

Yuhao Wang

website <https://yuhaow.github.io>

APPOINTMENTS

Assistant Professor

Institute of Interdisciplinary Information Sciences, Tsinghua University, Beijing, China 08/2020 - present

Research Affiliate

Shanghai Qi Zhi Institute, Shanghai, China 08/2020 - present

Research Associate

Statistical Laboratory, University of Cambridge, Cambridge, UK 08/2019 - 07/2020
Advisor: Professor Rajen Shah

EDUCATION

Doctor of Philosophy

Department of EECS, Massachusetts Institute of Technology, Cambridge, MA, USA 06/2019
Advisor: Professor Caroline Uhler

Master of Science

Department of EECS, Massachusetts Institute of Technology, Cambridge, MA, USA 06/2016
Advisor: Professor Bonnie Berger

Bachelor of Engineering

Department of Automation, Tsinghua University, Beijing, China 07/2014

MAIN RESEARCH INTERESTS

causal inference, high-dimensional statistics, experimental design.

AWARDS

Forbes China 30 under 30 (2021) 09/2021

PUBLICATIONS

(**): equal contribution; *: alphabetical order)

Submitted for Review

- Guido Imbens, Nathan Kallus, Xiaojie Mao, **Y. Wang**. *Long-term causal inference under persistent confounding via data combination*, preprint arXiv:2202.07234
- **Y. Wang**, Xinran Li. *Rerandomization with diminishing covariate imbalance and diverging number of covariates*, preprint arXiv:2109.02578
- **Y. Wang**^{*}, Weiming Zhu^{*}. *Profit-driven experimental design*, preprint at SSRN: <https://ssrn.com/abstract=3896229>
- **Y. Wang**, Rajen D. Shah. *Debiased inverse propensity score weighting for estimation of average treatment effects with high-dimensional confounders*, preprint arXiv:2011.08661

Referred Publications

- Alexandra Carpentier^{*}, Olivier Collier^{*}, Laetitia Comminges^{*}, Alexandre B. Tsybakov^{*}, **Y. Wang**^{*}. *Estimation of the ℓ_2 -norm and testing in sparse linear regression with unknown variance, Bernoulli* (to appear)

- Liam Solus, **Y. Wang**, Caroline Uhler. *Consistency guarantees for greedy permutation-based causal inference algorithms*, *Biometrika* 108.4 (2021) 795-814.
- **Y. Wang**, Santiago Segarra, Caroline Uhler. *High-dimensional joint estimation of multiple directed Gaussian graphical models*, *Electronic Journal of Statistics* 14.1 (2020): 2439-2483.
- **Y. Wang**, Uma Roy, Caroline Uhler. *Learning High-dimensional Gaussian Graphical Models under Total Positivity without Adjustment of Tuning Parameters*, *AISTATS* 2020.
- Alexandra Carpentier*, Olivier Collier*, Laetitia Comminges*, Alexandre B. Tsybakov*, **Y. Wang***. *Minimax rate of testing in sparse linear regression*, *Automation and Remote Control* 80.10 (2019): 1817-1834. (special issue in memory of Yakov Tsympkin)
- **Y. Wang**, Chandler Squires, Anastasiya Belyaeva, Caroline Uhler. *Direct estimation of differences in causal graphs*, *NeurIPS* 2018
- **Y. Wang**, Liam Solus, Karren D. Yang, Caroline Uhler. *Permutation-based causal inference algorithms with interventions*, *NeurIPS* 2017 (**accepted as spotlight, 4% acceptance**)
- Santiago Segarra, **Y. Wang**, Caroline Uhler, Antonio G Marques. *Joint inference of networks from stationary graph signals*, *Asilomar Conference on Signals, Systems, and Computers* 2017
- Yaron Orenstein, **Y. Wang**, Bonnie Berger. *RCK: accurate and efficient inference of sequence and structure-based protein-RNA binding models from RNAcompete data*, *ISMB* 2016 (**best student paper**)
- Xin He**, A. Ercument Cicek**, **Y. Wang****, Marcel H. Schulz, Hai-Son Le, Ziv Bar-Joseph. *De novo ChIP-seq analysis*, *Genome biology* 16.1 (2015): 205.
- **Y. Wang**, Jianyang Zeng, *Predicting drug-target interactions using restricted Boltzmann machines*, *ISMB* 2013; *Bioinformatics* 29.13 (2013): i126-i134.

