Y. Samuel Wang

Contact Information

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Research Interests

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

Academic Positions

Post-doctoral Research Professional — 2018 -
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., 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

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

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, W., Drton, M., Wang, Y. S. "On Causal Discovery with Equal Variance Assumption" `https://arxiv.org/pdf/1807.03419.pdf`. *Forthcoming in Biometrika*

Wang, Y. S., Drton, M. "Causal Discovery for High Dimensional DAGs with non-Gaussian Data" `https://arxiv.org/pdf/1803.11273.pdf`
Forthcoming in Biometrika

Work In Progress

Wang, Y. S., Lee, C., West, J., Bergstrom, C., Erosheva, E.A. "Gender-based homophily in scientific collaborations"

Wang, Y. S., Drton, M. "Causal Discovery for non-Gaussian Bow-free Acyclic Path Diagrams"

Wang, Y. S., Erosheva, E. "`mixedMem`: An `R` Package for Estimation of Mixed Membership Models"

Teaching Experience

University of Washington

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

Referee: Annals of Applied Statistics; Biometrika; Biometrics; ICML; Int. J. of Approximate Reasoning, JMLR, NeurIPS, UAI

Industry Work Experience

Susquehanna International Group 2013

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
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