Shuting Shen

Mailing Address: 100 Fuqua Drive, Durham, NC 27708

+1 8577563165 ss1446@duke.edu

Current Position

Duke University, Durham, NC, United States 07/2023 – Present

- Postdoctoral Associate (jointly at Fuqua School of Business and Department of Biostatistics & Bioinformatics)
- Advisors: Dr. Ethan X. Fang (Department of Biostatistics & Bioinformatics) and Dr. Alexandre Belloni (Fuqua School of Business)

Education Background

Department of Biostatistics, Harvard University, Cambridge, MA, United States

- Ph.D. in Biostatistics**,** May 2023
- GPA: 3.931
- Advisors: Dr. Xihong Lin and Dr. Junwei Lu

School of Mathematical Sciences, Peking University, Beijing, China

- Bachelor of Science (Mathematics), Jul 2018
- Major GPA: 95.9/100, Ranking: top 1%

School of Foundational Education, Peking University (Health Science Center), Beijing, China

- Bachelor of Arts, Jul 2018
- Major GPA: 90.4/100, Ranking: 1/36

Awards and Honors

- ASA SLDS Student Paper Award, 2023
- WNAR Best Student Paper Award, 2022
- ICSA Junior Research Award, 2022
- ICSA Student Paper Award, 2022
- NESS Student Research Award, 2022
- Robert B. Reed Prize (awarded each year to the student(s) receiving the highest grade on the Department's written qualifying exam), Harvard University, 2020
- First Grade Scholarship & Merit Student Awards, Peking University, 2017
- Special Grade Scholarship & Merit Student Awards, Peking University, 2016
- First Grade Scholarship & Merit Student Awards, Peking University, 2015
- 1st Prize (Provincial), National Mathematical Olympiad, The Chinese Mathematical Society, 2012

Publications/Preprints/Working Papers

Statistical Theories and Methods

- **Shuting Shen**, Junwei Lu, 'Combinatorial-Probabilistic Trade-Off: Community Properties Test in the Stochastic Block Models', *IEEE Transactions on Information Theory,* vol. 69, no. 10, pp. 6605-6618 (short version is *ICLR 2023 spotlight* paper), 2023.

- **Shuting Shen**, Junwei Lu, Xihong Lin, 'Dimension Reduction for Large-Scale Federated Data: Statistical Rate and Asymptotic Inference', invited revision at *Journal of the American Statistical Association, Theory and Methods Section*, 2023
- **Shuting Shen**, Xi Chen, Ethan X. Fang, Junwei Lu, 'Combinatorial Inference on the Optimal Assortment in Multinomial Logit Models', invited revision at *Operations Research* (abstract at EC'23), 2023.
- Zhiwei Xu, Ziming Gan, Doudou Zhou, **Shuting Shen**, Junwei Lu, Tianxi Cai, 'Inference of Dependency Knowledge Graph for Electronic Health Records', under revision at *Journal of the Royal Statistical Society, Series B,* 2023.
- Alexandre Belloni, Ethan X. Fang, **Shuting Shen (alphabetical order)**, 'Anti-Concentration Inequalities for the Difference of Maxima of Gaussian Random Vectors', submitted to *Annals of Applied Probability*, 2024.
- Alexandre Belloni, Ethan X. Fang, **Shuting Shen (alphabetical order)**, 'Property Testing of Optimal Assortment in Contextual Multinomial Logit Models with Adaptive Sampling', manuscript available upon request, 2024.
- **Shuting Shen**, Tony Chen, Junwei Lu, Xihong Lin, 'Fast representation learning and variable selection for vertically distributed data', manuscript available upon request, 2024

Applications

- McCabe, Sean D., E. Adrianne Hammershaimb, David Cheng, Andy Shi, Derek Shyr, **Shuting Shen**, Lyndsey D. Cole, …, Xihong Lin, 'Unraveling attributes of COVID-19 vaccine acceptance and uptake in the US: A large nationwide study', *Scientific Reports* 13, no. 1, pp. 8360, 2023.
- Zorana Ivcevic*****, **Shuting Shen***, Shengjie Lin, David Cheng, Ryan Probasco, Ben Silbermann, Feng Zhang, Xihong Lin, Marc Brackett (* = **equal contribution**), "Daily positive and negative affect during the COVID-19 pandemic." *Frontiers in Psychology* 14, pp. 1239123, 2024.
- Gan, Ziming, Doudou Zhou, Everett Rush, Vidul A. Panickan, Yuk-Lam Ho, George Ostrouchov, Zhiwei Xu, **Shuting Shen**, …, Tianxi Cai, Junwei Lu, 'ARCH: Large-scale knowledge graph via aggregated narrative codified health records analysis', minor revision at *Journal of Biomedical Informatics*, 2024.
- Shengjie Lin*****, **Shuting Shen***, Zorana Ivcevic, David Cheng, Ryan Probasco, Ben Silbermann, Feng Zhang, Xihong Lin, Marc Brackett (* = **equal contribution**), 'Effects of an App-Based Brief Gratitude Practice on Positive and Negative Daily Affect During the COVID-19 Pandemic', submitted, 2024.

Invited and Contributed Talks

- *Combinatorial Inference on the Optimal Assortment in Multinomial Logit Models.* The 58th Annual Conference on Information Sciences and Systems (CISS), March 2024.
- *Combinatorial Inference on the Optimal Assortment in Multinomial Logit Models*. Hong Kong University Business School, October 2023.
- *Fast Distributed Principal Component Analysis of Large-Scale Federated Data*. Peking University, September 2023.
- *Fast Distributed Principal Component Analysis of Large-Scale Federated Data*. Joint Statistical Meetings, August 2023.
- *Combinatorial Inference on the Optimal Assortment in Multinomial Logit Models*. Fudan University, August 2023.
- *Combinatorial Inference on the Optimal Assortment in Multinomial Logit Models*. ACM Conference on Economics and Computation, July 2023.
- *Combinatorial-Probabilistic Trade-Off: Community Properties Test in the Stochastic Block Models.* The Eleventh International Conference on Learning Representations, May 2023.
- *Fast Distributed Principal Component Analysis of Large-Scale Federated Data*. The ICSA 2022 Applied Statistics Symposium, June 2022.

Teaching

- BST 235: Advanced Regression and Statistical Learning, Teaching Assistant, 2022-2023 Fall.

- BST 230: Probability I, Teaching Assistant, 2021-2022 Fall.
- BST 235: Advanced Regression and Statistical Learning, Teaching Assistant, 2020-2021 Fall.
- BST 231: Inference I, Teaching Assistant, 2020-2021 Spring.
- BST 216: Introduction to Quantitative Methods for Monitoring and Evaluation, Teaching Assistant, 2019-2020 Spring.
- BST 201: Introduction to Statistical Methods, Teaching Assistant, 2019-2020 Fall.