TEACHING EXPERIENCE

Course Instructor 30470303-0 Probability and Statistics (English), Tsinghua University	09/2020 -
Course Instructor 80470282-0 Advanced Topics in Causal Inference (English), Tsinghua University	02/2021 -
Teaching Assistant 6.867 Machine Learning, Massachusetts Institute of Technology	09/2016 – 01/2017

INTERNSHIP EXPERIENCE

Student Intern School of Computer Science, Carnegie Mellon University. Advisor: Professor. Ziv Bar-Joseph	07/2013 – 08/2013
Undergraduate Research Assistant Institute for Interdisciplinary Information Sciences, Tsinghua University. Advisor: Professor Jianyang Zeng	2012.9 – 2013.3

CONFERENCES AND INVITED TALKS

Long-term causal inference under persistent confounding via data combination, IIM Seminar, HKU Business School, University of Hong Kong, Hong Kong, China (virtual).	06/2022
Forum on Frontiers in Statistics and Data Analysis, Xiamen University and Tianyuan Mathematical Center in Southeast China, Xiamen, Fujian, China (virtual).	04/2022
Tsinghua Logic Salon, Tsinghua University, Beijing, China.	04/2022

Profit-driven experimental design,

Informs 2021 Invited Session Experiments and Computational Social Science, Anaheim, CA, USA (virtual).	10/2021
Shanghai Jiao Tong University Summer School, Shanghai, China.	07/2021
Debiased inverse propensity score weighting for estimation of average treatment effects with high-dimensional confounders,	
Joint Econometrics and Statistics Seminar Series, the London School of Economics and Political Science, London, UK.	02/2022
Seminar at School of Mathematical Sciences, Shanghai Jiao Tong University, Shanghai, China.	07/2021
Young Data Science Researcher Seminar, ETH Zurich, Zurich, Switzerland (virtual).	06/2021
Seminar at Center for Statistical Science, Tsinghua University, Beijing, China.	03/2021
Hong Kong Machine Learning Meetup, Hong Kong, China (virtual).	02/2021
Seminar of Statistics at ENSAE-CREST, Paris, France (virtual).	11/2020
Pacific Causal Inference Conference, Peking University, Beijing, China (virtual).	09/2020
Learning high-dimensional Gaussian graphical models under total positivity without tuning parameters,	
Machine Learning Theory Workshop, Peking University, Beijing, China.	06/2019
Seminar at Barcelona Graduate School of Economics, Barcelona, Spain.	05/2019
Provable algorithms for statistical challenges in data driven decision making,	
Seminar at Krannert School of Management, Purdue University, West Lafayette, IN, USA.	02/2019
Seminar at iDDA, The Chinese University of Hong Kong (Shenzhen), Shenzhen, China.	01/2019
Seminar at IIIS, Tsinghua University, Beijing, China.	12/2018
Direct estimation of differences in causal graphs,	
International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics), Pisa, Italy.	12/2018
Robust estimation of high-dimensional graphical models under total positivity,	
MIT Applied Algebra Day, Cambridge, MA, USA.	11/2018
Permutation-based causal inference algorithms with interventions,	
NeurIPS spotlight presentation, Long Beach, CA, USA.	12/2017

ACADEMIC SERVICE

Editorial board reviewer

Journal of Machine Learning Research 2020 - present

Journal reviewer

Annals of Statistics; Biometrika; Journal of the American Statistical Association; Journal of Machine Learning Research; Biometrics

Senior program committee

IJCAI 2021; AAAI 2023

Conference reviewer / conference program committee member

ICML 2018; NeurIPS 2018; ICML 2019; NeurIPS 2019; AAAI 2020; ICLR 2020; STOC 2020; UAI 2020

MIT LIDS & stats tea talk committee chairs

2018 - 2019