

ERIC W. FOX

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EDUCATION

- Ph.D. in Statistics, UCLA, Los Angeles, CA, 2015.
 - Dissertation: *Estimation and inference for self-exciting point processes with applications to social networks and earthquake seismology*
 - Advisor: Rick Schoenberg
- B.A. in Mathematics, Occidental College, Los Angeles, CA, 2009.

RESEARCH INTERESTS

Spatial statistics, point processes, and statistical learning with applications to ecology, seismology, and social networks.

RESEARCH AND TEACHING EXPERIENCE

- Assistant Professor, CSU East Bay Department of Statistics and Biostatistics, 2018–Present.

Taught and developed the following courses:

- Undergraduate:
 - STAT 310: Statistical Methods in the Social Sciences
 - STAT 320: Intro to Probability Theory
 - STAT 321: Probability through Simulation
 - STAT 432: Intro to Linear and Logistic Regression
 - STAT 450: Intro to R for Data Science
 - STAT 452: Intro to Statistical Learning
- Graduate:
 - STAT 630: Statistical Methods
 - STAT 632: Linear and Logistic Regression
 - STAT 650: R for Data Science
 - STAT 652: Statistical Learning
- Postdoctoral Researcher in Statistics, US EPA, Western Ecology Division, 2015–2018.

Developed random forest and spatial regression models for predicting the condition of streams and rivers in the conterminous US. The models make use of a large data set consisting of an aquatic health index for nearly 2000 sampled stream sites, and over 200 upstream landscape features as covariates.

- Graduate Student Researcher, UCLA Department of Mathematics, 2012–2014.
Researcher for project about point process models for e-mail networks. Applied models to inferring communication behaviors and leadership roles of users in a network.
- Undergraduate Research Mentor, UCLA Department of Mathematics, 2014.
Mentor for a team of students participating in the Research Experience for Undergraduates (REU) summer program. Project focused on modeling and analyzing Twitter data using techniques from point processes and topic modeling.
- Teaching Assistant Coordinator, UCLA Department of Statistics, 2013.
Trained prospective TAs through a weekly seminar (Stats 495) about pedagogical tools and resources specific to teaching undergraduate statistics.
- Teaching Assistant/Associate, UCLA Department of Statistics, 2011–2012.
 - Stats 12: Intro to Stat. Methods for Geo. and Env. Sciences
 - Stats 13: Intro to Stat. Methods for Life and Health Sciences
 - Stats 100B: Mathematical Statistics

PUBLICATIONS

- Gordon, J.S., **Fox, E.W.**, and Schoenberg, F.P. (2021). A nonparametric Hawkes model for forecasting California seismicity. *Bulletin of the Seismological Society of America*, 111(4), 2216–2234.
- **Fox, E.W.**, Ver Hoef, J.M., and Olsen, A.R. (2020). Comparing spatial regression to random forests for large environmental data sets. *PLOS ONE*, 15(3): e0229509.
<https://doi.org/10.1371/journal.pone.0229509>
- Lewis, N.S., **Fox, E.W.**, and DeWitt, T.H. (2019). Estimating the distribution of harvested estuarine bivalves with natural-history-based habitat suitability models. *Estuarine, Coastal and Shelf Science*, 219, 453–472.
- Hill, R.A., **Fox, E.W.**, Leibowitz, S.G., Olsen, A.R., Thornbrugh, D.J., and Weber, M.H. (2017). Predictive mapping of the biotic condition of conterminous-USA rivers and streams. *Ecological Applications*, 27(8), 2397–2415.
- **Fox, E.W.**, Hill, R.A., Leibowitz, S.G., Olsen, A.R., Thornbrugh, D.J., and Weber, M.H. (2017). Assessing the accuracy and stability of variable selection methods for random forest modeling in ecology. *Environmental Monitoring and Assessment*, 189(7).
- **Fox, E.W.**, Schoenberg, F.P., and Gordon, J.S. (2016). Spatially inhomogeneous background rate estimators and uncertainty quantification for nonparametric Hawkes point process models of earthquake occurrences. *Annals of Applied Statistics*, 10(3), 1725–1756.
- **Fox, E.W.**, Short, M.B., Schoenberg, F.P., Coronges, K., and Bertozzi, A.L. (2016). Modeling e-mail networks and inferring leadership using self-exciting point processes. *Journal of the American Statistical Association*, 111(514), 564–584.

- Lai, E., Moyer, D., Yuan, B., **Fox, E.W.**, Hunter, B., Bertozzi, A.L., and Brantingham, P.J. (2016). Topic time series analysis of microblogs. *IMA Journal of Applied Mathematics*, 81(3), 409–431.

PRESENTATIONS

- Fox, E.W. Incorporating temporal data into the Data Science curriculum. Lightning Talk, National Workshop on Data Science Education, UC Berkeley, August 2020.
- Nunez, L.R., and Fox, E.W. Spatial analysis of an Oakland crime data set using **ggmap**. Poster Presentation, 2020 CSUEB Student Research Symposium (canceled due to COVID)
- Fox, E.W. Random forest models for the probable biological condition of streams and rivers in the USA. Poster Presentation, Joint Statistical Meetings, Denver, July 2019.
- Fox, E.W., Ver Hoef, J.M., and Olsen, A.R. Comparing spatial regression to random forests for large environmental data sets. Contributed Talk, Joint Statistical Meetings, Baltimore, August 2017.
- Fox, E.W. Statistical properties of Marsan-Lengliné estimates of triggering functions for space-time marked point processes. Contributed Talk, 9th International Workshop on Statistical Seismology, Potsdam, Germany, June 2015.
- Fox, E.W. Modeling e-mail networks and inferring leadership using self-exciting point processes. Contributed Talk, Joint Statistical Meetings, Boston, August 2014.

SERVICE

Reviewer for the following journals: *Journal of the American Statistical Association*, *Annals of Applied Statistics*, *Behavior Research Methods*, *Freshwater Science*, *Ecological Indicators*

AWARDS AND HONORS

- Dissertation Year Fellowship, UCLA Graduate Division, 2014–2015.
Awarded to exceptional doctoral students working on their dissertation during the final year of graduate school. The fellowship includes a stipend, standard tuition and fees, and a research allowance.
- Benedict Freedman Senior Prize in Mathematics, Occidental College, 2009.
Awarded to the graduating senior with the most outstanding record of achievement as a mathematics major at Occidental. A monetary prize was included.
- Distinction for Senior Thesis, Occidental College, 2009.