

Jiasheng Shi

CONTACT INFORMATION

Department of Biostatistics, Epidemiology and Informatics,
University of Pennsylvania Perelman School of Medicine
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EDUCATION

Ph.D. in Statistics/Probability Theory
Department of Statistics, The Chinese University of Hong Kong (CUHK),
Hong Kong, 2015 - 2019
Advisor: Prof. Qi-Man Shao

B.S. in Mathematics
Chu Kochen Honors College, Zhejiang University (ZJU), Hangzhou, China, 2011 - 2015

RESEARCH EXPERIENCES

Postdoctoral Research Fellow
Department of Biostatistics, Epidemiology and Informatics
University of Pennsylvania Perelman School of Medicine
& Department of Research, Children's Hospital of Philadelphia, 2019 - present
Advisors: Prof. Yong Chen & Prof. Jing Huang

Visiting Scholar
Department of Statistics, University of Michigan, 2018
Host: Prof. Xuming He

RESEARCH INTERESTS

Predictive Intelligence for infectious disease and Pandemic Prevention;
(Electronic Health Records) EHR-based Research;
Distributed Analysis;
Meta-analysis;
High-dimensional Statistical Inference;
Self-normalized Limit Theory.
Asymptotic Theory in probability and statistics;

HONORS & AWARDS

Reaching Out Award, CUHK and HKSAR Government Scholarship Fund, 2018 - 2019
Overseas research award, Department of Statistics, CUHK, 2018
The best teaching assistant award, Department of Statistics, CUHK, 2017
Top undergraduate student research paper award, ZJU, 2015
Excellent Academic Scholarship, ZJU, 2013 - 2014
Honor prize of T.Yau College Student Mathematics Contests(probability), 2013
Excellent Academic Scholarship, ZJU, 2012 - 2013

PUBLICATIONS & MANUSCRIPTS

1. "Refined Cramér Type Moderate Deviation Theorems for General Self normalized Sums with Applications to Dependent Random Variables and Winsorized Mean". *Annals of Statistics*, 2022, 50(2), 673-697. Lan Gao, Qi-Man Shao and **Jiasheng Shi**. (Alphabetical authorship)
2. "Distributed Proportional Likelihood Ratio Model with Application to Data Integration Across Clinical Sites". *Annals of Applied Statistics*, to appear. Chongliang Luo, Rui Duan, **Jiasheng Shi**, Mackenzie Edmondson, Mitchell Maltenfort, Jeffrey S. Morris, Christopher Forrest, Rebecca Hubbard and Yong Chen.
3. "Missing Data Matter: An Empirical Evaluation of the Impacts of Missing EHR Data in Comparative Effectiveness Research". *Journal of the American Medical Informatics Association*, 2023, 30(7), 1246-1256. Yizhao Zhou, **Jiasheng Shi**, Ronan Stein, Xiaokang Liu, Robert N. Baldassano, Christopher B. Forrest, Yong Chen and Jing Huang.

4. “The Effectiveness of Government Masking Mandates on SARS CoV 2 County level Case Incidence Across the United States”. *Health Affairs*, 2022, 41(3), 445-453. Jing Huang, Brian T. Fisher, Vicky Tam, Zi Wang, Lihai Song, **Jiasheng Shi**, Xi Wang, Jeffrey S. Morris, Susan E. Coffin, David Rubin.
5. “Hybrid Statistical Epidemiological Models for Prediction in Transmission Disease with Application to SARS-CoV-2”. *Annals of Applied Statistics*, under revision. **Jiasheng Shi**, Jing Huang, Jeffrey S. Morris and David Rubin.
6. “On the Global Identifiability of Logistic Regression Models with Misclassified Outcomes”. *Bernoulli*, under revision. Rui Duan, Yang Ning, **Jiasheng Shi**, Raymond J Carroll, Tianxi Cai and Yong Chen.
7. “Enhance Time Since Infection Model Performance in COVID-19 Pandemic with Hospital Admission Data”. *Biometrika*, under review. **Jiasheng Shi**, Yizhao Zhou and Jing Huang.

PREPRINTS

1. “Prediction of Relapse in Pediatric Chronic Disease Using Compound Medical Records”. Preprint. **Jiasheng, Shi** and Jing Huang.
2. “On Approximation for Studentized Sample Quantile with Applications to VaR estimation”. Preprint. Lan Gao, Qi-Man Shao and **Jiasheng Shi**. (Alphabetical authorship)
3. “A Cramér Moderate Deviation Theorem for Studentized Trimmed Mean”. Preprint. Lan Gao, Qi-Man Shao and **Jiasheng Shi**. (Alphabetical authorship)
4. “Supervised Distance Based Matching Algorithm to Evaluate the Effect of Public Health Interventions”. Preprint. Hongzhe Zhang, **Jiasheng, Shi** and Jing Huang.
5. “Tail Distribution of Likelihood Ratio Test Statistic for Classical Meta-analysis”. Preprint. **Jiasheng, Shi**.

GRANT ACTIVITY

1. “R01: Deciphering the evolution and population heterogeneity of infectious transmission”. National Institutes of Health. Co-Investigator, pending.

INVITED TALKS

1. “A Learning System in Pandemic Prevention – from macro predictive modelling to small probability estimation”, Department of Mathematics, Hong Kong University of Science and Technology, April 2022, Virtual Meeting.
2. “A Learning System in Pandemic Prevention – from macro predictive modelling to small probability estimation”, Department of Industrial and System Engineering, Korea Advanced Institute of Science & Technology, February 2022, Virtual Meeting.
3. “A Semi-parametric Regression Model with Online Estimation Algorithm for Dynamics of Disease Transmission”, Data Science Conference on COVID 19, August 2020, Virtual Meeting.
4. “A Cramér Moderate Deviation Theorem for Studentized Sample Quantile”, Statistics and Probability Symposium, School of Mathematics and Statistics, Xi’an Jiaotong University, April 2019, Xi’an, China
5. “A Cramér Moderate Deviation Theorem for General Self-normalized Sums with Application to Longitudinal Study”, 11th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2018), December 2018, Pisa, Italy
6. “A Cramér Moderate Deviation Theorem for Studentized Trimmed Mean”, The 5th Institute of Mathematical Statistics Asia Pacific Rim Meeting (IMS APRM), June 2018, Singapore
7. “A Cramér Moderate Deviation Theorem for General Self-normalized Sums with Application to Geometric β -mixing sequence”, The 6 th IMS China International Conference on Statistics and Probability, July 2017, Nanning, China

CONTRIBUTED
TALKS

8. "Prediction of Relapse in Chronic Disease Using Fragmented Medical Records", JSM 2021, August 2021, Virtual Meeting.
9. "A Quasi-score Approach with Online Estimation Algorithm for Dynamics of Disease Transmission", ENAR 2021 Spring Meeting, March 2021, Virtual Meeting.
10. "Evaluation of Multiple Diagnostic Tests Using Multi-Institutional Data with Missing Components", ENAR 2020 Spring Meeting, March 2020, Virtual Meeting

TEACHING
ASSISTANT

1. Ph.D. Course: Advanced Statistical Inference, 2017 - 2018 & 2018 - 2019, CUHK.
2. Master Course: Stochastic Modelling, Autumn 2016, Autumn 2017 & Autumn 2018, CUHK
3. Undergraduate Course: Statistical Inference, Spring 2016, Spring 2017, Spring 2018 & Spring 2019, CUHK
4. Undergraduate Course: Applied Nonparametric Statistics, Autumn 2016, CUHK
5. Undergraduate Course: Introducing to Risk Management, Autumn 2015 & Autumn 2016, CUHK