BO NING

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CURRENT POSITION

Postdoctoral Associate, Department of Statistics and Data Science, Yale University
Advisor: Dr. Jessi Cisewski-Kehe

EDUCATION

Ph.D., Statistics, North Carolina State University   *July, 2018*
Advisors: Dr. Peter Bloomfield and Dr. Subhashis Ghosal

M.S., Economics, North Carolina State University   *December, 2013*
Advisor: Dr. Atsushi Inoue

RESEARCH INTERESTS

Astrostatistics, Bayesian methodology and theory on high-dimensional models; Bayesian nonparametrics; Bayesian time series analysis; causal inference; measurement error models; missing data analysis.

RESEARCH PAPERS

Publications

· **Bo Ning**, Alexander Wise, Jessi Cisewski-Kehe, Sarah Dodson-Robinson, and Debra Fischer, 2019. Identifying Activity-sensitive Spectral Lines: A Bayesian Variable Selection Approach. The Astronomical Journal (to appear).

· Shubham Kanodia, Angie Wolfgang, Gudmundur K. Stefansson, **Bo Ning**, and Suvrath Mahadevan, 2019. Mass-Radius relationship for M dwarf exoplanets: Comparing nonparametric and parametric methods. The Astrophysical Journal, 882:1.

· **Bo Ning**, Subhashis Ghosal, and Jewell Thomas, 2019. Bayesian method for causal inference in spatially-correlated multivariate time series. Bayesian Analysis, 14(1):1–28.

· **Bo Ning**, Angie Wolfgang, and Sujit Ghosh, 2018. Predicting exoplanet masses and radii: A nonparametric approach. The Astrophysical Journal, 869:5.

Papers under reivew/in preparation

· **Bo Ning**, Seonghyun Joeng, and Subhashis Ghosal. Bayesian linear regression for multivariate response under group sparsity. Under revision for Bernoulli. *arXiv:1807.03439*.

· Ryan Martin and **Bo Ning**. Empirical priors and coverage of posterior credible sets for a sparse normal mean model. Under revision for Sankhya A. *arXiv:1812.02150*.

· **Bo Ning**. Fast computational methods for Bayesian sparse PCA. In preparation.

· **Bo Ning**, Allen Davis, Jessi Cisewski, and Debra Fischer. Disentangling stellar activity and planetary signals using Bayesian sparse PCA. In preparation.

PRESENTATIONS AND WORKSHOPS

Presentations

· (*Invited talk*) Joint Statistical Meeting, Denver, CO, July 27–August 01, 2019, "Bayesian method for causal inference in spatially-correlated multivariate time series."

· (*Invited talk*) Jaguar Land Rover's global headquarters, Coventry, UK, July 01, 2019, "Bayesian method for causal inference in spatially-correlated multivariate time series."
· (*Poster*) O'Bayes Meeting, University of Warwick, UK, June 28–July 02, 2019, "Disentangling between stellar activity and planetary signals using Bayesian high-dimensional analyses."
· (*Contributed talk*) 12th Bayesian Nonparametrics Conference, Oxford, UK, June 24–28, 2019, "Bayesian high-dimensional analyses for a multivariate linear regression model and a sparse spiked-covariance model."
· (*Poster*) Statistics Conference, in honor of Aad van der Vaart's 60th Birthday, Leiden, the Netherlands, June 17–21, 2019, "Bayesian linear regression for multivariate response under group sparsity."
· (*Invited talk*) Department Seminar, Department of Statistics, North Carolina State University, May 9, 2019, "Disentangling between stellar activity and planetary signals using a Bayesian approach for sparse PCA."
· (*Contributed talk*) The Sixth Boston Area Exoplanet Science Meeting, Harvard/Center for Astrophysics, April 5, 2019, "Predicting exoplanet masses and radii: A nonparametric approach."
· (*Poster*) NextGen: Data Science Day, New England Statistical Society, Yale University, October 27, 2018, "Bayesian methods for high-dimensional data analysis."
· (*Presentation*) Exoplanet seminar, Department of Astronomy, Yale University, October 2, 2018, "Predicting exoplanet masses and radii: A nonparametric approach."
· (*Poster*) O'Bayes 2017 Meeting, Austin, TX, December 10–13, 2017, "Bayesian multivariate linear regression with unknown correlated errors under group sparsity."
· (*Presentation*) 3rd workshop on extreme precise radius velocities (EPRV), Penn State University, August 14–17, 2017, "Predicting exoplanet masses and radii: A nonparametric approach."
· (*Invited talk*) ASTRO transition workshop, SAMSI, NC, May 8–10, 2017, "Predicting exoplanet masses and radii: A nonparametric approach."
· (*Poster*) Joint Statistical Meeting, Baltimore, August, 2017, "Predicting exoplanet masses and radii: A nonparametric approach."
· (*Invited talk*) Maxpoint research day, Maxpoint Interactive Inc., Morrisville, NC, March, 2016, "Bayesian method for causal inference in spatially-correlated multivariate time series."
· (*Poster*) Joint Statistical Meeting, Chicago, August, 2016, "Bayesian method for causal inference in spatially-correlated multivariate time series."
· (*Presentation*) ICSA Applied Statistics Symposium, Atlanta, June 12–15, 2016, "Bayesian method for causal inference in spatially-correlated multivariate time series."
· (*Poster*) Graduate Student Research Symposium, the Graduate School, NCSU, March, 2016, "Bayesian method for causal inference in spatially-correlated multivariate time series."
· (*Presentation*) International conference on advances in interdisciplinary statistics and combinatorics, Greensboro, NC, September 30–Oct 2, 2016

