

# Laura Wendelberger

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## EDUCATION

PhD, Statistics, North Carolina State University, 2022  
MS, Statistics, North Carolina State University, 2019  
BS, Mathematics, University of Notre Dame, 2017  
BS, Mechanical Engineering, University of Notre Dame, 2017

## POSITIONS

### Lawrence Livermore National Laboratory

Postdoctoral Researcher, 2022-present

### North Carolina State University

Graduate Research Assistant, Department of Forestry, 2021-2022  
Graduate Research Fellow, SEAS NRT, 018-2020  
Graduate Research Assistant, Department of Statistics, 2017-2018,2020

### Los Alamos National Laboratory

Graduate Research Assistant, 2017

### National Security Technologies

Associate Engineer, 2014-2017 (seasonally)

## AWARDS

NCSU Center for Geospatial Analytics Interdisciplinary Advancement Award, 2022  
NCSU Center for Geospatial Analytics Collaboration and Innovation Award, 2022  
JSM SPES/Q&P student paper competition, 2021  
SEAS NRT Fellowship, 2018  
J. Robert Oppenheimer Scholarship in memory of Mary and Harold Argo, Spring 2013

## PUBLICATIONS

### Peer Reviewed Publications

Singh SP, Paterson AR, **Wendelberger LJ**, Fancher CM, Reich BJ, Smith RC, Wilson AG, and Jones JL. "Algorithms in Diffraction Profile Analysis." Handbook on Big Data and Machine Learning in the Physical Sciences. World Scientific Publishers. May 2020, 501-539.

Lindsay AE, Quaife B. and **Wendelberger LJ**. "A boundary element method for computing the vibrational modes of elastic plates with localized punctures." Advances in Computational Mathematics, 2018.

### Working Papers

**Wendelberger LJ**, Gray JM, Wilson AG, Houborg, R, and Reich BJ, "Multiresolution Broad Area Search: Monitoring Spatial Characteristics of Gapless Remote Sensing Data." Submitted, 2022.

**Wendelberger LJ**, Gray JM, Reich BJ, and Wilson AG, "Monitoring Deforestation Using Multivariate Bayesian Online Changepoint Detection with Outliers." Submitted, arXiv:2112.12899 [stat.ME], 2021.

**Wendelberger LJ**, Reich BJ, and Wilson AG. "Multi-Model Penalized Regression." In preparation, arXiv:2006.09157 [stat.ME], 2021.

**CONFERENCE  
PRESENTATIONS**

**Wendelberger LJ (Presenter)**, Gray JM, Reich BJ, Wilson AG, “Monitoring Change with Heterogeneous Satellites.” Fall Meeting of the American Geophysical Union, New Orleans, Louisiana, December 2021. (poster)

**Wendelberger LJ (Presenter)**, Reich BJ, and Wilson AG, “Multi-Model Penalized Regression.” Joint Statistical Meetings, virtual, August 8-12, 2021. (presentation)

**Wendelberger LJ (Presenter)**, Reich BJ, Wilson AG, “Multi-Model Penalized Regression for Feature Selection.” Conference on Data Analysis (CoDA), Santa Fe, New Mexico, February 2020. (poster)

**Wendelberger LJ (Presenter)**, Singh SP, Wilson AG, and Reich BJ, “A Bayesian Algorithm for Diffraction Profile Fusion.” National Nuclear Security Administration’s Office of Defense Nuclear Nonproliferation Research and Development University Program Review (DNN R&D UPR), Ann Arbor, Michigan, May 2018. (poster)

Singh SP (Presenter), Paterson AR, **Wendelberger LJ (Presenter)**, Fancher CM, Reich BJ, Smith RC, Wilson AG, and Jones JL. “Bayesian algorithms in diffraction profile analysis.” CNEC Annual Workshop and Advisory Board Meeting, Raleigh, North Carolina, Feb 2018. (presentation)

**MENTORSHIP**

Independent Research Mentor to Kavin Sankar, 11th Grade at Enloe High School, Raleigh, NC, 2021-present

**PROFESSIONAL  
SERVICE**

**Invited Talk**

*Accenture Federal Services* Computer Vision: COI Seminar Series, June 2022.

**Corresponding Secretary** Tau Beta Pi Engineering Honor Society  
University of Notre Dame, 2016-2017

**Member of**

American Statistical Association, 2017-present

American Geophysical Union, 2021-present

Tau Beta Pi Engineering Honor Society, 2015-present

Pi Tau Sigma Mechanical Engineering Honor Society, 2016-present