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

Bayesian methodology and theory on high-dimensional models; Bayesian nonparametric; astrostatistics; Bayesian dynamic time series; causal inference; missing value analysis.

RESEARCH PAPERS

Publications

· 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 (16pp).

Papers in preparation

· Bo Ning 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. Submitted. *arXiv:1812.02150*.
· Shubham Kanodia, Angie Wolfgang, Gudmundur K. Stefansson, Bo Ning, and Suvrath Mahadevan. Mass-Radius relationship for M dwarf exoplanets: Comparing nonparametric and parametric methods. Submitted to The Astrophysical Journal.
· Bo Ning and Matthias Löffler. The variational Bayes method for sparse PCA model. In preparation.
· Bo Ning, Alexander Wise, Jessi Cisewski, Sarah Dodson-Robinson, and Debra Fischer. A Bayesian approach to identifying activity-sensitive spectral lines. 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."
· (*Poster*) O'Bayes Meeting, University of Warwick, UK, June 28–July 02, 2019, "Detecting exoplanets using Bayesian high-dimensional analyses."

- (*Contributed talk*) 12th Bayesian Nonparametrics Conference, Oxford, UK, June 24–28, 2019, "Bayesian high-dimensional analysis of a sparse PCA 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."
- (*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

Lab instructor

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

Online course teaching assistant

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

Grader

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

HONORS, AWARDS AND MEMBERSHIPS

- IMS New Researcher Travel Award, 2019
- ISBA Travel Award for Attending 12th BNP Conference, 2019
- MassMutual Poster Award, Honorable Mention (Professional category), NESS NextGen: Data Science Day at Yale University, October 27, 2018
- O'Bayes 2017 Meeting Travel Award, Austin, 2017
- Certificate of Accomplishment in Teaching (CoAT), the Graduate School, NCSU, 2016
- Outstanding Teaching Assistant Award, the Department of Statistics, NCSU, 2015
- Outstanding Teaching Assistant Award for Excellence in Mentorship, Graduate Student Association, NCSU, 2015
- Graduate Student Summer Teaching Institute, the Graduate School, NCSU, June 9–11, 2014
- Member of ASA, Bernoulli Society, IMS, ISBA
- Member of Mu Sigma Rho, National Statistical Honor Society, 2014

SERVICE

- 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, MATLAB, LaTeX
- Familiar: Python, Julia (IJulia)

LANGUAGE

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