

**Ryan Miller,
Assistant Professor of Statistics**

Grinnell College

CONTACT INFORMATION	Grinnell College, 1115 8th Avenue, Grinnell, IA, 50112	phone: (641) 269-4017 email: millerry@grinnell.edu website: remiller1450.github.io
EDUCATION	University of Iowa , Iowa City, IA Ph.D., Biostatistics, August 2018 <ul style="list-style-type: none">• Thesis: <i>Marginal False Discovery Rate Approaches to Inference on Penalized Likelihood Models</i>• Advisor: Patrick Breheny, Ph.D M.S., Biostatistics, May 2015 <ul style="list-style-type: none">• Preceptorship: <i>Analyzing the Geographic Dispersion of Accidents Involving Animal Strikes in Iowa using a Bayesian Spatio-temporal Model</i>• Advisor: Jake Oleson, Ph.D Augustana College , Rock Island, IL B.A., Mathematics and Mathematics Education (Double Major), May 2011 <ul style="list-style-type: none">• Graduated <i>Cum Laude</i>• Advisor: Stacey Rodman, Ph.D	
PROFESSIONAL EXPERIENCE	Assistant Professor of Statistics Department of Mathematics and Statistics Grinnell College Role: Developed and taught courses in statistics and data science, mentored undergraduate research projects, conducted independent and collaborative research	2022 to present
	Assistant Professor of Statistics (tenure track) Department of Mathematics Xavier University Role: Developed and taught courses in statistics and data science, mentored and advised undergraduate students, conducted independent and collaborative research	2020 to 2022
	Visiting Assistant Professor of Statistics Department of Mathematics and Statistics Grinnell College Role: Developed and taught courses in statistics and data science, mentored undergraduate research projects, conducted independent and collaborative research	2018 to 2020
	Research Assistant Iowa Public Policy Center, University of Iowa Supervisor: Elizabeth Momany, Ph.D Role: Statistical analysis as part of the State Innovation Model (SIM) for Iowa healthcare	2017 to 2018
	Research Assistant Iowa Public Policy Center University of Iowa Supervisor: Michelle Reyes, M.S.	2014 to 2017

Role: Statistical analyses and data management on projects involving the Iowa Department of Transportation (IDOT) crash records database

Consultant 2017 to 2018
 National Advanced Driving Simulator Organization
 University of Iowa
 Supervisor: Michelle Reyes, M.S.
 Role: Statistical support on projects involving teen driving research

TEACHING EXPERIENCE Grinnell College, Department of Mathematics and Statistics
 STA 395 - Applied Data Science Spring 2020
 STA 230 - Introduction to Data Science (two sections) Fall 2022
 STA 230 - Introduction to Data Science Fall 2019
 STA 230 - Introduction to Data Science (two sections) Spring 2019
 STA 209 - Applied Statistics Spring 2020
 STA 209 - Applied Statistics (two sections) Fall 2019
 STA 209 - Applied Statistics Spring 2019
 STA 209 - Applied Statistics (two sections) Fall 2018

Xavier University, Department of Mathematics
 MATH 257 - Data Modeling Spring 2021
 MATH 256 - Introduction to Probability and Statistics Fall 2021
 MATH 256 - Introduction to Probability and Statistics Fall 2020
 MATH 156 - General Statistics Spring 2022
 MATH 156 - General Statistics (two sections) Spring 2021
 MATH 156 - General Statistics Fall 2020
 MATH 146 - Introductory Biostatistics (two sections) Spring 2022
 MATH 146 - Introductory Biostatistics (two sections) Fall 2021

University of Iowa, Department of Biostatistics
 BIOS 4120 - Introduction to Biostatistics (Instructor) Summer 2014
 BIOS 4120 - Introduction to Biostatistics (Teaching Assistant) Spring 2014
 BIOS 4120 - Introduction to Biostatistics (Teaching Assistant) Fall 2013

Pawnee High School, Pawnee IL
 Calculus I, Algebra II w/ Trig, Algebra I, Advanced Algebra 2011-2012

RESEARCH INTERESTS

- High-dimesional data analysis
- Penalized likelihood models
- Large-scale inference and false discovery rates
- Statistical applications in driving research
- Statistical applications in public health
- Statistics and data science eduction

PEER-REVIEWED PUBLICATIONS

1. **Miller, R.**, and Breheny, P “Marginal false discovery rate control for likelihoodbased penalized regression models” *Biometrical Journal*. 2019
<https://onlinelibrary.wiley.com/doi/abs/10.1002/bimj.201800138>
2. **Miller, R.**, Brown, T, Lee, S*, Tibrewal, I*, Milavetz, G, Gaffney, G, Hartman, Hartman R, D Gorelick, R Compton, Huestis, M “Impact of cannabis and low alcohol concentration on divided attention tasks during driving” *Traffic Injury Prevention*. 2020
<https://www.tandfonline.com/doi/full/10.1080/15389588.2020.1814956>

