

Charlotte Zilber Mann

Curriculum Vitae

June 2025

Building 25, California Polytechnic State University, San Luis Obispo, CA 93401

✉ czmann@calpoly.edu <https://manncz.github.io/>  [manncz](#)

Educational Preparation

- 2024 Ph.D., Statistics. University of Michigan, Ann Arbor, MI, USA
Dissertation: Topics in Causal Inference Addressing Practical Data Challenges
Supervised by Johann Gagnon-Bartsch
- 2021 M.A., Statistics. University of Michigan, Ann Arbor, MI, USA
- 2017 B.A., Mathematics with a Statistics Track. Carleton College, Northfield, MN, USA
summa cum laude; honors in math education Integrated Comprehensive Exercises, “[Bar Modeling: Adventures in Algebra](#),” with Margaret Crenshaw, Alli Domingues, and Zoe Peterson

Employment

- 2024 - **Assistant Professor of Statistics**, California Polytechnic State University, San Luis
present Obispo, CA, USA

Teaching Related Activities

Courses Taught

CAL POLY

1. *STAT 331: Statistical Computing in R* Winter 2024 & Spring 2025
2. *STAT 217: Introduction to Statistical Concepts and Methods* Fall 2024

UNIVERSITY OF MICHIGAN

1. *STATS 604: Statistical Practice* Fall 2022
Instructor: Johann Gagnon-Bartsch
 - Graduate-level course required for all Ph.D. students to learn the process of statistical investigation, including creating reproducible workflows.
 - Developed and taught weekly discussion section, created homework and exam solutions, held office hours, graded homework and exams, and evaluated final project.
2. *STATS 480: Survey Sampling* Winter 2020
Instructor: Walter Mebane

- Upper-level undergraduate introductory course to survey sampling including survey design and estimation based on different designs.
- Designed and taught weekly lab, held office hours, and graded homework and exams.

3. *STATS 250: Introduction to Statistics and Data Analysis*

Fall 2019

Instructor: Brenda Gunderson

- Large cross-disciplinary introductory statistics course.
- Taught one weekly lab section, held office hours, and graded homework and exams.

Undergraduate Research

UNIVERSITY OF MICHIGAN

1. Big Data Summer Institute, University of Michigan Summer 2022
 - Interdisciplinary, 6-week Summer Institute in Biostatistics (SIBs) program to introduce undergraduate students to research in public health using big data.
 - Mentored students to complete research projects using publicly available data to investigate health claims made by major news sources, including changes in flu vaccination rates and STI prevalence during the COVID pandemic.
2. Wei Xu, University of Michigan Jan 2022 - Apr 2023
 - Undergraduate Research Program in Statistics (URPS) project with Siyu Yang evaluating the statistical characteristics of estimators for paired cluster-randomized trials through simulation.
 - Independent project proving theoretical properties of estimators incorporating negative controls.
3. Jiaying Wang, University of Michigan May 2022 - Apr 2023
 - Project fitting and evaluating machine learning models on large educational data culminating in a report and github repository.
 - Part of research group supported by Institute of Education Sciences grant R305D2100, co-PIs Johann Gagnon-Bartsch and Adam Sales.
4. Siyu Yang, University of Michigan Jan 2022 - Aug 2022
 - URPS project with Wei Xu evaluating the statistical characteristics of estimators for paired cluster-randomized trials through simulation.
5. Zhanning Zhu, University of Michigan Jan 2021 - May 2021
 - URPS project with Allister Ho evaluating power and level of hypothesis tests for small experiments through simulation studies.
6. Allister Ho, University of Michigan Jan 2021 - May 2021
 - URPS project with Zhanning Zhu evaluating power and level of hypothesis tests for small experiments through simulation studies.

