## Y. Samuel Wang

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RESEARCH

Graphical models; Causal discovery; Mixed membership models; Variational inference;

Interests Empirical likelihood

ACADEMIC Post-doctoral Research Professional

2018 -

Positions

The University of Chicago; Booth School of Business

Supervisor: Mladen Kolar

**EDUCATION** 

Ph.D. in Statistics

2012 - 2018

University of Washington

Thesis: Linear Structural Equation Models with non-Gaussian Errors

Advisor: Mathias Drton

Committee members: Thomas Richardson and Emily Fox

B.A. in Applied Math; Economics

2006 - 2010

Rice University

Thesis: State Level Economic Volatility: Causes and Effects

Magna Cum Laude; Phi Beta Kappa

Publications

Wang, Y. S., Drton, M. (2019+) Causal Discovery for High Dimensional DAGs with non-Gaussian Data. Forthcoming in Biometrika

Zhao, B., Wang, Y. S., and Kolar, M. (2019). Direct estimation of differential functional graphical models. In *Advances in Neural Information Processing Systems 32: Annual Conference on Neural Information Processing Systems 2019, NeurIPS 2019, 8-14 December 2019, Vancouver, BC, Canada*, pages 2571–2581

Chen, W., Drton, M., and Wang, Y. S. (2019). On causal discovery with an equal-variance assumption. *Biometrika*, 106(4):973–980

Drton, M., Fox, C., Wang, Y. S., et al. (2019). Computation of maximum likelihood estimates in cyclic structural equation models. *The Annals of Statistics*, 47(2):663–690

Chen, Y.-C., Wang, Y. S., and Erosheva, E. A. (2018). On the use of bootstrap with variational inference: Theory, interpretation, and a two-sample test example. *The Annals of Applied Statistics*, 12(2):846–876

Wang, Y. S., Matsueda, R. L., Erosheva, E. A., et al. (2017). A variational EM method for mixed membership models with multivariate rank data: An analysis of public policy preferences. *The Annals of Applied Statistics*, 11(3):1452–1480

Wang, Y. S. and Drton, M. (2017). Empirical likelihood for linear structural equation models with dependent errors. Stat, 6(1):434-447

SUBMITTED PREPRINTS

Wang, Y. S., Lee, C., West, J., Bergstrom, C., Erosheva, E.A. "Gender-based homophily in collaborations across a heterogeneous scholarly landscape" [arXiv]

TEACHING University of Washington EXPERIENCE Lead Instructor: STAT 311: I

Lead Instructor: STAT 311: Elements of Statistical Methods

Teaching Assistant: STAT 220: Principles of Statistical Reasoning; STAT 221: Statistical Concepts for Social Sciences; STAT 311: Elements of Statistical Methods; STAT 421: Applied Statistics and Experimental Design; STAT 534: Statistical Computing; STAT 566: Causal Modeling; STAT 570: Adv Regression Methods for Indep Data; CSSS 589: Multivariate Data Analysis for the Social Sciences

Professional Service UW Statistics Dept Lead TA

2013, 2016

Journal Referee: Annals of Applied Statistics; Annals of Statistics; Biometrika; Biometrics; Int. J. of Approximate Reasoning; J. of Machine Learning Research Conference Referee: AISTATS; ICML; NeurIPS; UAI

Industry Work Experience

## Susquehanna International Group

2013

IENCE Assistant Trader Intern

- Worked on the index/ETF desk; created tools for calculating "robust" beta and bootstrapping portfolio risk

Deloitte 2010 – 2012

Strategy and Operations Consultant

- Focused on analytic strategy and supply chain risk assessments with heavy manufacturing, technology hardware, and oil and gas clients
- Houston office Business Analyst Action Committee lead

References

Mathias Drton

University of Washington Padelford Hall A-317 Seattle, WA, 98195, U.S.A +1-206-543-3871 md5@uw.edu Elena Erosheva

University of Washington Padelford Hall C-14 Seattle, WA, 98195, U.S.A +1-206-685-0166 elena@stat.washington.edu Thomas Richardson

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