Current Assistant Professor 2021 -Cornell University POSITION Department of Statistics and Data Science Principal researcher (post-doc) 2018 - 2021 EDUCATION AND PREVIOUS The University of Chicago Booth School of Business ACADEMIC Supervisor: Mladen Kolar POSITIONS 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 Magna Cum Laude; Phi Beta Kappa

PUBLICATIONS

- 1) Zhao, B., Wang, Y. S., and Kolar, M. (2022). Fudge: A method to estimate a functional differential graph in a high-dimensional setting. *Journal of Machine Learning Research*, 23(82):1–82
- 2) Wang, Y. S., Lee, S. K., Toulis, P., and Kolar, M. (2021). Robust inference for high-dimensional linear models via residual randomization. In Meila, M. and Zhang, T., editors, *Proceedings of the 38th International Conference on Machine Learning*, volume 139 of *Proceedings of Machine Learning Research*, pages 10805–10815. PMLR
- 3) Wang, Y. S. and Drton, M. (2020). High-dimensional causal discovery under non-Gaussianity. $Biometrika,\ 107(1):41-59$
- 4) 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
- 5) Chen, W., Drton, M., and Wang, Y. S. (2019). On causal discovery with an equal-variance assumption. *Biometrika*, 106(4):973–980
- 6) Drton, M., Fox, C., and Wang, Y. S. (2019). Computation of maximum likelihood estimates in cyclic structural equation models. *The Annals of Statistics*, 47(2):663–690
- 7) 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
- 8) 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. *The Annals of Applied Statistics*, 11(3):1452–1480
- 9) Wang, Y. S. and Drton, M. (2017). Empirical likelihood for linear structural equation models with dependent errors. *Stat*, 6(1):434–447

Preprints

- 1) Wang, Y. S.; Lee, C.; West, J.; Bergstrom, C.; Erosheva, E.A. "Gender-based homophily in collaborations across a heterogeneous scholarly landscape" [arXiv]
- 2) Wang, Y. S.; Drton, M. "Causal discovery with unobserved confounding and non-Gaussian data" [arXiv]
- 3) Zhao, B.; Zhai, S.; Wang, Y. S.; Kolar, M. "High-dimensional Functional Graphical Model Structure Learning via Neighborhood Selection Approach" [arXiv]

TECHNICAL REPORTS AND SOFTWARE

- 1) Wang, Y. S., Erosheva, E. A. (2016) "On the relationship between set-based and network-based measures of gender homophily in scholarly publications" [arXiv]
- 2) Wang, Y. S., Erosheva, E. A. (2015) "Fitting mixed membership models using mixedmem" [CRAN]

OTHER PUBLICATIONS

1) Varshney, A., Wang, Y. S., Watson, R. A., Noll, A., Rossi, J., Shah, P. B., Kaneko, T., Giugliano, R. P., and Adler, D. S. (2018). Abstract 12195: Relationship between transcatheter aortic valve replacement wait time and mortality in patients with symptomatic severe aortic stenosis. *Circulation*, 138(Suppl_1):A12195–A12195

Presentations

2022 Johns Hopkins Causal Inference Working Group

2021

Colorado State, Statistics

Emory, Quantitative Theory and Methods

University of Southern California, School of Business

Cornell, Statistics and Data Science

University of Waterloo, Statistics and Actuarial Science

University of Toronto, Statistics

Stevens Institute of Technology, School of Business

Temple, School of Business

2020

Texas A&M, Statistics

Shiga University, International Symposium on Data Science Research and Practice

Prior to 2020

JSM (2015, 2017, 2018, 2019)

CMSTAT (2018)

American Sociological Association Annual Meeting (2018) Wisconsin Institute for Discovery at UW-Madison (2017)

Toyota Technical Institute - Chicago (2017)

TEACHING Lead Instructor:

Cornell University

BTRY 6020: Statistical Methods II

University of Washington

STAT 311: Elements of Statistical Methods

Teaching Assistant:

University of Washington

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

Statistics Dept Lead TA, University of Washington

2013, 2016

STATISTICAL CONSULTING

Statistical consultant, University of Washington

2017 - 2018

Center for Statistics and the Social Sciences

Professional Service Journal Referee: Annals of Applied Statistics; Annals of Statistics; Bernoulli; Biometrika; Biometrics; Computational Statistics and Data Analysis; Electronic Journal of Statistics; IEEE Transactions on Neural Networks and Learning; International Journal of Approximate Reasoning; Journal of the American Statistical Association; Journal of Causal Inference; Journal of Computational and Graphical Statistics; Journal of Machine Learning Research; Journal of the Royal Statistical Society: Series B

Conference Referee: AISTATS; ICML; NeurIPS; UAI; CLEAR

Other: NSF proposal reviewer, JMLR editorial board reviewer

NON-ACADEMIC

Susquehanna International Group

2013

EXPERIENCE 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

Personal Interests Soccer, Cycling, Hiking, Cooking