Joshua S. North

Earth and Environmental Sciences
Lawrence Berkeley National Laboratory
1 Cyclotron Road, Berkeley, CA 94720

jsnorth@lbl.gov
https://jsnowynorth.github.io

EDUCATION

University of Missouri Columbia, Columbia, Missouri. (2022)

   Ph.D., STATISTICS
   Advisors: Dr. Christopher K. Wikle and Dr. Erin M. Schliep

University of Colorado Boulder, Boulder, Colorado. (2017)

   B.S., APPLIED MATHEMATICS
   B.A., ECOLOGY AND EVOLUTIONARY BIOLOGY
   Minor, STATISTICS

PROFESSIONAL EXPERIENCE

Lawrence Berkeley National Laboratory, Berkeley, California. (August 2022 - Present)

   CASCADE Postdoctoral Fellow
   Advisor: Dr. Mark D. Risser

PUBLICATIONS

North, J. S., Wikle, C. K., & Schliep, E. M. (2022). "A Bayesian approach for data-driven dynamic equation discovery". *Journal of Agricultural, Biological, and Environmental Statistics*, *1*(1), 1–28. https://doi.org/10.1007/s13253-022-00514-1

North, J. S., Stanley, Z., Kleiber, W., Deierling, W., Gilleland, E., & Steiner, M. (2020). "A statistical approach to fast nowcasting of lightning potential fields". *Advances in Statistical Climatology, Meteorology, and Oceanography*, *2*(6), 79–90. https://doi.org/https://doi.org/10.5194/ascmo-6-79-2020

North, J. S., Schliep, E. M., & Wikle, C. K. (2020). "On the spatial and temporal shift in the archetypal seasonal temperature cycle as driven by annual and semi-annual harmonics". *Environmetrics*, 1–16. https://doi.org/10.1002/env.2665

PUBLICATIONS UNDER REVIEW

North, J. S., Schliep, E. M., Hansen, G. J. A., Kundel, H., Custer, C. A., McLaughlin, P., & Wagner, T. (2022). "Accounting for spatio-temporal sampling variation in joint species distribution models". *Working Draft*.

North, J. S., Wikle, C. K., & Schliep, E. M. (2022). "A bayesian approach for spatio-temporal data-driven dynamic equation discovery". *Working Draft*.

North, J. S., Wikle, C. K., & Schliep, E. M. (2022). "A review of data-driven discovery for dynamic systems". *Working Draft.*

Wagner, T., Schliep, E. M., **North, J. S.**, Kundel, H., Custer, C. A., Ruzich, J. K., & Hansen, G. J. A. (2022). "Predicting climate change impacts on poikilotherms using physiologically guided species abundance models". *Working Draft.*

TEACHING

University of Missouri Columbia, Columbia, Missouri.

Course Development

STAT 4330/7330 - Methods in Sports Analytics I

STAT 4340/7340 - Methods in Sports Analytics II

Graduate Teaching Assistant

STAT 4340/7340 - Methods in Sports Analytics II (S20, S21, S22)

STAT 4330/7330 - Methods in Sports Analytics I (F20, F21)

STAT 3500 - Introduction to Probability and Statistics II (F18)

STAT 2500 - Introduction to Probability and Statistics I (F17, S18)

University of Colorado Boulder, Boulder, Colorado.

Undergraduate Teaching Assistant

APPM 3570 - Applied Probability (S16)

APPM 1235 - Pre-Calculus for Engineers (F15)

PRESENTATIONS

A Bayesian Approach for Data-Driven Dynamic Equation Discovery, Joint Statistical Meeting, Washington D.C.; August 10, 2022.

A Bayesian Approach to Data-Driven Discovery of Nonlinear Dynamic Equations, Lawrence Berkeley National Laboratory; January 21, 2022.

A Bayesian Approach to Data-Driven Discovery of Nonlinear Dynamic Equations, Sandia National Laboratory; December 14, 2021.

Data-Driven Approach to Nonlinear Dynamic Equation Discovery, Joint Statistical Meeting; August 9, 2021.

On the Spatial and Temporal Shift in the Archetypal Seasonal Temperature Cycle as Driven by Annual and Semi-Annual Harmonics, Joint Statistical Meeting; August 4, 2020. (Invited)

Accuracy of Radial Support Vector Classifiers; Effect of Imbalanced Training Sets on Varying Minority Class Prevalence, Boulder, Colorado; May 1, 2017. (Poster)

Creating Reproducible Research, Boulder, Colorado; March 21, 2017.

AWARDS

ENVR Student Paper competition - Honorable Mention (2022)

MEMBERSHIP/SERVICE

Instructor and VIP Consultant for University of Missouri DataFest (2018-2022)

American Statistical Association (ASA) member

University of Missouri Statistics Graduate Student Association Vice-President (2017-2018)

University of Missouri Statistics Graduate Student Association Treasurer (2018-2019)

COMPUTER SKILLS

Statistical/Mathematical: R, Julia, Python, C++

Applications: LaTeX, GitHub, RShiny, Excel