Wenjie Hu

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Education and academic positions

Wuhan Univiersity *Wuhan, China*
Assistant professor *2026.10 - up to now*

University of Pennsylvania *Philadelphia, USA*
Postdoctoral researcher *2024.08 - 2026.09*

Peking University *Beijing, CN*
Ph.D. in Statistics *2019.09 - 2024.06*

University of Cambridge *Cambridge, UK*
Visiting scholar in Statistical Laboratory *2023.01 - 2024.01*

Peking University *Beijing, CN*
B.S. in Mathematics and Applied Mathematics *2015.09 - 2019.06*

Research Interests

Causal inference with unmeasured confounding; Missing data; Data fusion; Semiparametric theory; Graphical models; Selective inference.

Publications

† indicates joint first author or equal contribution.

Published

1. **W. Hu**†, R. Wang†, W. Li and W. Miao (2024). Semiparametric Efficient Fusion of Individual Data and Summary Statistics. *Accepted by JASA*. arXiv: 2210.00200
2. K. Jiang†, **W. Hu**†, S. Yang, X. Lai and X.-H. Zhou (2024). Improve Sensitivity Analysis Synthesizing Randomized Clinical Trials With Limited Overlap. *Accepted by Statistics in Medicine*. arXiv: 2409.07391
3. J. Sun†, **W. Hu**† and X.-H. Zhou (2024). Drug Efficacy Estimation for Follow-on Companion Diagnostic Devices Through External Studies. *Statistics in Medicine* 43.29, pp. 5605–5617
4. **W. Hu**, X.-H. Zhou and P. Wu (2025). Identification and estimation of treatment effects on long-term outcomes in clinical trials with external observational data. *Statistica Sinica* 35, pp. 959–980. DOI: 10.5705/ss.202023.0006
5. P. Wu, Z. Tan, **W. Hu** and X.-H. Zhou (2024). Model-assisted inference for covariate-specific treatment effects with high-dimensional data. *Statistica Sinica* 34, pp. 459–479. DOI: 10.5705/ss.202022.0089

6. W. Miao, **W. Hu**, E. L. Ogburn and X.-H. Zhou (2023). Identifying effects of multiple treatments in the presence of unmeasured confounding. *Journal of the American Statistical Association* 118.543, pp. 1953–1967. DOI: 10.1080/01621459.2021.2023551
7. W. Miao, W. Li, **W. Hu**, R. Wang and Z. Geng (2022). Invited commentary: estimation and bounds under data fusion. *American Journal of Epidemiology* 191.4, pp. 674–678. DOI: 10.1093/aje/kwab194
8. C. You, Y. Deng, **W. Hu**, J. Sun, Q. Lin, F. Zhou, C. H. Pang, Y. Zhang, Z. Chen and X.-H. Zhou (2020). Estimation of the time-varying reproduction number of COVID-19 outbreak in China. *International journal of hygiene and environmental health* 228, p. 113555. DOI: 10.1016/j.ijheh.2020.113555

Preprints & Under Revision

1. Z. Gao†, **W. Hu**† and Q. Zhao (2023). Revisit FDR: Benjamini-Hochberg procedure as a non-cooperative game. *Major revision invited by Statistical Science*
2. X. Feng†, **W. Hu**†, P. Yang, T. Li and X.-H. Zhou (2024). Identifying average causal effect in regression discontinuity design with auxiliary data. *Submitted to JASA*. arXiv: 2412.20840
3. **W. Hu**, K. Jiang, H. Zhou, E. W. Steyerberg and X.-H. Zhou (2025). Methods for fusion of randomized trial with real world data: a review on estimation and sensitivity analysis. *Submitted to Statistics in Medicine*
4. Y. Zhu, **W. Hu**, B. Zhang, Y. Qiu and Y. Chen (2025). Robust bias calibration for causal inference under unmeasured confounding. *Submitted to JASA*
5. **W. Hu**, Y. Zhu, B. Zhang, Y. Qiu and Y. Chen (2025). Multi-site distributional inference of causal effect in the presence of unmeasured confounding. *Submitted to Biometrika*
6. **W. Hu**, J. Hu and Y. Chen (2025). Identifying causal effect for multiple treatments and outcomes with the existence of unmeasured confounding. *Submitted to JRSSB*

Working Papers

1. **W. Hu**, H. Zhou, S. Yang and X.-H. Zhou (2025). Synergizing Treatment Effect Assessment: Unifying Multiple Outcomes through RCT-RWD Integration for Enhanced Efficiency and Expanded Scope.

Awards and Fellowships

Award for Excellent Students	*2018, 2020, 2022*
School of Mathematical Science Scholarship	*2020, 2021*
Minglue Scholarship	*2020*
President Scholarship	*2022, 2023*
BICMR Mathematical Award for Graduate Students	*2022*
Outstanding Graduate of Beijing	*2024*

Presentations

Oct 2025. *Identifying average causal effect in regression discontinuity design with auxiliary data*. University of Maryland.

August 2025. *Identifying causal effect for multiple treatments and outcomes in the presence of unmeasured confounding*. JSM 2025.

June 2025. *Multi-site distributional inference of causal effect in the presence of invalid negative control outcomes*. ICSA 2025.

September 2023. *Identification and Estimation of Treatment Effects on Long-term Outcomes in Clinical Trials with External Observational Data*. Pacific Causal Inference Conference.

January 2023. *Paradoxes and resolutions for semiparametric fusion with individual and summary data*. University of Cambridge.

May 2021. *Identifying effects of multiple treatments in the presence of unmeasured confounding*. Peking university.

Teaching Experience

Statistical Inference,Teaching Assistant *Fall 2019,2020,2021*
Introduction to Causal Inference,Teaching Assistant *Spring 2020*
Introduction to Semiparametric Theory,Teaching Assistant *Summer school 2021*

Professional Service

Peer review for scientific journals: Statistics in Medicine, Journal of Computational and Graphical Statistics, Journal of the Royal Statistical Society (Series B, Statistical Methodology).