

Emily A. Robinson

Ph.D. Statistics

✉ erobin17@calpoly.edu | 🏠 emilyarobinson.com | in erobinson95 | 🌐 earobinson95

Overview

3+ years of teaching experience with introductory statistics and HS geometry.
2.5+ years of statistical consulting experience working with more than 75 clients.
3 summers applying statistics for different industry functions.

Education

Degrees

Ph.D. in Statistics University of Nebraska - Lincoln <i>3.98 Cumulative GPA</i>	August 2019 – Expected August 2022 Lincoln, NE
M.S. in Statistics University of Nebraska - Lincoln <i>4.0 Cumulative GPA</i>	August 2017 – May 2019 Lincoln, NE
B.S. in Statistics & B.S. in Secondary Math Education Winona State University Honors: Summa Cum Laude, Mu Sigma Rho, Pi Mu Epsilon <i>3.98 Cumulative GPA</i>	August 2013 – May 2017 Winona, MN

Certifications

5-12 Mathematics Teaching License State of Minnesota – Department of Education File Folder Number: 500935	Issued May 2017 – Expires June 2023 Minnesota
--	--

Publications

Graphics

- [Under Review] **Robinson, E. A.**, Howard, R., & VanderPlas, S., (2022) 'You Draw It': Implementation of visually fitted trends with r2d3. Submitted to Special Issue of the *Journal of Data Science*.
- [Under Review] **Robinson, E. A.**, Hofmann, H., & VanderPlas, S. (2022) A Guide to Designing Experiments to Test Statistical Graphics. Submitted to *VIS 2022 TestVis IEEE Visualization & Graphics Technical Community*.
- [Under Review] **Robinson, E. A.**, Howard, R., & VanderPlas, S., (2022) Eye Fitting Straight Lines in the Modern Era. Submitted to *Journal of Computational and Graphical Statistics*. [Access on GitHub here](#).

Collaborations

4. Krueger, A. J., Rault, L. C., **Robinson, E. A.**, Weissling, T. J., Velez, A. M., & Anderson, T. (2022) Pyrethroid Insecticide and Milkweed Cardenolide Interactions On Detoxification Enzyme Activity and Expression in Monarch Caterpillars. *Pesticide Biochemistry and Physiology*. doi: 10.2139/ssrn.4120920
5. Kirkwood-Watts, D., Bremers, E. K., **Robinson, E. A.**, Brazeal, K. R., & Couch, B. A. (2022) Revisiting clickers: In-class questions followed by at-home reflections are associated with higher student performance on related exam questions. *Journal of Microbiology & Biology Education*. 10.1128/jmbe.00038-22

6. Reinders, J. D., Reinders, E. E., **Robinson, E. A.**, Moar, W. J., Price, P. A., Head, G. P., & Meinke, L. J. (2022) Characterizing the sublethal effects of SmartStax® PRO dietary exposure on life history traits of the western corn rootworm, *Diabrotica virgifera virgifera* LeConte. *PLOS ONE*. doi: [10.1371/journal.pone.0268902](https://doi.org/10.1371/journal.pone.0268902)
7. Carmona G. I., **Robinson, E. A.**, Rosa, A. T., Proctor C. A. & McMechan A. J. (2022) Cover crop planting and termination dates influence arthropod activity in the following corn. *Journal of Economic Entomology*. doi: [10.1093/jee/toac090](https://doi.org/10.1093/jee/toac090)
8. Carmona G. I., **Robinson, E. A.**, Campos J. N., & McMechan A. J. (2022) Impact of the timing and use of an insecticide on arthropods in cover crop-corn systems *Insects*. doi: [10.3390/insects13040348](https://doi.org/10.3390/insects13040348)
9. Reinders, J. D., Reinders, E. E., French, B. W., **Robinson, E. A.** & Meinke, L. J. (2021) Evidence of western corn rootworm resistance to Cry3Bb1 + Cry34/35Ab1 maize in Nebraska. *Journal of Economic Entomology*. doi: [10.1002/ps.6752](https://doi.org/10.1002/ps.6752)
10. Krueger, A. J., **Robinson, E. A.**, Weissling, T. J., Vélez, A. M., & Anderson, T. D. (2021) Chemical combinations reduce growth and survival of monarch butterflies. *Journal of Economic Entomology*. doi: [10.1093/jee/toab169](https://doi.org/10.1093/jee/toab169)
11. Reinders, J. D., Wangila, D. S., **Robinson, E. A.**, French, B. W., & Meinke, L. J. (2021) Characterizing the relationship between western corn rootworm (Coleoptera: Chrysomelidae) larval survival on Cry3Bb1-expressing corn and larval developmental factors. *Journal of Economic Entomology*. doi: [10.1093/jee/toab151](https://doi.org/10.1093/jee/toab151)
12. Ongaratto, S., Baldin, E. L., Hunt, T. E., Montezano, D. G., **Robinson, E. A.**, & Santos, M. C. (2021). Effects of intraguild interactions on *Anticarsia gemmatilis* and *Chrysodeixis includens* larval fitness and behavior in soybean. *Pest Management Science*. doi: [10.1002/ps.6330](https://doi.org/10.1002/ps.6330)

