

Alexander H. Tank

CONTACT INFORMATION	Department of Statistics, Box 354322 Seattle, Washington 98195	609 - 213 - 8491 alextank@uw.edu
RESEARCH INTERESTS	machine learning, statistics, time series, large scale probabilistic inference, optimization, forecasting	
EDUCATION	University of Washington , Seattle, WA Ph.D Graduate Program, Department of Statistics, 2013 - 2017 (expected) Machine Learning and Big Data track. Princeton University , Princeton, NJ B.A., Molecular Biology, May 2011	
WORK AND RESEARCH EXPERIENCE	Research Assistant University of Washington Department of Statistics Ph.D Advisor: Emily Fox Summer Research Intern Allen Brain Institute, Seattle, WA Mentor: Michael Buice, Ph.D Research Scientist , University of Pennsylvania Departments of Psychology and Electrical Engineering Mentor: Alan Stocker, Ph.D Senior Thesis , Princeton University Department of Psychology and Princeton Neuroscience Institute Mentors: Yael Niv, Ph.D and Sam Gershman, Ph.D	Fall 2013 - Summer 2014 September 2011 to May 2013 January 2010 to May 2011
PUBLICATIONS	C. Xie, A. Tank , A. Greaves-Tunell, E. B. Fox, “A Unified Framework for Long Range and Cold Start Forecasting of Seasonal Profiles in Time Series” (submitted to NIPS), 2017 A. Tank , E. B. Fox, A. Shojaie “Granger Causality Networks for Categorical Time Series” (in preparation for journal) 2017 A. Tank , E. B. Fox, A. Shojaie, “Identifiability and Estimation of Structural Vector Autoregressive Models for Subsampled and Mixed Frequency Time Series” (submitted to Biometrika) 2017. C. Xie, A. Tank , E. B. Fox, “A Unified Framework for Missing Data and Cold Start Prediction in Time Series”, NIPS Time Series Workshop, Barcelona, 2016 A. Tank , E. B. Fox, A. Shojaie, “Identifiability of Subsampled and Mixed Frequency Structural SVAR Models”, KDD Causal Discovery Workshop, San Francisco, 2016 A. Tank , E. B. Fox, A. Shojaie, “Granger Causality Networks for Categorical Time Series”, KDD Time Series Workshop, San Francisco, 2016 A. Tank , N. Foti, and E.B. Fox, “Bayesian Structure Learning of Stationary Time Series,” <i>Conference on Uncertainty in Artificial Intelligence</i> (UAI), Amsterdam, Netherlands July 2015. A. Tank , N. Foti, and E.B. Fox, “Streaming Variational Inference for Bayesian Nonparametric Mixture Models,” <i>International Conference on Artificial Intelligence and Statistics</i> (AISTATS), San Diego, CA May 2015. A. Tank , N. J. Foti, and E. B. Fox. “Streaming Variational Inference for Normalized Random Measure Mixture Models” NIPS Workshop on Advances in Variational Inference, 2014.	
LEADERSHIP	Session Chair: ‘Optimization in Biology’, JSM Baltimore, 2017. Co-chair of NIPS 2015 workshop on Bayesian Nonparametrics: The Next Generation.	

CONSULTING
EXPERIENCE

- Consultant for Dr. David Scott for University of Washington Medical Center, 2016. A longitudinal data analysis of how hip implants lead to bone density loss.
- Consultant for Greg Johnson at the Allen Institute of Cell Science, 2017. Analyzed correlations and Granger causality of tissue cell features between neighboring cells.

TALKS

“Identifiability of Subsampled and Mixed Frequency Structural VAR models” KDD Causal Discovery Workshop, San Francisco 2016.
“Granger Causality Networks for Categorical Time Series” KDD Time Series Workshop San Francisco, CA 2016.
“Identifiability of Subsampled and Mixed Frequency Structural VAR models” Joint Statistical Meetings, Chicago 2016.
“Bayesian Structure Learning for Stationary Time Series” International Society for Bayesian Analysis, Sardinia, Italy 2016.
“Granger Causality Networks for Categorical Time Series” ENAR Spring Meeting, Austin 2016.
“Streaming Variational Inference for Bayesian Nonparametric Mixture Models” Microsoft Research - University of Washington Machine Learning Day, 2015. (Spotlight)

AWARDS

Scholarships

Integrative Graduate Education and Research Traineeship (IGERT) in Big Data and Data Science (2 years funding)

Travel Awards

International Society of Bayesian Analysis (ISBA) Student Travel Award, 2016.

Probabilistic Models of Cognition Summer Course, UCLA, CA 2011

Student Awards

Sigma Xi, 2011

Honors in Molecular Biology, 2011

PROGRAMMING

R (+ Rcpp), Python, Matlab, Java