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: Drs. Peter Bloomfield and Subhashis Ghoshal

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; causal inference; measurement error models; missing data analysis; time series analysis.

RESEARCH PAPERS

Publications

· Ryan Martin and **Bo Ning**, 2019. Empirical priors and coverage of posterior credible sets for a sparse normal mean model. *Sankhya A (Special Issue in Honor of J.K. Ghosh)* (accepted). *arXiv:1812.02150.*

· **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 review/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.*

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

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

PRESENTATIONS AND WORKSHOPS

Confirmed Future Presentation

· (*Invited talk*) Joint Statistical Meeting, Philadelphia, PA, August 01–06, 2020, *Disentangling stellar activity and planetary signals using Bayesian high-dimensional analyses.*

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 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 of NC State University, 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, *Bayesian inference for generalized extreme value distribution with Gaussian copula dependence.*

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 23, 2019

Lab instructor

- Experimental Statistics for Biological Sciences, NCSU *(Ph.D. and Master's levels)*, Fall, 2015; Spring, 2016; Fall, 2016; and Fall, 2017

Teaching assistant (online course)

- SAS Programming, NCSU *(Master's level)*, Fall, 2014 and Spring, 2015

Teaching assistant (traditional)

- SAS Programming, NCSU *(Master's level)*, Summer, 2014
- Statistical Practice (Consulting), NCSU *(Ph.D. and Master's levels)*, Spring, 2016; Spring, 2017; and Spring, 2018

Teacher 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

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

Teaching awards

- Outstanding Teaching Assistant Award, Department of Statistics, NCSU, 2015
- Outstanding Teaching Assistant Award for Excellence in Mentorship, the Graduate School, 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, ASA Astrostatistics Interest Group, Bernoulli Society, IMS, and ISBA
· Member of Mu Sigma Rho, National Statistical Honor Society, 2014

SERVICE

· Secretary of the ASA Astrostatistics Interest Group, as of January 1, 2020
· Member of the Organizing Committee for the 3rd Annual Postdoctoral Symposium at Yale University, October, 2019–June, 2020
· Member of the Local Organizing Committee, NESS NextGen: Data Science Day at Yale University, October, 2018
· 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, May 16–August 16, 2016
· Product Analytics Summer Intern, MaxPoint Interactive Inc. Morrisville, NC, May 12–August 12, 2015

PROGRAMMING SKILLS

· Proficient: R, SAS, and LaTeX
· Familiar: Matlab, Python, and Julia

LANGUAGES

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