2 Naturalistic Driving Study Data–Volume 1 Toolbox of Work Zone Countermeasures*, Report No. MN 2022-13V1. Minnesota Department of Transportation, St. Paul, MN.
- Hallmark, S., G. Basulto-Elias, N. Oneyear, O. Smadi, S. Chrysler, and G. Ullman. 2022. *Evaluation of Work Zone Safety Using the SHRP2 Naturalistic Driving Study Data–Volume 2 Description of Research*, Report No. MN 2022-13V2. Minnesota. Department of Transportation, St. Paul, MN.
- Hallmark, S., T. Litteral, N. Oneyear, and G. Basulto-Elias. 2021. *Guidance on Use of Channelization for Two-Lane Two-Way Work Zone Configurations*. Iowa Department of Transportation, Ames, IA.
- Hallmark, S., A. Sharma, B. Lawton, G. Basulto-Elias, A. Bilek, N. Oneyear, and T. Litteral. 2020. *Assessing Driver Behavior at Back of Queues: Implications for Queue Warning System in Work Zones*. Smart Work Zone Deployment Initiative and Federal Highway Administration, Washington, DC.