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Education

Ph.D. in Economics, Georgia Institute of Technology, expected July 2025

MS in Economics, Georgia Institute of Technology, Summer 2023

MA in Economics, University of South Florida, Spring 2019

B.B.A. Finance (Minor: Economics), 3rd position (cohort of 86 students), Bangladesh University of Professionals (BUP), Spring 2017

Research Interests

Environmental Economics, Health Economics, Urban Economics

Working Papers

Crime on the Move? The Effect of Ridesharing Services on Crime [Job market paper]

This study examines the impact of the introduction of ridesharing services like Uber and Lyft on crime rates across U.S. cities, leveraging a natural experiment created by their staggered rollout. Using a Two-way Fixed Effects (TWFE) Difference-in-Differences (DID) model, I find significant reductions in violent crimes, property crimes, and burglary following the entry of these services, while finding no substantial effects on larceny, motor vehicle theft, or arson. The study also investigates the heterogeneity of these effects across different demographic groups, indicating that ridesharing services may influence crime through mechanisms such as employment and demographic changes. This research adds to the limited literature on the relationship between ridesharing services and crime, providing new insights into the potential mechanisms behind these effects. [\[PDF\]](#) [\[Replication code\]](#)

Impact of An Infrastructure Failure on Cognitive Performance, 2023

Natural and human-made disasters can have far-reaching impacts on health and human capital for affected individuals. The 2007 collapse of the I-35W Mississippi River Bridge in Minneapolis, Minnesota, led to a substantial disruption of the learning environment for students in affected communities. The collapse resulted in numerous fatalities and injuries; notably, a school bus carrying 63 students was on the bridge during the collapse, and traffic patterns were disrupted for a year. Using a two-way fixed effects and synthetic difference-in-differences approach, I find that the bridge collapse leads to lower standardized test scores for affected schools relative to similar unaffected schools. Furthermore, I provide evidence that improvements in air quality due to reduced traffic do not outweigh the trauma-induced psychological stress impacts of the disaster. [\[PDF\]](#) [\[Replication code\]](#)

Silencing the Rails: A Study of the Noise-Safety Trade-off in Railway Quiet Zones, 2023

I examine quiet zones—established to alleviate noise pollution at railroad-highway crossings while ensuring public safety—in this study as a natural experiment to assess their impact on accident frequency in the United States. Leveraging highway-rail crossing accident data from the Federal Railroad Administration (1994–2023) and applying difference-in-differences methods with staggered treatment estimators, I find that quiet zones are associated with a 1.27 times higher annual accident rate at railway crossings within these zones. Although vehicle damage costs remain unaffected, quiet zones significantly increase fatalities and injuries. Further analysis of residential property sales data indicates that the aggregate property value gains, driven by a revealed preference for noise reduction, outweigh the economic costs of additional accidents. However, the distributional consequences are substantial: homeowners benefit from rising property values, whereas commuters and pedestrians disproportionately bear the increased safety risks. These findings raise important policy questions regarding the safety standards and cost-effectiveness of quiet zones and highlight the potential for new vehicle safety technologies to mitigate crossing accidents. [\[PDF\]](#)

Works in Progress

Ride or Die: Did Ridesharing Services Kill Active and Public Transit? (Joint with Casey Wichman)

Beware of Dog: Impact of Air Pollution on Dog Bites, 2023 [\[PDF\]](#)

Crime is in the water: Impact of water pollution on crime [\[PDF\]](#)

Fighting Fire with Fire: A Study on the Effectiveness of Prescribed Burns in Mitigating Future Wildfires [\[PDF\]](#)

Impact of Protected Bike Lane on Air Pollution, Safety and Educational Outcome

Hritan, Emtiaz Hossain and Vanna-iampikul, Pruek, The impacts of air pollution on traffic accidents across the United States (February 4, 2022). Available at SSRN: <https://ssrn.com/abstract=4039404>

Refereeing

Applied Economics, See: [\[Link\]](#)

Conference Presentations

2024 12th Annual Graduate Student Paper Conference, Ivan Allen College of Liberal Arts, Georgia Institute of Technology [\[Link\]](#)