Special Contributions to the Curriculum

UNIVERSITY OF MICHIGAN

1. U-M Graduate Teacher Certificate, University of Michigan May 2024
 - Developed a seminar curriculum on non-traditional grading with Dr. Vilma Mesa.
2. Graduate Student Mentor, all statistics courses (excluding STATS 250) AY 2021-2
 - Supported Graduate Student Instructors to improve pedagogy.
 - Designed and led teaching orientation, conducted classroom observations of lab instruction, and shared bi-weekly teaching resource newsletter.
3. Instructor, Statistics Summer Study Group Spring/Summer 2021 - 2022
 - Awarded and supported by Student Ally for Diversity Grant from Rackham Graduate School.
 - Developed a curriculum for incoming PhD and Bridge Master's students to the statistics department to improve readiness for first year classes for those with diverse mathematical backgrounds.
 - Collaborated with co-grantee, Dr. Zoe Rehnberg, and ad-hoc department committee on math preparation.
 - Facilitated weekly problem-solving sessions to review linear algebra and calculus concepts in preparation for first year graduate statistics courses.
4. Departmental Tutor, STATS 510, 511, 500, & 503 AY 2021-2
 - Provided studying and homework support for graduate-level probability, statistical inference, and linear modeling courses.
 - Part of departmental initiative to offer tutoring for RMF and RMA eligible graduate students in continuation of the Statistics Summer Study Group.

Teaching Awards

UNIVERSITY OF MICHIGAN

1. Outstanding GSI Award. Department of Statistics, University of Michigan, 2023.
2. Nominated by the Department of Statistics for the Rackham Outstanding Graduate Student Instructor Award. University of Michigan, 2023.

Scholarship

Publications

1. **Mann, C. Z.**, Hansen, B. B., and Gaydosch, L. (2024) "Early effects of 2014 U.S. Medicaid expansions on mortality: Design-based inference for impacts on small subgroups despite small-cell suppression." *Annals of Applied Statistics*, 18(4), 2887-2908. doi:10.1214/24-AOAS1910.
 - Work completed entirely at University of Michigan.
 - Peer-reviewed journal.
 - Collaboration with Ben B. Hansen (Associate Professor, University of Michigan, Statistics) and Lauren Gaydosch (Associate Professor, University of North Carolina at Chapel Hill Sociology). As first author, I completed all analyses, wrote the first drafts of the paper, and was responsible for submission and revisions.

2. **Mann, C. Z.**, Sales, A., and Gagnon-Bartsch, J. A. (2024) “Using Publicly Available Auxiliary Data to Improve Precision of Treatment Effect Estimation in a Randomized Efficacy Trial.” *Proceedings of the 17th International Conference on Educational Data Mining, International Educational Data Mining Society*, 518-525. doi:10.5281/zenodo.12729874.
 - Work completed entirely at University of Michigan.
 - Peer-reviewed short conference paper.
 - Collaboration with Johann A. Gagnon-Bartsch (Associate Professor, University of Michigan, Statistics) and Adam C. Sales (Assistant Professor, Worcester Polytechnic Institute, Statistics). As first author, I completed all analyses, wrote the first drafts of the paper, and was responsible for submission and revisions.
3. **Mann, C. Z.**, Abshire, C., Yost, M., Kaatz, S., Swaminathan, L., Flanders, S. A., Prescott, H. C., and Gagnon-Bartsch, J. A. (2021) “Derivation and external validation of a simple risk score to predict in-hospital mortality in patients hospitalized for COVID-19.” *Medicine*, 100(40), e27422. doi:10.1097/MD.00000000000027422.
 - Work completed entirely at University of Michigan.
 - Peer-reviewed open-access journal.
 - Collaboration with Johann A. Gagnon-Bartsch (Associate Professor, University of Michigan, Statistics) and physicians and analysts in various Michigan hospitals. As first author, I completed all analyses, wrote the first drafts of the paper, and was responsible for submission and revisions.
4. **Mann, C. Z.**, Hansen, B. B., Gaydosch, L., and Lycurgus, T. (2021). “Protocol — Evaluating the effect of ACA Medicaid expansion on mortality during the COVID-19 pandemic using county level matching.” *Observational Studies*, 7(2), S1-S31. doi:10.1353/obs.2021.0034.
 - Work completed entirely at University of Michigan.
 - Peer-reviewed journal.
 - Collaboration with Ben B. Hansen (Associate Professor, University of Michigan, Statistics) and Lauren Gaydosch (Associate Professor, University of North Carolina at Chapel Hill Sociology), and Timothy Lycurgus (PhD Candidate, University of Michigan, Statistics, at the time of publication). As first author, I completed all analyses, wrote the first drafts of the paper, and was responsible for submission and revisions.
5. Lycurgus, T., Hansen, B. B., and **Mann, C. Z.** (2021). “Protocol: Evaluating the effect of ACA Medicaid expansion on 2015-2018 mortality through matching and weighting.” *Observational Studies*, 7(2), 1-13. doi:10.1353/obs.2021.0033.
 - Work completed entirely at University of Michigan.
 - Peer-reviewed journal.
 - Collaboration with Timothy Lycurgus (PhD Candidate, University of Michigan, Statistics, at the time of publication), Ben B. Hansen (Associate Professor, University of Michigan, Statistics) and Lauren Gaydosch (Associate Professor, University of North Carolina at Chapel Hill Sociology). T. Lycurgus built off of analyses I completed and advised on these analyses.

