

CONTACT INFORMATION	Department of Statistics and Data Science Cornell University Ithaca, NY 14853	847-274-1723 tls255@cornell.edu
EDUCATION	Cornell University , Ithaca, New York Postdoctoral Associate, August, 2015 - present <ul style="list-style-type: none"> Principal Investigator: David Matteson (Department of Statistics and Data Science) University of Missouri , Columbia, Missouri Ph.D., Statistics July 2020 <ul style="list-style-type: none"> NSF Graduate Research Fellow, Aug 2016 - July 2020 Dissertation Title: <i>Alternative Learning Strategies for Spatio-Temporal Processes of Complex Animal Behavior</i> Advisor: Christopher K. Wikle M.A., Statistics Dec 2018 Colorado State University , Fort Collins, Colorado B.S., Statistics and Wildlife Biology, December 2014 <ul style="list-style-type: none"> <i>Magna Cum Laude</i> with Honors 	
PUBLICATIONS	Schafer, T.L.J. , Wikle, C.K., and Hooten M.B. 2021. Bayesian inverse reinforcement learning for collective movement. <i>Accepted to Annals of Applied Statistics</i> Che-Castaldo, J.P., Cousin, R., Daryanto, S., Deng, G., Feng, M.E., Gupta, R.K., Hong, D., McGranaghan, R.M., Owolabi, O.O., Qu, T., Ren, W., Schafer, T.L.J. , Sharma, A., Shen, C., Sherman, M.G., Sunter, D.A., Wang, L., and Matteson, D.S. 2021. Critical Risk Indicators (CRIs) for the electric power grid: A survey and discussion of interconnected effects. <i>Environment Systems and Decisions</i> . Schliep, E.M., Schafer, T.L.J. , and Hawkey, M. 2021. Distributed lag models to identify the cumulative effects of training and recovery in athletes using multivariate ordinal wellness data. <i>Journal of Quantitative Analysis in Sports</i> . 17(3) : 241-254. Schafer, T.L.J. , Wikle, C.K., Ballard, B.M., VonBank, J.A., and Weegman, M.D. 2020. Bayesian Markov model with Pölya-Gamma sampling for estimating individual behavior transition probabilities from accelerometer classifications. <i>Journal of Agricultural, Biological and Environmental Statistics</i> . 25 : 365-382. Schafer, T.L.J. and Wikle, C.K. 2019. Alternative learning strategies for collective animal movement. In <i>JSM Proceedings</i> , Statistical Computing Section. Alexandria, VA: American Statistical Association. Schafer, T.L.J. , Breck, S.W., Baruch-Mordo, S., Lewis, D.L., Wilson, K.R., Mao, J.S., and Day, T.L. 2018. American black bear den-site selection and characteristics in an urban environment. <i>Ursus</i> , 29 : 25-31.	
WORKS IN PROGRESS <i>Available upon request</i>	Owolabi, O.O., Schafer, T.L.J. , Smits, G.E., Sengupta, S., Ryan, S., Wang, L., Matteson, D.S., Sherman, M.G., and Sunter, D.A. Role of variable renewable energy penetration on electricity price and its volatility across independent system operators in the United States. <i>Under Review at Applied Energy</i> . VonBank, J.A., Cunningham, S.A., Schafer, T.L.J. , Weegman, M.D., Link, P.T., Wikle, C.K., Kraai, K.J., Collins, D.P., and Ballard, B.M. Joint use of location and acceleration data to quantify habitat use transitions in arctic-nesting geese. <i>Under Review at Scientific Reports</i> . Schindler, A.R., Cunningham, S.A., Schafer, T.L.J. , Sinnot, E.A., Clements, S.J., DiDonato, F.M., Mosloff, A.R., Walters, C., Shipley, A.A., Weegman, M.D., and Zhao, Q. Joint analysis of structured survey and citizen science data improves precision of bird population trends and the extent of improvement depends on life history strategy.	

Davidow, M., Merow, C., Che-Castaldo, J.P., **Schafer, T.L.J.**, Duker, M., Corcoran, D., and Matteson, D.S. Clustering future scenarios based on predicted range maps. [arXiv:2101.07408](https://arxiv.org/abs/2101.07408)

Feng, M.E., **Schafer, T.L.J.**, Che-Castaldo, C., Sherman, M.G., Matteson, D.S., and Che-Castaldo, J.P. Novel biodiversity indicators based on finance metrics.