3. **Miller, R**, Brown, T, Wrobel, J, Kosnett, M, Brooks-Russell, A “Influence of cannabis use history on the impact of acute cannabis smoking on simulated driving performance during a distraction task” *Traffic Injury Prevention*. 2022
<https://www.tandfonline.com/doi/full/10.1080/15389588.2020.1814956>
 4. Vo, M*, Kuo-Esser, L*, Dominguez, M*, Barta, H*, Graber, M*, Rausenberger, A*, **Miller, R**, Sommer, N, Escorcia, W “Photo Phenosizer, a rapid machine learning-based method to measure cell dimensions in fission yeast” *microPublication Biology*. 2022
<https://micropublication.org/journals/biology/micropub-biology-000620>
- * indicates undergraduate student co-author

MANUSCRIPTS IN PROGRESS

1. **Miller, R**, and Breheny, P “Feature-specific inference for penalized regression using local false discovery rates” (In submission)
Pre-print: <https://arxiv.org/abs/1809.05497>
2. **Miller, R**, and Breheny, P “Marginal false discovery rates for group lasso selections” (In preparation)

NOTEWORTHY PRESENTATIONS

1. **Miller, R**, Brown, T, Lee, S*, Tibrewal, I*, Milavetz, G, Gaffney, G, Hartman, Hartman R, D Gorelick, R Compton, Huestis, M “Secondary Task Performance While Driving: The Impacts of cannabis and low alcohol concentration on divided attention tasks during driving” *Association for the Advancement of Automotive Medicine, 64th annual scientific conference*. October 16, 2020

MENTORING

Student Summer Research:

- Jindal, T, and Luo, Y “A latent variable approach for analyzing collision scenarios with application to driving simulator time-series data” (Summer 2019)
 - Accepted for poster presentation at the 2019 *Midstates Consortium for Math and Science* at University of Chicago
- Lee, S, and Tibrewal, I “Evaluating the impact of cannabis, with and without alcohol, on secondary tasks performed while driving” (Summer 2019)
 - Accepted for oral presentation at the 2019 *Midstates Consortium for Math and Science* at University of Chicago
 - Accepted for oral presentation at the 2020 *Association for the Advancement of Automotive Medicine* annual conference in Portland Oregon
 - Accepted for publication in *Traffic Injury Prevention*, 2020

Award Winning Student Projects:

- Uzzi, MJ, and Li, L “An Evaluation of the Factors Influencing College Graduation Rate” (Spring 2020)
 - 2nd place in the June 2020 USCLAP Introductory Statistics paper competition
 - Presented at the 2020 Electronic Undergraduate Statistics Research Conference
- Carroll-Townsend, D “Factors on Receiving the Flu Vaccine” (Spring 2020)
 - Honorable mention in the June 2020 USCLAP Introductory Statistics paper competition

Senior Project Faculty Mentor:

- Filipiak, E “An improved analysis of performance degradation during divided attention tasks performed while driving” (Xavier University, 2021-22)
- Siemer, K “Factor analysis of a novel school climate survey instrument” (Xavier University, 2021-22)

	<p>Doctoral Committee Member:</p> <ul style="list-style-type: none"> • Peterson, R, University of Iowa, Department of Biostatistics (Spring 2019)
FUNDING	<ul style="list-style-type: none"> • 1N5 School Climate Instrument Validation (co-investigator with Dr. Victor Ronis-Tobin) - \$10,000 (2020-22)
HONORS AND RECOGNITIONS	<ul style="list-style-type: none"> • William R. Clarke Graduate Teaching award recipient, University of Iowa 2018 • Outstanding Teaching Assistant nominee, University of Iowa 2013-14 • Pi Mu Epsilon honor society inductee, Augustana College chapter 2010 • Four-year letterman, Cross Country, Track and Field, Augustana College 2007-2011
PROFESSIONAL SERVICE	<p>Referee for the following journals:</p> <ul style="list-style-type: none"> • Journal of Statistical Computation and Simulation (1) • Computational Statistics and Data Analysis (1) • Scientific Reports (1) <p>AP Statistics exam reader</p> <ul style="list-style-type: none"> • 2021
PROFESSIONAL DEVELOPMENT	<p>Participant in the following workshops/conferences:</p> <ul style="list-style-type: none"> • Data Science: Computation and Visualization (Grinnell Iowa, 2018) • Project NExT Brown Cohort (2020-2021)
REFERENCES	Available upon request

Last updated: August, 2022