

Mikaela Meyer

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Education

- 2018–Present **Ph.D., Statistics and Public Policy**, *Carnegie Mellon University*.
- 2019 **M.S., Statistics & Data Science**, *Carnegie Mellon University*.
(Expected) Project: Hierarchical Models for Racial Discrepancies in Policing
Advisor: Amelia Haviland
- 2018 **B.S., Mathematical Statistics and Applied Statistics**, *Purdue University*.
Graduated with Highest Distinction, Honors College Student
Minor in Political Science

Research

- 2019–Present **Graduate Research Assistant**, Carnegie Mellon University
Advisor: Amelia Haviland
- Developing hierarchical models to decompose variance in racial discrepancies in police actions by location
 - Collaborating with Center for Policing Equity to obtain necessary data
- 2018–Present **Member of Teaching Statistics Research Group**, Carnegie Mellon University
- Creating an assessment for undergraduate introductory statistics courses and assessing questions based on think-aloud interviews
 - Using cognitive task analysis and think-aloud interviews to better understand student misconceptions in a statistical inference class
- 2016–2018 **Undergraduate Fellow**, Purdue Policy Research Institute
Advisors: Laurel Weldon and Caitlin Surakitbanharn
- Drafted policy briefs with other undergraduates from a variety of disciplines about subjects, such as personal drone regulations, autonomous vehicle deployment, and flood risk in coastal Louisiana
- 2015–2018 **Research Assistant**, Purdue University
Advisors: Dwaine Jengelley and Aaron Hoffman
- Conducted newspaper sentiment analysis using Lexicoder software
 - Wrote an R script to scrape political cartoons from gocomics.com
 - Collected and analyzed survey data from journalists at Society of Professional Journalists Conference in September 2018
 - Taught the PIs and other students in the research group how to use basic functions in R

2015-2016 **Member of NSF Statistics Living-Learning Community**

Advisors: Mark Ward and Frederi Viens

- Received funding from NSF Grant No. 1246818 to conduct research about modeling Lake Chad's hydrology through Bayesian methodologies

2016 **Student Poll Analyst**, Purdue Institute for Civic Communication

- Drafted questions for a national poll on civic confidence that was conducted by Penn Schoen Berland
- Analyzed poll results with other students and presented them at National Press Club

Publications

Peer-reviewed journal articles

Meyer, M. R., & Johnson, D. R. (2019). "Variability of Best-Estimate Flood Depth Return Periods in Coastal Louisiana". *Journal of Marine Science and Engineering*, 7(5), 145. doi:10.3390/jmse7050145

Manchanda, S., **Meyer, M.**, Li, Q., Liang, K., Li, Y., & Kong, N. (2018). "On Comprehensive Mass Spectrometry Data Analysis for Proteome Profiling of Human Blood Samples". *Journal of Healthcare Informatics Research*, 2(3), 305-318.

Government reports

Gambler, R., Matheson, T., Alexander, D., Burdick, K., Chaidez, L., Donovan, K., Fejfar, M., Gilley, S., Hatscher, C., Hauswirth, E., **Meyer, M.**, Najmi, S., Reeves, K., & Tessin, J. (2019) "BORDER SECURITY: DHS Should Improve the Quality of Unlawful Border Entry Information and Other Metric Reporting". *U.S. Government Accountability Office*. GAO-19-305.

