Jiaqi Gu

Postdoctoral Scholar
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EDUCATION

Ph.D.	(Sep 2018 to Aug 2022)	Statistics, University of Hong Kong, Hong Kong, China
B.S.	(Sep 2014 to Jun 2018)	Statistics, Renmin University of China, Beijing, China

PROFESSIONAL EXPERIENCE

2023 – 2024	Postdoctoral Scholar
	Department of Neurology and Neurological Sciences, Stanford University
	Stanford, CA
2022	Senior Research Assistant
	Department of Statistics and Actuarial Science, University of Hong Kong
	Hong Kong, China

COMPUTER SKILLS

C, Python, R, Matlab, SQL, SPSS.

HONORS & AWARDS

2022	Excellent Research Award, Department of Statistics and Actuarial Science, University of Hong Kong.
2021	Excellent Research Award, Department of Statistics and Actuarial Science, University of Hong Kong.
2021	Excellent Teaching Assistant Award, Department of Statistics and Actuarial Science, University of Hong Kong.
2017	Runner-up, Beijing-Hong Kong Data Modelling Competition.
2017	Honorable Mention, Interdisciplinary Contest in Modeling.
2016	First Prize, Contemporary Undergraduate Mathematical Contest in Modeling (Beijing).

GRANTS

2023	Investigator, UCB Biopharma & Stanford Medicine Digital Health Research Collaborative.

PRESENTATIONS

December 2023	A Powerful and Precise Filter of Feature Selection using Group Knock-offs. *CMStatistics 2023*, Berlin, Germany. (Invited Talk)
November 2023	Reproducible causal genetic variants discovery of Alzheimer's disease via knockoffs. *ASHG 2023*, Washington D.C. (Poster)
August 2023	Triangular Concordance Learning of Networks. *COMPSTAT 2023*, Birkbeck, UK. (Invited Talk)
August 2023	3D-Polishing for Triangular Mesh Compression of Point Cloud Data. *KDD 2023*, Long Beach, CA. (Oral, Poster)
August 2023	Joint Latent Space Models for Ranking Data and Social Network. *EcoSta 2023*, Tokyo, Japan. (Invited Talk)
July 2021	Crystallization Learning with the Delaunay Triangulation. *ICML 2021*, Virtual. (Spotlight, Poster)
June 2019	Fast Algorithm for Generalized Multinomial Models with Ranking Data. *ICML 2019*, Long Beach, CA. (Oral, Poster)

PUBLICATIONS

1. **Gu, J.** and Yin, G. (2023). Jiaqi Gu and Guosheng Yin's contribution to the Discussion of 'Martingale Posterior Distributions' by Fong, Holmes and Walker. *Journal of the Royal Statistical Society Series B (Statistical Methodology)*. In press.

2. Fan, Y., **Gu, J.** and Yin, G. (2023). Sparse Concordance-based Ordinal Classification. *Scandinavian Journal of Statistics*. Volume 50(3), 934–961.

3. **Gu, J.** and Yin, G. (2023). 3D-Polishing for Triangular Mesh Compression of Point Cloud Data. *Proceedings of the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '23)*. Pages 557–566.

4. **Gu, J.**, Zhang, Y. and Yin, G. (2023). Bayesian Log-rank Test. *The American Statistician*. Volume 77(3), 292-300.

5. **Gu, J.**, Fan, Y. and Yin, G. (2023). Omnibus Test for Restricted Mean Survival Time Based on Influence Function. *Statistical Methods in Medical Research*. Volume 32(6), 1082-1099.

6. **Gu, J.** and Yin, G. (2023). Triangular Concordance Learning of Networks. *Journal of Computational and Graphical Statistics*. Volume 32(2), 434-447.

7. **Gu, J.** and Yu, P.L.H. (2023). Social Order Statistics Models for Ranking Data with Analysis of Preferences in Social Networks. *Annals of Applied Statistics*. Volume 17(1), 89-107.

8. **Gu, J.** and Yin, G. (2022). Bayesian SIR model with change points with application to the Omicron wave in Singapore. *Scientific Reports.* Volume 12, 20864.

9. **Gu, J.** and Yu, P.L.H. (2022). Joint Latent Space Models for Ranking Data and Social Network. *Statistics and Computing.* Volume 32(3), 51.

10. **Gu, J.**, Fan, Y. and Yin, G. (2022). Reconstructing the Kaplan–Meier Estimator as an M-estimator. *The American Statistician.* Volume 76(1), 37-43.

11. **Gu, J.** and Yin, G. (2021). Crystallization Learning with the Delaunay Triangulation. *Proceedings of the 38th International Conference on Machine Learning.* PMLR 139, 3854-3863.

12. **Gu, J.** (2020). Discussion of "Unbiased Markov Chain Monte Carlo Methods with Couplings." *Journal of the Royal Statistical Society Series B (Statistical Methodology).* Volume 82, 585-586.

13. **Gu, J.** and Yin, G. (2019). Fast Algorithm for Generalized Multinomial Models with Ranking Data. *Proceedings of the 36th International Conference on Machine Learning.* PMLR 97, 2445-2453.

14. Yu, P.L.H., **Gu, J.** and Xu, H. (2019). Analysis of Ranking Data. *Wiley Interdisciplinary Reviews: Computational Statistics.* Volume 11(6), e1483.

Papers under Review

15. **Gu, J.**, Tan, R. and Yin, G. (2023). Delaunay Weighted Two-sample Test for High-dimensional Data by Incorporating Geometric Information. *Journal of the American Statistical Association.* Under revision.

16. **Gu, J.** and Yin, G. (2023). Bayesian Knockoff Filter. *Journal of Machine Learning Research.* Under revision.

17. Zhang, C., **Gu, J.**, Wu, Y. and Yin, G. (2023). Normalized Area Above Quantile: An Alternative Measure to Restricted Mean Survival Time. *Annals of Applied Statistics.* Under revision.

18. **Gu, J.** and Yin, G. (2023). Unit Information Dirichlet Process Prior. *Biometrics.* Under revision.

19. **Gu, J.** and Yin, G. (2023). Hierarchical and Stochastic Crystallization Learning: Geometrically Leveraged Nonparametric Regression with Delaunay Triangulation. *Journal of Machine Learning Research.* Under review.

20. Yu, C. X., **Gu, J.**, Chen, Z. and He, Z. (2023). Summary Statistics Knockoffs Inference with Family-wise Error Rate Control. *Biometrics.* Under review.

21. Chu, B., **Gu, J.**, Chen, Z., Morrison, T., Candès, E., He, Z. and Sabatti, C. (2023). Second-order group knockoffs with applications to GWAS. *arXiv: 2310.15069.*

22. Qi, X., Belloy, M., **Gu, J.**, Liu, X., Tang, H., He, Z. (2023) Robust inference with GhostKnockoffs in genome-wide association studies. *arXiv: 2310.04030.*

REVIEW SERVICES
Have been invited to review submissions for *Contemporary Clinical Trials*, *The American Journal of Human Genetics*, *The American Statistician*.

TEACHING

2021	Stochastic Process.
2019,2020,2021,2022	Operational Risk and Insurance Analytics.
2019,2020	Artificial Intelligence: Foundation, Philosophy and Ethics.
2018	Modern Nonparametric Statistics.