Manuscripts

Submitted

1. **Mann, C. Z.**, Sales, A., and Gagnon-Bartsch, J. A. “Combining observational and experimental data for causal inference considering data privacy.” *Under Review. Submitted to the Journal of Causal Inference* 12/15/22. First revision submitted 7/16/24. <https://arxiv.org/abs/2308.02974>.
 - Work thus far completed entirely at University of Michigan.
 - Peer-reviewed journal.
 - Collaboration with Johann A. Gagnon-Bartsch (Associate Professor, University of Michigan, Statistics) and Adam C. Sales (Assistant Professor, Worcester Polytechnic Institute, Statistics). As first author, I completed all analyses, wrote the first drafts of the paper, and am responsible for submission and revisions.

In-Preparation

1. **Mann, C. Z.**, Sales, A., and Gagnon-Bartsch, J. A. “A general framework for design-based treatment effect estimation in paired cluster-randomized experiments.” <https://arxiv.org/abs/2407.01765>.
 - Majority of work completed at University of Michigan as a chapter of my dissertation. Submission in progress during my first year at Cal Poly.

Presentations

2024	Workshop. Educational Data Mining. Atlanta, GA, USA. <i>Tools for planning and analyzing randomized controlled trials and A/B tests</i> , with Adam Sales, Johann Gagnon-Bartsch, Duy Pham, and Jaylin Lowe. https://sites.google.com/g.ucla.edu/edm2024tutorial/home . Attendance: 20.
2024	Refereed Short Paper Presentation. Educational Data Mining. Atlanta, GA, USA.
2024	Contributed Poster. American Causal Inference Conference. Seattle, WA, USA.
2023	Contributed Poster. Joint Statistical Meetings. Toronto, ON, CA.
2023	Contributed Short Presentation. Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI, USA.
2022	Contributed Poster. Women in Statistics and Data Science Conference. St. Louis, MO, USA.
2022	Contributed Presentation. Causal Inference & EDM Workshop, International Conference on Artificial Intelligence in Education. Virtual.
2021	Contributed Poster and Presentation. Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI, USA. Won Excellent Poster Award.
2015	Contributed Poster. Joint Statistical Meetings. Seattle, WA, USA.

Advising

1. Lana Huynh, Master’s Thesis. Cal Poly.

24/25

Service

Departmental Service

UNIVERSITY OF MICHIGAN

1. Co-founder and Steering Committee Member, Graduate Student Justice, Equity, Diversity, and Inclusion Working Group (GS-JEDI). Department of Statistics, University of Michigan. Summer 2020 - Fall 2023.
2. Member of the PhD Student Council. Department of Statistics, University of Michigan. Fall 2019 - Fall 2023.
3. PhD Student Mentor. Department of Statistics, University of Michigan.
 - Sahana Ryan Fall 2022 - Summer 2024
 - Angelica Estrada Fall 2021 - Fall 2022
4. Student Representative, Faculty Diversity, Equity, and Inclusion Committee. Department of Statistics, University of Michigan. Fall 2020 - Winter 2022.
5. Chair of the PhD Student Council Recruiting Committee. Department of Statistics, University of Michigan. Fall 2020 - Winter 2022.

Professional Service

Journals Refereed

2025	<i>Observational Studies</i>
2022	<i>Journal of Racial and Ethnic Health Disparities</i>
2022	<i>Journal of Data Science</i>
2020	<i>The American Statistician</i>

Professional Memberships

1. American Statistical Association, 2016 - present.
2. Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group of the ASA, 2021-2022.

Service Awards

1. Ph.D. Student Service Award. Department of Statistics, University of Michigan, 2021.