

# Y. Samuel Wang

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ACADEMIC POSITIONS	Assistant Professor <i>Cornell University</i> <i>Department of Statistics and Data Science</i>	2021 -
	Principal researcher (post-doc) <i>The University of Chicago</i> <i>Booth School of Business</i> Supervisor: Mladen Kolar	2018 - 2021
EDUCATION	Ph.D. in Statistics <i>University of Washington</i> Thesis: <i>Linear structural equation models with non-Gaussian errors</i> Advisor: Mathias Drton Committee members: Thomas Richardson and Emily Fox	2012 - 2018
	B.A. in Applied Math; Economics <i>Rice University</i> Magna Cum Laude; Phi Beta Kappa	2006 - 2010
PUBLICATIONS	<ol style="list-style-type: none"><li>1) 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, <i>Proceedings of the 38th International Conference on Machine Learning</i>, volume 139 of <i>Proceedings of Machine Learning Research</i>, pages 10805–10815. PMLR</li><li>2) Wang, Y. S. and Drton, M. (2020). High-dimensional causal discovery under non-Gaussianity. <i>Biometrika</i>, 107(1):41–59</li><li>3) Zhao, B., Wang, Y. S., and Kolar, M. (2019). Direct estimation of differential functional graphical models. In <i>Advances in Neural Information Processing Systems 32: Annual Conference on Neural Information Processing Systems 2019, NeurIPS 2019, 8-14 December 2019, Vancouver, BC, Canada</i>, pages 2571–2581</li><li>4) Chen, W., Drton, M., and Wang, Y. S. (2019). On causal discovery with an equal-variance assumption. <i>Biometrika</i>, 106(4):973–980</li><li>5) Drton, M., Fox, C., and Wang, Y. S. (2019). Computation of maximum likelihood estimates in cyclic structural equation models. <i>The Annals of Statistics</i>, 47(2):663–690</li><li>6) 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. <i>The Annals of Applied Statistics</i>, 12(2):846–876</li><li>7) 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. <i>The Annals of Applied Statistics</i>, 11(3):1452–1480</li><li>8) Wang, Y. S. and Drton, M. (2017). Empirical likelihood for linear structural equation models with dependent errors. <i>Stat</i>, 6(1):434–447</li></ol>	
PREPRINTS	<ol style="list-style-type: none"><li>1) Wang, Y. S.; Lee, C.; West, J.; Bergstrom, C.; Erosheva, E.A. “Gender-based homophily in collaborations across a heterogeneous scholarly landscape” [arXiv]</li></ol>	

- 2) Zhao, B.; Wang, Y. S.; Kolar, M. “FuDGE: Functional differential graph estimation with fully and discretely observed curves” [arXiv]
- 3) Wang, Y. S.; Drton, M. “Causal discovery with unobserved confounding and non-Gaussian data” [arXiv]
- 4) Zhao, B.; Zhai, S.; Wang, Y. S.; Kolar, M. “High-dimensional Functional Graphical Model Structure Learning via Neighborhood Selection Approach ” [arXiv]

WORK IN  
PROGRESS

- “Confidence sets for causal discovery”  
*with Mathias Drton and Mladen Kolar*
- “Posterior summarization for time varying dynamic Bayesian models”  
*with Mladen Kolar, Si Kai Lee, and David Puelz*
- “Estimation of functional graphical models via neighborhood selection”  
*with Mladen Kolar, Percy Zhai, and Boxin Zhao*
- “Non-parametric estimation of the score function”  
*with Mladen Kolar*

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

- 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
- 2019**  
JSM, *Topic contributed org. by Maryclare Griffin and David Matteson*  
American Sociological Association Annual Meeting, *Regular session*

**2018**JSM, *Topic contributed org. by John Kolassa*CMSTAT, *Session org. by Marloes Maathuis***2017**JSM, *Contributed talk*

Wisconsin Institute for Discovery at UW-Madison

Toyota Technical Institute - Chicago

**2015**JSM, *Contributed talk*

## TEACHING

**Statistics Dept Lead TA**, University of Washington

2013, 2016

**Lead Instructor:***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

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; Electronic Journal of Statistics, International Journal of Approximate Reasoning; Journal of the American Statistical Association; Journal of Causal Inference; Journal of Machine Learning Research; Journal of the Royal Statistical Society: Series B**Conference Referee:** AISTATS; ICML; NeurIPS; UAI**Other:** NSF proposal reviewer, JMLR editorial board reviewerNON-ACADEMIC  
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

PERSONAL  
INTERESTS

Soccer, Cycling, Hiking, Cooking