Presentations

Invited Talks

1. [Abstract Accepted] **Robinson, E. A.**, VanderPlas, S., Howard, R., (August, 2022). Eye Fitting Straight Lines in the Modern Era. *Joint Statistical Meetings*. Washington, DC.

Contributed Talks

2. **Robinson, E. A.** June, 2022). 'You Draw It': Implementation of visually fitted trends with r2d3. *Symposium on Data Science and Statistics*. Pittsburgh, PA. [Access slides here](#).
3. **Robinson, E. A.** (October, 2021). Human Perception of Statistical Charts: An Introduction to Graphical Testing Methods. *UNL Nerd Nite*. Lincoln, NE. [Access slides here](#).
4. **Robinson, E. A.**, VanderPlas, S., & Howard, R. (October, 2021). Pandemic Dilemmas: Human perception of exponentially increasing data displayed on a log scale evaluated through experimental graphics tasks. *Women in Statistics and Data Science*. Virtual. [Access slides here](#).
5. **Robinson, E. A.** (September, 2021). Eye Fitting Straight Lines in the Modern Era. *Midwest Women in Science Conference*. Hosted virtually by University of Chicago. [Access slides here](#).
6. **Robinson, E. A.**, VanderPlas, S., & Howard, R. (August, 2021). Pandemic Dilemmas: Human perception of exponentially increasing data displayed on a log scale evaluated through experimental graphics tasks. *Joint Statistical Meetings*. Virtual. [Access slides here](#).
7. **Robinson, E. A.**, VanderPlas, S., & Howard, R. (April, 2021). You Draw It with r2d3. *Iowa State Graphics Group*. Virtual. [Access slides here](#).
8. **Robinson, E. A.**, VanderPlas, S., & Howard, R. (February, 2021). Do logs work during a pandemic? Perception of exponentially increasing data. *Iowa State Graphics Group*. Virtual. [Access slides here](#).

Poster Presentations

9. **Robinson, E. A.** (April, 2022). Eye Fitting Straight Lines in the Modern Era. *UNL Research Days*. Lincoln, NE.

10. **Robinson, E. A.** (February, 2022). Friday Fun Days: Hands-on experience and peer mentoring in a master's level consulting course. *Conference on Statistical Practice*. Virtual.

Research Experience

Research	Ph.D. Thesis at University of Nebraska - Lincoln Co-Advisers: Susan VanderPlas and Reka Howard Dissertation Topic: <i>Human perception of exponentially increasing data displayed on a log scale evaluated through experimental graphics tasks.</i> Access thesis here.	Lincoln, NE May 2020 – Present
	Genomic Prediction Graduate Research Assistant Advisor: Reka Howard	Lincoln, NE Summer 2018

Consulting Experience

Consulting	Statistical Cross-disciplinary Consulting and Collaboration Lab (SC3L) University of Nebraska - Lincoln 75+ clients, 100+ projects, 9 publications Work one-on-one with clients to design experiments, conduct power analyses, summarize data, conduct statistical analyses, interpret results, and provide written research reports. Collaborate on graduate theses and manuscripts for peer reviewed journal publication. Mentor students on leading meetings, running analysis, and writing reports. Lead hands-on activities in introductory consulting class once a week.	Lincoln, NE January 2019 – Present
Mentoring	STAT 930: Advanced Statistical Consulting, SC3L Assistant STAT 825: Principles of Statistical Consulting, SC3L Assistant	S2020, S2021, S2022 F2019, F2020, F2021