Presentations and Posters

- July 2019 Presentation and Poster. **Meyer, M.**, Orellana, J., and Reinhart, A. "Using Think-Aloud Interviews and Cognitive Task Analysis to Identify Misconceptions in Undergraduate Statistics Education". Joint Statistical Meetings. Denver, CO
- May 2019 Breakout Session. Reinhart, A., Burckhardt, P., Elliott, P. W., Evans, C., Luby, A., **Meyer, M.**, Orellana, J., Yurko, R., Weinberg, G., Wieczorek, J., & Nugent, R. "Using think-aloud interviews to assess student understanding of statistics concepts". US Conference on Teaching Statistics. State College, PA
- April 2018 Presentation. Hoffman, A., **Meyer, M.**, Malik, P., Balcazar, P., Hennes, E., Jengelley, D., & Walsh, S. "How anxiety about Donald Trump influences news reporting". Midwest Political Science Association Conference. Chicago, IL
- April 2018 Poster. **Meyer, M.** & Johnson, D. R. "Variability Analysis of Historic Flood Depth Returns in Coastal Louisiana". Purdue Undergraduate Research Symposium. West Lafayette, IN
- April 2018 Poster. Ball, J., **Meyer, M.**, Bunce, B., & Johnson, D. R. "Parametric Sensitivity Analysis of a Coastal Louisiana Flood Risk Model". Purdue Undergraduate Research Symposium. West Lafayette, IN

- November 2016 Presentation. Manchanda, S., **Meyer, M.**, Li, Q., Liang, K., Li, Y., & Kong, N. (2018). "On Comprehensive Mass Spectrometry Data Analysis for Proteome Profiling of Human Blood Samples". INFORMS. Nashville, TN. *Finalist in Operation Research Undergraduate Paper Competition*
- April 2016 Presentation. Jengelley, D., Duncan, N., **Meyer, M.**, & Mroczek, C. "Framing Caribbean Integration: A Content Analysis of Elites' Views on Regionalism". Midwest Political Science Association Conference. Chicago, IL

Teaching Assistantships

- Fall 2018 Statistical Graphics and Visualization, Carnegie Mellon University
- Spring 2018 Differential Equations, Purdue University

Grants

- January 2019 **GuSH Crosswalk Seed Grant** (Carnegie Mellon University)
- Grant title: "Using Think-Aloud Interviews and Cognitive Task Analysis to Identify Misconceptions in Undergraduate Statistics Education"
- Josue Orellana and Mikaela Meyer, \$1,000*

Awards

- 2018 **Phi Beta Kappa**
- 2016-2018 **Stamps Family Foundation Scholarship**
- 2017 **Truman Scholarship**
- 2017 **Marshall Scholarship Finalist**
- 2016 **Mu Sigma Rho Statistics Honor Society**
- 2016 **Outstanding Sophomore in Statistics**

Work Experience

- Summer 2018 **Applied Research and Methods Intern**, Government Accountability Office
- Conducted a literature review to better understand the methods used by the Department of Homeland Security to estimate the number of migrants crossing the border illegally
 - Summarized R scripts so the team of statisticians and non-statisticians could learn what exact steps DHS took to calculate border security metrics
- Summer 2017 **Emerging Leaders Program Data Science Intern**, Nielsen
- Created a scorecard using Python's Pandas library to evaluate a new data integration product

Technical Skills

- Proficient R, PYTHON
- Familiar LATEX, SAS

Non-Academic Presentations

- April 2017 Invited speaker at March for Science Lafayette. Lafayette, IN

Media

- 2018 "Statistics Student Awarded Truman Scholarship", Amstat News. [Read here.](#)
- 2017 "Commitment to Public Service Earns Statistics Junior Prestigious Truman Scholarship", Purdue College of Science. [Read here.](#)

Leadership Experiences and Involvement

- 2019- **Statistics Department Representative**, CMU Graduate Student Assembly
- 2019- **Member**, CMU Graduate Student Assembly External Affairs Committee
- 2018- **Cohort Representative**, Statistics Student Advisory Committee
- 2018- **Mentor**, CMU Statistics Matched Pairs Mentor Program
- 2018- **Member**, CMU Women in Statistics
- 2015-2018 **President**, Purdue College Democrats
- 2015-2018 **Mentor**, Purdue Honors College Mentor Program
- 2016-2018 **Co-Captain**, Purdue Debate Team

Graduate Coursework

- Intermediate Statistics
- Regression Analysis
- Advanced Statistics Theory I
- Statistical Machine Learning
- Advanced Data Analysis
- Microeconomics
- Advanced Statistics Theory II*
- Statistical Computing*

* -To be completed by Dec 2019

Professional Memberships

- American Statistical Association