

# JESSE WHEELER

Department of Statistics  
University of Michigan  
Ann Arbor MI 48109-1107

Email: [jeswheel@umich.edu](mailto:jeswheel@umich.edu)

## Education

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### PhD in Statistics

2020-Present

University of Michigan, Ann Arbor, MI.

Thesis Advisor: Edward Ionides

### B.S. in Mathematics, Statistics, Minor in Computer Science

2016-2020

Utah State University (USU), Logan, UT.

Graduated Summa cum laude as valedictorian of the College of Science, class of 2020

## Research

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### Interests

Time Series Analysis via Mechanistic Models

Computational Statistics

Reproducible and Robust Statistics

Applications in infectious disease modeling.

### Peer Reviewed Publications

Wheeler, J., Rosengart, A., Jiang, Z., Tan, K., Truetle, N., Ionides, E. (2023) Informing policy via dynamic models: Cholera in Haiti. *Annals of applied statistics*. <https://arxiv.org/abs/2301.08979> **Submitted**.

Wagstaff, J., Bean, B., Wheeler, J., Maguire, M., Sun, Y. (2023) Adaptive Mapping of Design Ground Snow Loads in the Conterminous United States. *Journal of Structural Engineering*, **Submitted**.

Ionides, E. L., Ning, N. and Wheeler, J. (2022). An iterated block particle filter for inference on coupled dynamic systems with shared and unit-specific parameters. *Statistica Sinica*, **accepted**.

Wheeler, J., Bean, B., Maguire, M. (2022). Creating a Universal Depth-to-Load Conversion Technique for the Conterminous United States Using Random Forests. *Journal of Cold Regions Engineering*, *36*(1), 04021019. doi:10.1061/(ASCE)CR.1943-5495.0000270

Bean, B., Maguire, M., Sun, Y., Wagstaff, J., Al-Rubaye, S., Wheeler, J., Jarman, S., Rogers, M. (2021). The 2020 National Snow Load Study. *Utah State University*.

White, T., Wheeler, J., Lindstrom, C., Christensen, R., Moon, K. (2021). GPS-Denied Navigation Using SAR Images and Neural Networks. *ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. Toronto, ON, Canada, 2021, pp. 2395-2399, doi:10.1109/ICASSP39728.2021.9414421.

## Conference Presentations

Wheeler, J., Rosengart, A., Jiang, Z., Tan, K., Treutle, N., Ionides., E. (2023). Informing Policy Via Dynamic Models: Cholera in Haiti. Contributed Paper. *Bayes Comp 2023, Satellite Event: Bayesian Inference of Epidemics, Levi, Finland*. **Upcoming, March 2023.**

Wheeler, J., Rosengart, A., Jiang, J., Ionides, E. (2022). Eliminating Cholera in Haiti: Combining Dynamic Models with Data to Inform Vaccination Policy. Contributed Paper. *JSM 2020, Washington D.C.*

Wheeler, J., Bean, B. (2020). Estimating Snow Water Equivalence Using Easily Obtainable Climate Variables. USU Student Research Symposium.

Wheeler, J., Lindstrom, C., Christensen, R., Moon, K. (2020). Poster: GPS-Denied Navigation Using SAR Images and Neural Networks. *Utah Conference on Undergraduate Research, Logan, UT*.

Christensen, D., Villanueva, I., Wheeler, J., Vicioso, P., Husman, J., Lampkins, S., Youmans, K. (2019). Exploring Potential Relationships Between Self-Efficacy, Performance, and Electrodermal Activity in Engineering Exams. *American Educational Research Association*. April 5-9. Toronto, Canada.

## Awards

**Honorable Mention NSF GRFP** 2022

**Rackham Merit Fellowship**, University of Michigan 2020-2025

**URCO Grant**, USU 2020  
Award amount: \$1000

## Other

## Teaching

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**University of Michigan** 2022-2023

Stats 306, *Lab Instructor* (Introduction to Statistical Computing)

Tutor for masters level courses in probability and regression

**SISMID (2022).** Instructor for a short course on *Simulation based inference for Epidemiological Dynamics* at the Summer Institute in Statistics Modeling in Infectious Diseases (SISMID). University of Washington.

**Utah State University**

*2017-2020*

Math 0995, *Recitation Leader* (Remedial Algebra)

Math 1210, *Recitation Leader* (Introductory Calculus)

Math 1220 *Recitation Leader* (Calculus II, sequences and series)

Stats 1040, *Recitation Leader*, (Introductory Statistics, non-Calculus based)

**Mentoring**

Undergraduate projects and thesis: Kevin Tan (2022), Noah Treutle (2022) and Bo Yang (Present).

**Awards**

**Outstanding Undergraduate Recitation Leader**

*2019*

*USU Mathematics and Statistics Department*

**Service**

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**Computing Club Committee Member, UM Statistics Department** *2022-Present*

**Peer Review:** PLoS computation biology

*2021*

**President, USU Data Science Club**

*2019-2020*