Cunningham, S.A., **Schafer, T.L.J.**, Wikle, C.K., Ballard, B.M., VonBank, J.A., Bearhop, S., Hilton, G.M., Walsh, A.J., Griffin, L., Fox, A.D., and Weegman, M.D. Quantifying the influence of behavioral contributions to reproductive attempts in geese of contrasting migration strategy.

Schafer, T.L.J., Wikle, C.K., McDermott, P.L., and Weegman, M.D. Hybrid statistical and deep neural models for ecological prediction of count data.

ORAL PRESENTATIONS

Leveraging information and costs between high frequency acceleration and spatial positioning monitors for animal behavior inference. (Invited) Joint Statistical Meetings, Washington, D.C. August, 2022.

Inverse reinforcement learning for animal movement data.

- (Invited) The Wildlife Society Annual Conference, Spokane, Washington. November, 2022.
- Women in Statistics and Data Science, Virtual. October, 2021.

Continuous shrinkage priors with dependence. Joint Statistical Meetings, Virtual. July, 2021.

Inverse reinforcement learning for agent-based models.

- (Invited) SAMSI Pros and Cons of ABMs for Epidemic Modeling, Virtual. June, 2021.
- (Invited) Joint Statistical Meetings, Virtual. August, 2020.

Inverse reinforcement learning for animal behavior from environmental cues. (Invited) ENAR 2020 Spring Meeting, Virtual. March, 2020.

Alternative learning strategies for collective animal movement. Joint Statistical Meetings, Denver, Colorado. August 2019

Estimating behavioral transition probabilities of greater white-fronted geese using non-homogenous Markov models. Joint Statistical Meetings, Vancouver, British Columbia. July, 2018.

Black Bear Den Characteristics and Site Selection Near Urban Aspen, Colorado. The Wildlife Society Annual Conference, Pittsburgh, Pennsylvania. October, 2014.

- Awarded best undergraduate contributed paper.

POSTER PRESENTATIONS

Non-linear forecasting with echo state networks. Ecological Forecasting Initiative, Washington D.C. May, 2019.

Estimating environmental effects on behavioral transitions of geese.

- Missouri Natural Resources Conference, Osage Beach, Missouri. February, 2019.
- Statistics and the Environment section of the American Statistical Association biennial workshop, Asheville, North Carolina. October, 2018

AWARDS

NSF Graduate Research Fellowship 2016

Benjamin A. Gilman International Scholarship 2013

GRANTS

Colorado Chapter of The Wildlife Society Travel Grant Oct 2014

Wayne Sandfort Student Travel Grant, Central Mountains and Plains Section of The Wildlife Society Oct 2014

TEACHING EXPERIENCE

Graduate Instructor

University of Missouri, Statistics Dept., Columbia, MO. 2015-2017

Introductory Statistical Reasoning (STAT 1200)

Introduction to Probability and Statistics I (STAT 2500)

Introduction to Probability and Statistics II (STAT 3500)

Teaching Assistant

Colorado State University, Biology Dept., Fort Collins, CO.

2011

Biology of Organisms Lab (LIFE 103)

PROFESSIONAL ACTIVITIES

Lead Organizer, Knowledge Discovery and Data Mining (KDD) 2021 Workshop

[Data-Driven Exploration of Interconnected Risks in Complex Human-Natural Systems](#)

Aug 2021

Assistant Editor, [Data Science in Science](#)

Graduate Student Mentorship

Georgia Smits, Cornell University

Member, Early Career Women in Statistics Mutual Mentoring

2020-*Current*

Member, [Ecological Forecasting Initiative Student Working Group](#)

2019-*Current*

• [R-Shiny Working Group Leader](#)

Jun - Nov 2020

Twitter Outreach, [Code-RLadies](#)

2019-2020

Organizer and Mentor, [ASA Datafest Mid-MO](#)

2017-2020

Mentor, Sports Statistics Initiative

2019-2020

Graduate Student Leader, Space-Time Reading Group

2018-2019

Vice President, [Statistics Graduate Student Association](#)

2015-2017

REFEREE

Ecology

Methods in Ecology and Evolution

Society for Petroleum Engineering Journal

Ursus

PROFESSIONAL MEMBERSHIPS

American Statistical Association

Association for Computing Machinery

The Wildlife Society

American Geophysical Union