2023 American Society of Health Economists (ASHEcon) Conference St. Louis, session: Physical and Cognitive Health Effects of Air Pollution [\[Link\]](#)

2023 Southeastern Workshop on Energy & Environmental Economics and Policy (SWEEEP), [\[Link\]](#)

2023 GSU Environmental Economics Symposium, Georgia State University

Employment

Research Experience

Graduate Research Assistant, Georgia Institute of Technology, Atlanta, Georgia, Summer 2024

Project: *Ride or Die: Did Ridesharing Services Kill Active and Public Transit?* under Dr. Casey Wichman

Graduate Research Assistant, Georgia Institute of Technology, Atlanta, Georgia, January 2022-August 2022

Project: *Advances in Causal Inference at the Intersection of Air Pollution and Health Outcomes Data.* under Dr. Dylan Brewer

Teaching Experience

Instructor of Record, Georgia Institute of Technology, August 2022-December 2022 and January 2024-May 2024

Statistics for Economists (ECON 2250), Spring 2024 and Fall 2022

Principles of Macroeconomics (ECON 2105), Summer 2023

Graduate Teaching Assistant, Georgia Institute of Technology, Atlanta, Georgia, August 2020-December 2021, January-December 2023

Fall 2024 Microeconomic Theory I (ECON-7012) and Game Theory (ECON 4180) for Dr. Maxwell Rosenthal

Fall 2023 Microeconomic Analysis (ECON 6106) for Dr. Sam Wunderly

Spring 2023 Macroeconomics (ECON 6105) for Dr. Willie Belton

Fall 2021 Advance Microeconomic Analysis(ECON-3110) and International Energy Markets (ECON 3300) for Dr. Matthew E. Oliver

Spring 2021 Game Theory (ECON 4180) for Dr. Maxwell Rosenthal

Fall 2020 International Energy Markets (ECON 3300) for Dr. Matthew E. Oliver

Adjunct Instructor of Economics, Guilford Technical Community College, Jamestown, NC, January 2020-August 2020

Spring 2020 3 sections of Principles of Microeconomics and 1 section of Principles of Macroeconomics

Summer 2020 1 section of Macroeconomics (online)

Graduate Instructional Assistant, University of South Florida (USF), Tampa, FL, January 2018-May 2019

Spring 2019 Economics of Education and Microeconomics Principles for Dr. Erika Martinez

Fall 2018 Microeconomics Principles for Dr. Antoinette Criss

Spring 2018 Intermediate Price Theory and Microeconomics Principles for Dr. Erika Martinez

Professional Affiliations

American Economic Association (AEA), Association of Environmental and Resource Economists (AERE), American Society of Health Economists, Omicron Delta Epsilon (International honor society in Economics)

Scholarships/Fellowships

Outstanding Graduate Student Instructor, School of Economics, Georgia Tech, 2025 [Institute-wide Finalist] [\[See more here\]](#)

The Interdisciplinary Health and Environment Leadership Development (IHE-LeaD) Fellowship, Georgia Tech, sponsored by the Burroughs Wellcome Fund, August 2022-May 2023. [\[See more here\]](#)

Richard R. House Graduate Stipend by School of Economics, Georgia Tech

Econ Fellow Endowment Stipend, by School of Economics, Georgia Tech

BUP Scholarship (merit based) for three consecutive years : 2014, 2015, 2016 by Bangladesh University of Professionals (BUP)

Skills

Software: Stata, R, Python, ArcGIS, QGIS

Fluent in English and Bengali (native)

Certificates/Licences

Tech to Teaching Certificate, Georgia Institute of Technology, 2022. [\[See more here\]](#)

Extra-Curricular Activities

President, Omicron Delta Epsilon, Georgia Tech Chapter, 2023-present

Senator, Graduate Student Senate (GSS) of Georgia Tech for 2020-21

Board Member, Graduate Student Advisory Board (GSAB), Ivan Allen College of Liberal Arts (IAC), 2022

References

Dylan Brewer
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Casey Wichman
Associate Professor
School of Economics, Georgia Institute of Technology
Email: wichman@gatech.edu

Robert Gonzalez
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School of Economics, Georgia Institute of Technology
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