ERIC W. FOX

US EPA, Western Ecology Division
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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

- Postdoctoral Researcher in Statistics, US EPA, Western Ecology Division, 2015–Present.

    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

- Private Math and Statistics Tutor, 2010–Present.

  Tutor for students at the K-12 and college levels (algebra, geometry, precalculus, calculus, statistics, standardized testing, and computer programming).

- Math Workshop Facilitator, Occidental College and UCLA, 2007–2014.

  Workshop facilitator for calculus and precalculus courses. Responsibilities included designing worksheets and helping participants with course material.

PUBLICATIONS

- 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. To appear in *Ecological Applications*.

- **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., 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., Hill, R.A., Leibowitz, S.G, Olsen, A.R., and Weber, M.H. Random forest models for the probable biological condition of rivers and streams in the USA. Invited Talk, International Indian Statistical Association Conference, Corvallis, August 2016.

- 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.

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.

- Teaching Assistant of the Year Nominee, UCLA Department of Statistics, 2012.

- 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.

PROGRAMMING SKILLS

R, LaTeX, C++, RCpp, R Markdown, R Packages, Git/GitHub, UNIX, HTML, Mathematica

CITIZENSHIP

United States of America