Gemma E. Moran

CONTACT INFORMATION

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EMPLOYMENT

Columbia University — New York, NY, USA
Postdoctoral Research Scientist — August 2019 - Present
Supervisor: Dave Blei

EDUCATION

The Wharton School, University of Pennsylvania — Philadelphia, PA, USA

Ph.D. Statistics — May 2019
Thesis Title: "Bayesian Approaches for Modeling Variation"
Thesis Advisors: Edward George and Veronika Ročková

The University of Sydney — Sydney, NSW, Australia

B.Sc. Advanced Mathematics (First Class Honours) — November 2013
Majors: Mathematics, Statistics
Thesis Advisor: John Ormerod

PAPERS

- Moran, G. E., Ročková, V. and George, E. I. (2019) "Spike-and-Slab Lasso Biclustering." *Annals of Applied Statistics (Accepted)*
- Bai, R., Moran, G. E., Antonelli, J., Chen, Y., Boland, M. R. (2019)"Spike-and-Slab Group Lassos for Grouped Regression and Sparse Generalized Additive Models" *Journal of the American Statistical Association* [arXiv:1903.01979]
- Moran, G. E., Ročková, V. and George, E. I., (2018), "Variance prior forms for high-dimensional Bayesian variable selection" *Bayesian Analysis* [arXiv:1801.03019]
- Ročková, V., Moran, G. E., and George, E. I., (2016), "Determinantal Regularization for Ensemble Variable Selection" *Proceedings of the 19th International Conference on Artificial Intelligence and Statistics (AISTATS)*, pages 1105-1113, Cadiz, Spain.

SOFTWARE

- `SSLASSO` (R Package) Ročková, V. and Moran, G. E. [CRAN.R-project.org/package=SSLASSO]

AWARDS

- Donald S. Murray Prize for excellence in teaching, Statistics Department, Wharton — 2018
- Honorable Mention for Best Talk at the Bayesian Young Statisticians Meeting — 2018
- Wharton Doctoral Program Fellowship — 2014
- The George Allen Scholarship for Mathematical Statistics, the University of Sydney — 2013

PRESENTATIONS

- "Spike-and-Slab Lasso Biclustering" Joint Statistical Meetings, Vancouver, BC, Canada. August 2018.
- "Spike-and-Slab Lasso Biclustering" Bayesian Young Statisticians Meeting, University of Warwick, UK. July 2018.

- "On variance estimation for Bayesian variable selection" International Society for Bayesian Analysis World Meeting, Edinburgh, Scotland. June 2018. (Poster)
- "Independence Variance Priors for Penalized Likelihood Variable Selection" Joint Statistical Meetings, Baltimore, MA. July 2017.
- "Determinantal Regularization for Ensemble Variable Selection." 19^{th} International Conference on Artificial Intelligence and Statistics, Cadiz, Spain. May 2016. (Poster)

Teaching Experience

Teaching Assistant

The Wharton School, University of Pennsylvania

- STAT621: Accelerated Regression Analysis for Business (Fall 2018)
- STAT613: Regression Analysis for Business (Fall 2017, Fall 2018)
- STAT422: Predictive Analytics (Spring 2017)
- STAT101: Introductory Business Statistics (Fall 2016)

Recitation Instructor

The Wharton School, University of Pennsylvania

- STAT111: Introductory Statistics (Spring 2018). Rating: 3.1/4

The University of Sydney

- MATH1015: Biostatistics (Semester 1, 2013)
- MATH1005: Statistics (Semester 2, 2013)

Lecturer

Wharton Moneyball Academy (Summer 2017, 2018)
Contributed to and taught course on data analysis in R as part of summer program in statistics and sports for high school students

Professional Experience

Computational Informatics Division, CSIRO Sydney, NSW, Australia

Summer research scholar 11/2013 - 02/2014

Research topic: Markov chain Monte Carlo and generalized linear models for RNA-seq data

Australian Mathematical Sciences Institute Sydney, NSW, Australia

Summer research scholar 12/2012 - 02/2013

Research topic: Theory for Gaussian variational approximation of Bayesian generalized linear models