Elizabeth (Betsy) Bersson

https://betsybersson.github.io/

elizabeth.bersson@duke.edu
678-848-7675

Employment

- **Duke University** — Durham, NC
  Graduate Research Assistant — *August 2019 – present*
- **NIEHS/NIH; Biostatistics and Computational Biology Branch** — Durham, NC
  Graduate Summer Intern — *June 2023 – July 2023*
- **The Federal Reserve Board; Macroeconomics and Quantitative Studies** — Washington, DC
  Senior Research Assistant — *June 2017 - June 2019*

Education

- **Duke University** — Durham, NC
  Statistical Science, PhD candidate — *Aug. 2019 – May 2024 (anticipated)*
- **The University of Alabama** — Tuscaloosa, AL
  Applied Statistics, MS — *Jan. 2016 – May 2017*
  Mathematics, BS with honors, minor in Economics — *Aug. 2013 – May 2017*

Publications and Preprints

- *'Bayesian Covariance Estimation for Multi-group Matrix-variate Data'*, **E. Bersson** and P.D. Hoff, *submitted*, 2023.
- *'Optimal Conformal Prediction for Small Areas'*, **E. Bersson** and P.D. Hoff, *submitted*, 2023. **2023 GSS/SRMS/SSS Student Paper Competition Winner**
- *'Bounded Rationality, Sticky Prices, and the Zero Lower Bound'*, **E. Bersson**, P. Hürtgen, and M. Paustian, *Journal of Money, Credit, and Banking*, 2023.

Working Papers

- *'Bayes-Optimal Prediction Sets for Categorical Data'*, **E. Bersson** and P.D. Hoff, *in preparation.*
- *'Comparison of frequentist and Bayesian penalization methods for environmental mixture analyses'*, **E. Bersson**, M. Lee, R. Lu, Z. Chen, S. Zhao, *in preparation.*

Technical Skills

- **Languages**: Fortran, JAGS, Julia, Mathematica, Matlab, R, SAS, SQL
- **Technologies**: Git, Latex, Linux, OpenMP, slurm

Professional and Mentorship Experience

- **Project Manager** — Duke University
  Mental Health and the Justice System; Data+ — *Summer 2022*
  - Mentored a team of 3 undergraduates on a research project exploring the relationship between mental health services and the justice system in Durham County, NC.
- **Graduate Mentor** — Duke University
  INvestigating Febrile Deaths In Tanzania (INDITe) — *Spring 2022*
  - Estimated disease etiology for participants who experienced febrile deaths in Tanzania using a nested partially latent class model.
  - Worked with an undergraduate statistician completing an independent study.
- **Graduate Mentor** — Duke University
  Undergraduate Introduction to Research in Statistical Science Workshop — *May 2021*

- ○ Mentored a team of team of five undergraduates with varying degrees of research experience on a research project assessing the effectiveness of two common drugs used to prevent opioid relapse.
- ○ The project won 1st place in the USCLAP competition.

Teaching Experience

- **Teaching Assistant**
  Stat Inference, Regression Analysis (Head TA), Case Studies, Statistical Consulting   *Duke University*
  Discrete Mathematics, Applied Diff Eq II   *The University of Alabama*

- **Tutor**
  Math Lab Tutor- all levels   *The University of Alabama*

Talks and Posters

- *'Optimal Conformal Prediction for Small Areas'*, contributed talk with travel grant at the Joint Statistical Meetings 2023

- *'Optimal Conformal Prediction for Small Areas'*, invited poster with travel grant at Notre Dame Future Faculty Workshop 2023

- *'Optimal Conformal Prediction for Small Areas'*, contributed poster at ISBA 2022

- *'Supporting mentored undergraduate research in statistics '* with Joan Combs-Durso, Yue Jiang, and Edric Tam, contributed talk at ECOTS 2022

Academic Service

- Co-organizer of Women in Statistics, Department of Statistical Science, Duke University, 2022-present

- Served on Graduate Consultative Committee, Department of Statistical Science, Duke University, 2022-2023

Honors and Awards

- Duke University Dean's Conference Travel Award, 2023

- Funded invitation to the Preparing to Teach Statistics Workshop at University of Toronto Scarborough, 2023

- Funded invitation to the Notre Dame Future Faculty Workshop, 2023

- ASA GSS/SRMS/SSS Student Paper Competition Award Winner with JSM travel award, 2023

- ISBA junior researcher travel award, 2022

- Funded by NSF TRIPODs grant, Fall 2021

- Applied Statistics Masters Student of the Year, 2017