

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	2022 to present
	Assistant Professor of Statistics (tenure track) Department of Mathematics Xavier University	2020 to 2022
	Visiting Assistant Professor of Statistics Department of Mathematics and Statistics Grinnell College	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. Role: Statistical analyses and data management on projects involving the Iowa Department of Transportation (IDOT) crash records database	2014 to 2017
	Consultant National Advanced Driving Simulator Organization University of Iowa Supervisor: Michelle Reyes, M.S. Role: Statistical support on projects involving teen driving research	2017 to 2018

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	<ul style="list-style-type: none"> • High-dimensional 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 education 	
PEER-REVIEWED PUBLICATIONS	1. Miller, R. and Breheny, P “Marginal false discovery rate control for likelihoodbased penalized regression models” <i>Biometrical Journal</i> . 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” <i>Traffic Injury Prevention</i> . 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” <i>Traffic Injury Prevention</i> . 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, Escorcias, W “Photo Phenosizer, a rapid machine learning-based method to measure cell dimensions in fission yeast” <i>microPublication</i>	

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)

Doctoral Committee Member:

- Peterson, R, University of Iowa, Department of Biostatistics (Spring 2019)

FUNDING

- 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, 2022
PROFESSIONAL DEVELOPMENT	<p>Participant in the following programs:</p> <ul style="list-style-type: none"> • Project NExT Brown Cohort (2020-2021)
REFERENCES	Available upon request

Last updated: August, 2022