Bingkai Wang, PhD

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Education

Ph.D. in Biostatistics, Johns Hopkins University, Sep. 2016 – Mar. 2021
Advisors: Michael Rosenblum and Brian Caffo.

B.S. in Mathematics, Fudan University, Sep. 2012 – May. 2016
Advisor: Shuqin Zhang.

Professional Experiences

Postdoctoral Fellow, Statistics Department of the Wharton School, University of Pennsylvania, April 2021 – present.

Summer Internship, Statistical Methodology & Consulting Group, Novartis, 2018.

Publications

Peer-reviewed Journal Articles

1. Zhao Yi, Brian Caffo, **Bingkai Wang**, R. Li Chiang-shan, and Xi Luo. A Whole-Brain Regression Method to Identify Individual and Group Variations in Functional Connectivity. *Brain and Behavior* (To appear). https://doi.org/10.1101/2020.01.16.909580.

2. **Bingkai Wang**, Xi Luo, Yi Zhao, Brian Caffo. Semiparametric Partial Common Principal Component Analysis for Covariance Matrices. *Biometrics* (2020). https://doi.org/10.1111/biom.13369.

3. Canto, M.I., Trindade, A.J., Abrams, J., Rosenblum, M., Dumot, J., Corbett, F.S., Diehl, D., Chak, A., Khara, H., McKinley, M. Shin, E.J., Waxman, I., Infantolino, A., Tofani, C., Samarasena, J., Chang, K., **Wang, B**., Goldblum, J., Voltaggio, L., Montgomery, E., Lightdale, C.J., Shaheen, N.J. Multifocal Cryoballoon Ablation for Eradication of Barrett's Esophagus-Related Neoplasia: A Prospective Multicenter Clinical Trial. *American Journal of Gastroenterology* (2020). doi: 10.14309/ajg.0000000000000822.

4. Yi Zhao, **Bingkai Wang**, Stewart Mostofsky, Brian Caffo, Xi Luo, Covariate Assisted Principal regression for covariance matrix outcomes, *Biostatistics* (2019). https://doi.org/10.1093/biostatistics/kxz057.

5. **Bingkai Wang,** Elizabeth L. Ogburn, and Michael Rosenblum. Analysis of covariance in randomized trials: More precision and valid confidence intervals, without model assumptions. *Biometrics* (2019). https://doi.org/10.1111/biom.13062.

6. Paniz Charkhchi, **Bingkai Wang**, Brian Caffo and David M. Yousem. Bias in Neuroradiology Peer Review: Impact of a "Ding" on "Dinging" Others. *American Journal of Neuroradiology* (2018). https://doi.org/10.3174/ajnr.A5908.

Commentary

1. Michael Rosenblum, **Bingkai Wang**. The Critical Role of Statistical Analyses in Maximizing Power Gains from Covariate-Adaptive Trial Designs. *JAMA Network Open* (2019). doi:10.1001/jamanetworkopen.2019.0789.

2. **Bingkai Wang,** Elizabeth L. Ogburn, and Michael Rosenblum. Rejoinder to "Robustness of ANCOVA in randomized trials with unequal randomization" by Jonathan W. Bartlett. *Biometrics* (2019). https://doi.org/10.1111/biom.13182

Manuscripts

1. **Bingkai Wang**, Ryoko Susukida, Ramin Mojtabai, Masoumeh Amin-Esmaeili, and Michael Rosenblum. Model-Robust Inference for Clinical Trials that Improve Precision by Stratified Randomization and Adjustment for Additional Baseline Variables. *arXiv preprint.* https://arxiv.org/abs/1910.13954.
(Under review at *Journal of American Statistical Association: Theory and Methods* and received a revision request)

Honors and Awards

Second place in the student paper competition by paper "Model-Robust Inference for Clinical Trials that Improve Precision by Stratified Randomization and Adjustment for Additional Baseline Variables", American Statistical Association (ASA) Biopharmaceutical Section, 2021.

Margaret Merrell Award (awarded to one doctoral student per year for outstanding research), Johns Hopkins University Department of Biostatistics, 2021.

Distinguished student paper award by paper "Model-Robust Inference for Clinical Trials that Improve Precision by Stratified Randomization and Adjustment for Additional Baseline Variables", Eastern North American Region (ENAR) International Biometric Society, 2021.

Student paper award by paper "Semiparametric Partial Common Principal Component Analysis for Covariance Matrices", the Statistical Meeting in Imaging, 2020.

Center of Excellence in Regulatory Science and Innovation (CERSI) Scholarship, U.S. Food and Drug Administration and Johns Hopkins University, 2017-present.

Teaching

Lead teaching assistant, Statistical Methods in Public Health, second term, 2020 autumn.

Teaching assistant, Statistical Methods in Public Health, 2018-2020.

Teaching assistant and guest lecturer, Advanced Data Science I-II, 2018.

Teaching assistant and guest lecturer, Statistical Theory I-IV, 2017-2018.

Activities

Presentations

Semiparametric Partial Common Principal Component Analysis for Covariance Matrices. SMI, May 2020.

Model-Robust Inference for Clinical Trials that Improve Precision by Stratified Randomization and Covariate adjustment. Eastern North American Region (ENAR) Spring Meeting, March 2020, and Joint Statistical Meeting (JSM), August 2020.

Clarifying How Adjustment for Prognostic Baseline Variables Leads to More Precision and Less Bias in Randomized Trials. ENAR, March 2018 and JSM, July 2019.