

# Y. Samuel Wang

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CONTACT INFORMATION	5807 S Woodlawn Ave Chicago, IL 60637 swang24@uchicago.edu ysamuelwang.com	
ACADEMIC POSITIONS	Principal researcher (post-doc) <i>The University of Chicago; Booth School of Business</i> Supervisor: Mladen Kolar	2018 -
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  B.A. in Applied Math; Economics <i>Rice University</i> Magna Cum Laude; Phi Beta Kappa	2012 - 2018      2006 - 2010
PUBLICATIONS	<ol style="list-style-type: none"><li>1) Wang, Y. S. and Drton, M. (2020). High-dimensional causal discovery under non-Gaussianity. <i>Biometrika</i>, 107(1):41–59</li><li>2) 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>3) 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>4) 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>5) 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>6) 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>7) 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>	
SUBMITTED 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><li>2) Zhao, B., Wang, Y. S., Kolar, M. “FuDGE: Functional differential graph estimation with fully and discretely observed curves” [arXiv]</li></ol>	

- 3) Wang, Y. S., Drton, M. “Causal discovery with unobserved confounding and non-Gaussian data” [[arXiv](#)]

WORK IN  
PROGRESS

“Confidence sets for causal discovery”  
*with Mathias Drton and Mladen Kolar*

“High-dimensional residual randomization inference”  
*with Yi Ding, Mladen Kolar, Si Kai Lee, and Panos Toulis*

“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

Wang, Y. S., Erosheva, E. A. (2016) “On the relationship between set-based and network-based measures of gender homophily in scholarly publications” [[arXiv](#)]

Wang, Y. S., Erosheva, E. A. (2015) “Fitting mixed membership models using `mixedmem`” [[CRAN](#)]

PRESENTATIONS

**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  
*Center for Statistics and the Social Sciences*

2017 - 2018

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 Machine Learning Research

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

**Other:** NSF proposal reviewer, JMLR editorial board reviewer

NON-ACADEMIC  
EXPERIENCE

**Susquehanna International Group**  
*Assistant Trader Intern*

2013

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

**Deloitte**  
*Strategy and Operations Consultant*

2010 – 2012

- 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