Y. Samuel Wang

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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., and Erosheva, E. A. (2017). A variational EM method for mixed membership models with multivariate rank data: An analysis of public policy preferences. *Ann. Appl. Stat.*, 11(3):1452–1480

Wang, Y. S. and Drton, M. (2017). Empirical likelihood for linear structural equation models with dependent errors. *Stat*

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. *Ann. Appl. Stat.*, 12(2):846–876

Drton, M., Fox, C., Wang, Y.S. "Computation of Maximum Likelihood Estimates in Cyclic Structural Equation Models." Forthcoming *Ann. Stat.*

Work In Progress

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

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

Bergstrom, C., Erosheva, E., Lee, C., Wang, Y.S., West, J. "Measuring Homophilly in Co-authorship Formation When Adjusting for Sub-discipline Attributes"

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: *Ann. App. Stat., Int. J. of Approximate Reasoning, J. Mach. Learn. Res., 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	Elena Erosheva	Thomas Richardson
University of Washington	University of Washington	University of Washington
Padelford Hall A-317	Padelford Hall C-14	Padelford Hall B-313C
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