

# Jeffrey Doser

<http://jeffdoser.com/>

(585) 683-4170 • doserjef@msu.edu

## Education

- Michigan State University, Ph.D. in Forestry and Ecology, Evolution, and Behavior, Expected May 2022
- Michigan State University, M.S. in Applied Statistics, Expected December 2022
- State University of New York at Geneseo, B.S. Mathematics and Biology, Summa Cum Laude, 2014-2018

## Research Experience

- Research Assistant, Michigan State University, Summer 2018-present
  - Adviser: Dr. Andrew Finley
  - Dissertation Topic: Forest bird monitoring using acoustic recordings, community science, and hierarchical models.
- Undergraduate Researcher
  - Lab of Dr. Kristina Hannam, Department of Biology, SUNY Geneseo, 2015-2018
    - Analysis of spatial and temporal variation of western New York soundscapes
  - Lab of Dr. David Meisel, Department of Physics and Astronomy, SUNY Geneseo, 2016-2018
    - Development of an automated bird song recognition system using wavelets, simple machine learning techniques, and a Raspberry Pi

## Teaching Experience

- Teaching Assistant, Michigan State University, Summer 2018-present
  - Course: R Programming for Data Sciences
    - Co-authored course textbook ([https://www.jeffdoser.com/files/for875/\\_book/index.html](https://www.jeffdoser.com/files/for875/_book/index.html))
    - Graduate Level
  - Course: Ecological Monitoring and Data Analysis
    - Undergraduate Level
- Undergraduate Lab Assistant, Introductory Biology Lab, Fall 2016

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## Publications

- **Doser, J.W.**, Finley, A.O., Weed, A.S., Zipkin, E.F. (2021) Integrating automated acoustic vocalization data and point count surveys for estimation of bird abundance. *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.13578>
- **Doser, J.W.**, Weed, A.S., Zipkin, E.F., Miller, K.M., Finley, A.O. (2021) Trends in bird abundance differ among protected forests but not bird guilds. In press. *Ecological Applications*.
- **Doser, J.W.**, Finley, A.O., Kasten, E. P., Gage, S. H. (2020) Assessing soundscape disturbance through hierarchical models and acoustic indices: A case study on a shelterwood logged northern Michigan forest. *Ecological Indicators* (2020). <https://doi.org/10.1016/j.ecolind.2020.106244>
- **Doser, J. W.**, Hannam, K. M, Finley, A. O. (2020) Characterizing functional relationships between anthropogenic and biological sounds: A western New York state soundscape case study. *Landscape Ecol* (2020). <https://doi.org/10.1007/s10980-020-00973-2>
- Teimouri, M., **Doser, J. W.**, Finley, A. O. (2020) ForestFit: An R package for modeling tree diameter distributions. *Environmental Modelling & Software* (2020). <https://doi.org/10.1016/j.envsoft.2020.104668>

## Presentations

- Doser, J.W. February 2021. Forest bird monitoring using acoustic recordings and hierarchical models. Hanover Seminar Series. Department of Forestry. Michigan State University.
- Doser, J.W., Finley, A.O., Kasten, E. P., Gage, S. H. April 2020. Assessing soundscape disturbance through hierarchical models and acoustic indices: A case study on a shelterwood logged northern Michigan forest. Oral Presentation. Conference on Applied Statistics in Agriculture and Natural Resources. Gainesville, FL (Conference canceled).
- Doser, J.W., Finley, A.O., Kasten, E. P., Gage, S. H. June 2020. Assessing soundscape disturbance through hierarchical models and acoustic indices: A case study on a shelterwood logged northern Michigan forest. Oral Presentation. International Ecoacoustics Congress. Urbino, Italy. (Conference canceled).
- Doser, J.W., Finley, A.O., Kasten, E. P., Gage, S. H. February 2020. Assessing soundscape disturbance through hierarchical models and acoustic indices: A case study on a shelterwood logged northern Michigan forest. Oral Presentation. Michigan State University Department of Forestry Graduate Symposium. East Lansing, MI.

