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CURRICULUM VITAE

Jingshu Wang

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CURRENT EMPLOYMENT

Assistant Professor, 2019-present
Department of Statistics, University of Chicago

EDUCATION

2016	**Ph.D.**, Statistics, Stanford University Advisor: Art B. Owen Thesis: Factor analysis for high-dimensional data
2011	**B.Sc.**, Mathematics and Applied Mathematics, Peking University, China

WORK EXPERIENCE

2016-2019	Postdoctoral Fellow in Statistics (Mentor: Nancy R. Zhang) The Wharton School, University of Pennsylvania
2013	Summer Graduate Intern Quantitative Marketing, Google

PROFESSIONAL SERVICE

2016-present	Referee for *Journal of the American Statistical Association, Biometrika,* *Annals of Applied Statistics, Annals of Statistics,* *Statistics and Probability Letters, Statistica Sinica, Biometrics,* *Journal of Computational and Graphical Statistics, Statistics and Computing,* *Journal of Machine Learning Research, Biostatistics,* *Biostatistics, Genetics, Bioinformatics, PLoS Medicine,* *Nature Communications, Nature Machine Learning Intelligence*

HONORS AND AWARDS

2018	ICSA 2018 Conference Young Researcher Award
2016	SFASA Student Travel Award for 2016 Joint Statistical Meeting
2015	Stanford Statistics Department Teaching Assistant Award

PUBLICATIONS

Peer-reviewed Journal Articles

1. **Jingshu Wang**, Lin Gui, Weijie Su, Chiara Sabatti and Art B. Owen. Detecting Replicating Signals using Adaptive Filtering Procedures, *Annals of Statistics*, to appear.

2. Qingyuan Zhao, **Jingshu Wang**, Zhen Miao, Nancy R Zhang, Sean Hennessy, Dylan S Smalland Daniel J Rader, 2021. A Mendelian randomization study of the role of lipoprotein subfractions in coronary artery disease. *Elife*, 10, e58361.

3. **Jingshu Wang**, Qingyuan Zhao, Jack Bowden, Gibran Hemani, George Davey Smith, Dylan S. Small and Nancy R. Zhang, 2021. Causal Inference for Heritable Phenotypic Risk Factors Using Heterogeneous Genetic Instruments, *PLoS Genetics*, 17(6), e1009575.

4. Xiangbin Ruan, Bowei Kang, Cai Qi, Wenhe Lin, **Jingshu Wang***, Xiaochang Zhang*, 2021. Progenitor cell diversity in the developing mouse neocortex. *Proceedings of the National Academy of Sciences*, 118(10).

5. Bowei Kang, Eroma Abeysinghe, Divyansh Agarwal, Quanli Wang, Sudhakar Pamidighantam, Mo Huang, Nancy R Zhang, **Jingshu Wang**, 2020. Online Single-cell RNA-seq Data Denoising with Transfer Learning. *PEARC'20: Practice and Experience in Advanced Research Computing*, 469472.

6. Divyansh Agarwal, **Jingshu Wang**, and Nancy R. Zhang, 2020. Data Denoising and Post-Denoising Corrections in Single Cell RNA Sequencing. *Statistical Science*, 35(1): 112-128.

7. Zilu Zhou, Chengzhong Ye, **Jingshu Wang**, and Nancy R. Zhang, 2020. Surface protein imputation from single cell transcriptomes by deep neural networks. *Nature Communications*, 11(1): 1-10.

8. **Jingshu Wang**, Divyansh Agarwal, Mo Huang, Gang Hu, Zilu Zhou, and Nancy R. Zhang, 2019. Data denoising with transfer learning in single-cell transcriptomics. *Nature Methods*, 16, 875-878.

9. Qingyuan Zhao, Yang Chen, **Jingshu Wang**, and Dylan S. Small. Powerful genome-wide design and robust statistical inference in two-sample summary-data Mendelian randomization, 2019. *International Journal of Epidemiology*, 48(5),1478-1492.

10. Qingyuan Zhao, **Jingshu Wang**, Jack Bowden, Dylan S. Small. Statistical Inference in Two-sample Summary-data Mendelian Randomization Using Robust Adjusted Profile Score. *Annals of Statistics*, to appear

11. Qingyuan Zhao, **Jingshu Wang**, Jack Bowden, Dylan S. Small, 2019. Two-sample Instrumental Variable Analyses Using Heterogeneous Samples. *Statistical Science*, 34(2), 317-333.

