Elliot Shannon

Curriculum Vitae

Department of Forestry
Department of Statistics and Probability
Michigan State University
East Lansing, Michigan 48824
360-608-3645
✉ *shann125@msu.edu*
elliotshannon.github.io

Education

2021 – 2026 **Dual PhD, Forestry and Statistics & Probability**, Michigan State University

2017 – 2020 **BS, Biology**, George Fox University

PhD Thesis

Title *Bayesian spatio-temporal models for national forest inventory monitoring.*

Advisor Dr. Andrew O. Finley

Research Interests

Spatio-temporal statistics, Multivariate statistics, Bayesian statistics, Small Area Estimation, Forest Inventory, Carbon Monitoring

Publications

8. **Elliot S. Shannon**, Andrew O. Finley, Paul B. May, and Jane Foster. 2025. Balancing land use tradeoffs for energy development and forest resource availability using remote sensing in the Northeast United States. *In prep.*

7. **Elliot S. Shannon**, Andrew O. Finley, Paul B. May, and Sudipto Banerjee. 2025. A multivariate spatio-temporal model for forest carbon pools across the contiguous US. *In prep.*

6. **Elliot S. Shannon**, Andrew O. Finley, Paul B. May, and Sudipto Banerjee. 2025. Investigating spatio-temporal models for forest inventory data under increasing information. *In prep.*

5. Naresh Khanal, Raju Pokharel, **Elliot S. Shannon**, Jagdish Poudel and Emily Silver. 2025. Historical trend of market coverage and competition of various wood products in Michigan. *To be submitted to Forestry.*

4. **Elliot S. Shannon**, Andrew O. Finley, Paul B. May, Grant M. Domke, Hans-Erik Andersen, George C. Gaines III, Arne Nothdurft and Sudipto Banerjee. 2025. Leveraging national forest inventory data to estimate forest carbon density status and trends for small areas. *Submitted to Forest Ecology and Managmenet*. ArXiv: https://arxiv.org/abs/2503.08653.

3. **Elliot S. Shannon**, Andrew O. Finley, Grant M. Domke, Paul B. May, Hans-Erik Andersen, George C. Gaines III and Sudipto Banerjee. 2025. Toward spatio-temporal models to support national-scale forest carbon monitoring and reporting. *Environmental Research Letters*. DOI: https://doi.org/10.1088/1748-9326/ad9e07.

2. Naresh Khanal, Raju Pokharel, Jagdish Poudel, Shivan Gc, **Elliot S. Shannon** and Andrew O. Finley. 2024. Analysis of location, feedstock availability, and economic impacts of potential mass timber processing facilities in Michigan. *Forest Policy and Economics*. DOI: https://doi.org/10.1016/j.forpol.2024.103203.

1. **Elliot S. Shannon**, Andrew O. Finley, Daniel J. Hayes, Sylvia N. Noralez, Aaron R. Weiskittel, Bruce D. Cook and Chad Babcock. 2024. Quantifying and correcting geolocation error in spaceborne LiDAR forest canopy observations using high spatial accuracy data: A Bayesian model approach. *Environmentrics*. DOI: https://doi.org/10.1002/env.2840.

Teaching Experience

Teaching Assistant at Michigan State University

2024 - 2025 FOR 372: **Ecological Monitoring and Data Analysis**
Spring 2024, Spring 2025

2023 - 2024 FOR 128: **Practical Computing and Data Science Tools**
Fall 2023, Fall 2024

Fall 2023 STT 802: **Design of Experiments**

2022 - 2023 FOR/STT 875 **R Programming for Data Sciences**
Summer 2022, Summer 2023

Undergraduate Teaching Assistant at George Fox University

Fall 2020 BIOL 390: **Plant Biology**

Instructor at George Fox University Science Outreach Program

Fall 2018 **Forest Ecology**

Presentations

Feb 2025	**MSU Statistics and Probability Graduate Student Seminar**, East Lansing, MI
Jan 2025	**MSU Forestry Graduate Student Symposium**, East Lansing, MI
Aug 2024	**Joint Statistical Meetings**, Portland, OR
Apr 2024	**FIA User Group Meeting**, Tucson, AZ
Aug 2023	**Joint Statistical Meetings**, Toronto, Canada

Professional Memberships

American Statistical Association

American Geophysical Union

International Society for Bayesian Analysis

Institute of Mathematical Statistics

The International Biometric Society

Updated March 19, 2025