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- Doser, J., Hannam, K., Finley, A. September 2019. Using hierarchical Bayesian models to analyze acoustic data. Oral presentation, XXVII International Bioacoustics Congress, Brighton, England.
- Doser, J., Hannam, K., Finley, A. May 2019. Characterizing functional relationships between biophony and technophony: a western New York soundscape case study. Oral presentation, Northeast Regional Environmental Acoustics Symposium. Providence, RI.
- Doser, J., Meisel, D. April 2018. Developing an automated bird song recognition system using wavelets and simple machine learning techniques. Oral presentation, Geneseo Recognizing Excellence, Achievement and Talent Day, Geneseo, NY.
- Doser, J., Hannam, K. October 2017. Using soundscape maps to assess a local soundscape. Poster presentation, Middle States Division American Association of Geographers Annual Meeting, Geneseo, NY.
- Doser, J., Hannam, K. October 2017. Analysis of seasonal temporal variation of soundscapes in western New York. Oral presentation, Northeast Regional Undergraduate Research, Scholarly and Creative Activity Conference for the Council of Public Liberal Arts Colleges, Mansfield, PA.
- Doser, J., Hannam, K. June 2017. Analysis of western New York forest soundscapes across spatial and temporal gradients. Twitter presentation, Biotweeps Twitter Conference.
- Doser, J., Meisel, D. April 2017. Quest for signs of life in the midst of chaos. Poster presentation, Geneseo Recognizing Excellence, Achievement and Talent Day, Geneseo, NY.
- Doser, J., Hannam, K. April 2017. Analysis of seasonal temporal variation of soundscapes in western New York. Oral presentation, Geneseo Recognizing Excellence, Achievement and Talent Day, Geneseo, NY.
- Doser, J., Hannam, K. April 2017. Analysis of seasonal temporal variation of soundscapes in western New York. Oral presentation, Northeast Natural History Conference, Cromwell, CT.
- Doser, J., Hannam, K. November 2016. Analyzing soundscape temporal variation in western New York as a potential assessment of biological diversity. Oral presentation, Rochester Academy of Science Fair, Rochester, NY.
- Doser, J., Hannam, K. August 2016. Use of soundscape recordings to analyze daily temporal variation in avian vocalizations in western New York. Poster presentation, North American Ornithological Conference, Washington D.C.

## Grants/Scholarships

- Goldwater Scholarship, Nationwide, 2017

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- SUNY Geneseo Undergraduate Travel Grant, Spring 2017
- Dr. Sorrell E. Chesin '58 Endowed Research Award, Fall 2016
- Geneseo Foundation Undergraduate Summer Fellowship, Summer 2016
- Dr. Wendell and Barbara Rhodes Research Award, Summer 2016
- Geneseo Foundation Scholarship, 2014-2018

## Awards and Honors

- Excellence in Mathematics, SUNY Geneseo, 2018
- SUNY Chancellor's Award for Student Excellence, state-wide, 2018
- Pi Mu Epsilon Mathematics Honors Society, SUNY Geneseo, 2018
- Dr. Sam Molnar Scholar Athlete Award, SUNYAC, 2018
- Dr. Dan Mullin Scholar Athlete Award, SUNY Geneseo, 2018
- James Fulton Award for Academic and Athletic Excellence, SUNYAC, 2018
- Phi Beta Kappa Honors Society, SUNY Geneseo, 2017
- Sigma Xi Research Society, Associate Member, Nationwide, 2017
- Google Cloud/CoSIDA Academic All-District, Regional, 2017-2018
- SUNY Chancellor's Scholar-Athlete Award, SUNYAC, 2016-2018
- Winter Scholar Athlete of the Year, SUNYAC, 2016-2018
- President's List, SUNY Geneseo, Spring 2016
- Dean's List, SUNY Geneseo, Fall 2014 - Spring 2018
- Edgar Fellows Honors Program, 2014 - 2018

## Professional Positions

- Statistical Consultant, College of Agriculture and Natural Resources Statistical Consulting Center, Michigan State University, Aug 2019 - Aug 2020
  - Provided statistical and programming advice to undergraduate students, graduate students, and faculty members.
- Student Database Programmer, Computing and Information Technologies Department, SUNY Geneseo, 2016-2018
  - Developed, modified, and tested Banner applications using SQL, Groovy, SQR, and the Argos Enterprise Reporting System
  - Experience in managing and testing Oracle databases

## Relevant Skills

- Computer Languages/Statistical Software
  - Proficient: R, SQL
  - Familiar: C++, Groovy, Matlab, SQR, Mathematica, Python, Java, PI/SQL, C, SAS

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- Software
  - Latex/Knitr
  - R Markdown/bookdown
  - R Shiny

## Outreach

- Volunteer, Delta 4H Wildlife Club, Spring 2019
- Guest Speaker, French Road Elementary School, Brighton, New York, May 2018
  - Discussed the importance of coding with a Raspberry Pi and applications of using a Raspberry Pi for sound recording.

## Affiliations

- American Statistical Association, 2019 - present
- International Society of Ecoacoustics, 2019-present

## Editorial Service

- Peer Reviews
  - *Methods in Ecology and Evolution*, *Journal of Ornithology*, *Ecological Applications*

## University Service

- Ecology, Evolution, and Behavior Program Graduate/Postdoc Awards Committee, Michigan State University, 2020-present.
- Treasurer, Graduate Student Organization, Department of Forestry, Michigan State University, 2019-2020.
- Student Athlete Advisory Committee, SUNY Geneseo, 2015-2018