12. **Jingshu Wang** and Art B. Owen. Admissibility in Partial Conjunction Testing, 2019. *Journal of the American Statistical Association* 114, 158-168

13. **Jingshu Wang**, Mo Huang, Eduardo Torre, Hannah Dueck, Sydney Shaffer, John Murray, Arjun Raj, Mingyao Li and Nancy R. Zhang. Gene Expression Distribution Deconvolution in Single Cell RNA Sequencing, 2018. *Proceedings of National Academy of Sciences* 115(28), E6437-E6446

14. Mo Huang, **Jingshu Wang**, Eduardo Torre, Hannah Dueck, Sydney Shaffer, Roberto Bonasio, John Murray, Arjun Raj, Mingyao Li and Nancy R. Zhang. Gene Expression Recovery For Single Cell RNA Sequencing, 2018. *Nature Methods* 15, 539-542

15. **Jingshu Wang***, Qingyuan Zhao*, Trevor Hastie and Art B. Owen. Confounder Adjustment in Multiple Hypotheses Testing, 2017. *Annals of Statistics* 45, 1863-1894

16. Art B. Owen and **Jingshu Wang**. Bi-cross-validation for Factor Analysis, 2016. *Statistical Science* 31, 119-139

Unpublished manuscripts

17. Dongyue Xie and **Jingshu Wang** (2022). Robust Statistical Inference for Cell Type Deconvolution. *ArXiv*.

18. Jinhong Du, Ming Gao, **Jingshu Wang** (2021). Model-based Trajectory Inference for Single-Cell RNA Sequencing Using Deep Learning with a Mixture Prior. *BioRXiv*.

PRESENTATION

Invited Seminars and Conference Presentations

(2021) statistics colloquium, Michigan State University

(2021) ICSA Applied Statistics Symposium, virtual

(2021) Department of statistics seminar, The University of Iowa

(2021) Department of Statistics seminar, Hong Kong University

(2021) Department of Biostatistics seminar, Yale University

(2020) Symposium 2020 ICSA, virtual

(2020) International Seminar on Selective Inference, virtual

(2020) ENAR 2020 Spring Meeting, virtual

(2019) Department of Statistics seminar, Northwestern University

(2019) Department of Statistics seminar, University of Pittsburgh

(2019) Biostatistics seminar series, Northwestern University

(2019) Department of Biostatistics seminar, Indiana University

(2019) Joint Statistical Meeting, Denver

(2019) ISMB/ECCB 2019 Basel, Swiss (Tutorial)

(2019) IMS China Meeting, China

(2019) ICSA China Conference, China

(2019) Department of Biostatistics seminar, University of Washington

(2019) Department of Statistics seminar, University of Wisconsin, Madison

(2019) Department of Statistics seminar, University of Chicago

(2019) Department of Statistics seminar, Duke University

(2019) Department of Statistics seminar, Carnegie Mellon University

(2019) Department of Statistics seminar, Columbia University

(2019) Department of Statistics seminar, Florida State University

(2019) Department of Statistics seminar, University of Florida

(2019) Department of Statistics seminar, Purdue University

(2019) Department of Statistics seminar, University of Illinois Urbana-Champaign

(2018) ICSA China Conference on Data Science, China

(2018) 2nd International Conferences on Econometrics and Statistics (EcoSta), China

(2017) Department of Statistics, Tel Aviv Univeristy, Israel

(2016) 10th ICSA International Conference, China

Contributed Conference Presentations and Posters

(2019) CTRG2019, Chicago (Poster)

(2018) ASHG, San Diego (Poster)

(2017) ASHG, Orlando (Poster talk)

(2017) 10th International Conference on Multiple Comparison Procedures, Riverside (Talk)

(2016) Joint Statistical Meeting, Chicago (Talk)

(2015) 9th International Conference on Multiple Comparison Procedures, India (Talk)

(2015) Stanford BioX symposium (Poster)

(2014) 2014 Joint Statistical Meeting, Boston (Talk)

(2014) ICSA-KISS Applied Statistics Symposium, Portland (Talk)

TEACHING EXPERIENCE

Instructor

University of Chicago

STAT 41530	Topics in Causal Inference
STAT 34700	Generalized Linear Models
STAT 22000	Statistical Methods and Applications

Stanford University

Stats110	Statistical Methods in Engineering and Physical Science (Summer, 2016)