Workshops
· ASTRO: Astrophysical population emulation and uncertainty quantification, SAMSI, NC, April 3–7, 2017
· ASTRO: Hierarchical Bayesian modeling of exoplanet populations (by invitation only), SAMSI, NC, Oct 17–28, 2016
· Statistical, Mathematical and Computational Methods for Astronomy (ASTRO), SAMSI, NC, August 22–26, 2016

TEACHING EXPERIENCE

Guest instructor
· ExoStatistics: Exploring Extrasolar Planets with Data Science, Yale University *(Undergraduate level)* — *April, 2019*

Lab instructor

· Experimental Statistics for Biological Sciences II, NCSU *(Ph.D. and master level) — Fall, 2015; Spring 2016; Fall 2016; Fall 2017*

Online course teaching assistant

· SAS Programming I, NCSU *(Master level) — Fall, 2014; Spring, 2015*

Grader

· SAS Programming I *(Master level) — Summer, 2014*
· Statistical Practice (Consulting), NCSU *(Ph.D. and Master level) — Spring, 2016; Spring, 2017; Spring, 2018*

Teaching training programs

· Certificate of Accomplishment in Teaching (CoAT) program, the Graduate School, NCSU, 2016
· Graduate Student Summer Teaching Institute, the Graduate School, NCSU, June 9–11, 2014

AWARDS AND MEMBERSHIPS

Travel awards

· Yale University Postdoctoral Scholars Travel Fund award, 2019
· Travel Support for O'Bayes Conference, 2019
· Travel Grant for Attending Aad van der Vaart's 60th Birthday Conference, 2019
· IMS New Researcher Travel Award, 2019
· ISBA Travel Award for Attending the 12th International Conference on Bayesian Nonparametrics, 2019
· O'Bayes 2017 Meeting Travel Award, 2017

Teaching awards

· Outstanding Teaching Assistant Award, Department of Statistics, NCSU, 2015
· Outstanding Teaching Assistant Award for Excellence in Mentorship, Graduate Student Association, NCSU, 2015

Poster competition award

· MassMutual Poster Award, Honorable Mention (Professional Category), NESS NextGen: Data Science Day at Yale University, October 27, 2018

Memberships

· Member of ASA, Bernoulli Society, IMS, ISBA
· Member of Mu Sigma Rho, National Statistical Honor Society, 2014

SERVICES

· Local Organizing Committee, NESS NextGen: Data Science Day at Yale University, October 27, 2018
· Referee/Reviewer for *Journal of the Royal Statistical Society Series A, Journal of Multivariate Analysis, Astronomy and Computing, The Astronomical Journal.*

INTERNSHIP EXPERIENCE

· Data Scientist Intern, MaxPoint Interactive Inc. Morrisville, NC.   *Summer, 2016*
· Product Analytics Summer Intern, MaxPoint Interactive Inc. Morrisville, NC.   *Summer, 2015*

PROGRAMMING SKILLS

· Proficient: R, SAS, LaTeX
· Familiar: Matlab, Python, Julia (IJulia)

LANGUAGE

· Native/fluent: Chinese (Cantonese, Gan, Mandarin), English
· Intermediate: Japanese, Taiwanese
· Limited: French, Hakka, Thai, Spanish