Teaching Experience

UNL	Graduate Teaching, Instructor of Record Department of Statistics, University of Nebraska - Lincoln Average instructor rating: 3.75/4.	Lincoln, NE August 2017 - May 2019
	STAT 380: Statistics and Applications (3 credit hours) STAT 218: Introduction to Statistics (3 credit hours)	S2019 S2018, F2019
Other	R Workshops , <i>University of Nebraska, Lincoln</i> , In person synchronous Introduction to R, ggplot2, data management and cleaning, package development, literate programming, and Shiny.	January 2021
	Secondary Mathematics Student Teaching Experience <i>Rushford-Peterson High School</i> Classes taught: HS Geometry (3 Sections), College Algebra Prep (1 Section), and Alternative Mathematics (1 Section)	Rushford, MN Spring 2017
Tutoring	Sylvan Learning Center, Sioux Falls, SD Math Achievement Center, Winona State University	Summer 2017 January 2014 - May 2016

Industry Experience

Industry	Berkley Human Services Actuarial Internship	Minneapolis, MN Summer 2017
	John Deere Financial Credit Risk Internship	Johnston, IA Summer 2016

John Deere Headquarters
Statistics Internship

Moline, IL
Summer 2015

Skills

Technical Skills

Proficient in: R/RStudio, RShiny, RMarkdown, SAS, Latex, Git/GitHub.
Familiar with: Python, SQL, Databases, Tableau, MPlus, SPSS, JavaScript, D3.js.

Honors and Awards

Awards

Joint Statistical Meeting (JSM) Student Paper Award for Section on Graphics 2021

Scholarships

Chancellor's Fellowship, University of Nebraska - Lincoln 2017
Lorena W. Jacobson Scholarship, Winona State University 2014-2017

Competitions

MinneMUDAC, team won best serendipitous discovery. (MinneAnalytics) 2016
Midwest Undergrad Data Analytics Competition, team recieved 3rd place. (WSU) 2016
Midwest Undergrad Data Analytics Competition, participation. (WSU) 2015

Professional Development

Professional membership

American Statistical Association March 2015 – Present

Short Courses
and Workshops

**Skills for Statistical Writing: Tips & Tricks for Improving
Written Communication** Virtual
Conference on Statistical Practices (CSP) February 2022

Preparing to Teach Virtual
ASA Section on Statistics and Data Science Education August 2021

Evolution of Bayesian Software in SAS Virtual
Applied Statistics in Agriculture and Natural Resources May 2021

Navigating Tough Conversations in Statistical Collaboration Virtual
Conference on Statistical Practices (CSP) February 2021

Introduction to Business Data Analysis in Python Lincoln, NE
Holland Computing Center (HCC) January 2020

Teaching Data Science Denver, CO
Joint Statistical Meetings (JSM) July 2019

Service and Leadership

ISU Iowa State University Graphics Group Seminar Organizer January 2022 - May 2022

JSM Session Chair: Time Series Analysis and Visualization August 2021

CSP Session Chair: Health Care Applications February 2021

USPROC Judge: Undergraduate Statistics Project Competition July 2021

NCUWM Table Host: Undergraduate Women in Mathematics Networking Dinner February 2020

UNL Statistics Graduate Student Association, President July 2019 – June 2021

ASUN Graduate Student Assembly, Statistics Representative August 2019 - May 2020

Professional Development Committee August 2019 - May 2020

IANR/CASNR Graduate Student Committee, Statistics Representative August 2018 - May 2019

WSU

Math/Stat Club, President

January 2014 - December 2016

Community

Southwood Lutheran Church Global Missions, La Cabeita, Honduras

March 2022

Service

Serve in the Community, Southwood Lutheran Church

January 2020 - Present

Youth Fellowship Leader, Southwood Lutheran Church

May 2018 - Present

Amigos for Christ, Chinandega, Nicaragua

May 2019

Kids First, Winona, MN

January 2016 - December 2017

Jamaica Travel Study, Winona State University

March 2016