

Qian Xiao

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CONTACT INFORMATION

Brooks Hall 454, 310 Hefty Dr.
Athens, GA 30602
Email: qian.xiao@uga.edu
Phone: +1-706-542-7338
Website: <http://faculty.franklin.uga.edu/qianxiao/>

EMPLOYMENT

Assistant Professor
Department of Statistics
University of Georgia, GA, USA
August 2017 – now

EDUCATION

Ph.D., Statistics
University of California Los Angeles (UCLA),
Los Angeles, CA, USA
September 2014 – June 2017
• Advisor: Hongquan Xu.

M.S., Statistics
University of California Los Angeles (UCLA),
Los Angeles, CA, USA
September 2012 – June 2014

Bachelor of Economics, Investment Management
Central University of Finance and Economics,
Beijing, China
September 2008 – June 2012

RESEARCH INTERESTS

Design and analysis of computer experiments; Uncertainty quantification; Active learning / reinforcement learning; medical data science.

PUBLICATIONS

JOURNAL ARTICLES ¹

1. **Xiao, Q.**, & Xu, H.* (2017), “Construction of maximin distance Latin squares and related Latin hypercube designs”, *Biometrika*, 104, 455–464.
2. Wang, L., **Xiao, Q.** & Xu, H.* (2018), “Optimal maximin L_1 -distance Latin hypercube designs based on good lattice point designs”, *The Annals of Statistics*, 46 (6B), 3741–3766.
3. **Xiao, Q.**, & Xu, H.* (2018), “Construction of maximin distance designs via level permutation and expansion”, *Statistica Sinica*, 28, 1395–1414.
4. **Xiao, Q.**, Wang, L., & Xu, H.* (2019), “Application of kriging models for a drug combination experiment on lung cancer”, *Statistics in Medicine*, 38, 236–246.
5. **Xiao, Q.**, Mandal, A., Lin, C. D. & Deng, X.* (2021), “EzGP: Easy-to-interpret Gaussian Process models for computer experiments with both quantitative and qualitative factors”, *SIAM-ASA Journal on Uncertainty Quantification*, 9.2, 333–353.
6. **Xiao, Q.*** & Xu, H. (2021), “A Mapping-based Universal Kriging Model for Order-of-addition Problems in Drug Combination Studies”, *Computational Statistics & Data Analysis*, 157, 107–155.

¹Note: corresponding authors are marked with *.

7. Wang, Y., Peng, Z., Zhang, R. & **Xiao, Q.*** (2021), “Robust sequential design for piecewise-stationary multi-armed bandit problem in the presence of outliers”, *Statistical Theory and Related Fields*, 5(2), 122-133.
8. Wang, Y. Wang, F., Yuan, Y. & **Xiao, Q.*** (2021), “Connecting U-type designs before and after level permutations and expansions”, *Journal of Statistical Theory and Practice* 15, 81.
9. Li, C., Shen, Y.*, **Xiao, Q.**, Rathbun, S., Huang, H., & Guan, Y. (2021), “Mean Corrected Generalized Estimating Equations for Longitudinal Binary Outcomes with Report Bias”, *Statistical Methods in Medical Research*, doi:10.1177/09622802211065160.
10. Cheng, W., Pan A., Rathbun S., Ge Y., **Xiao, Q.**, Martinez L., Ling, F., Liu S., Wang X., Yu Z., Ebell M., Li C., Handel A., Chen E., & Ye, S.* (2021), “Effectiveness of Neuraminidase Inhibitors to Prevent Mortality in Laboratory-Confirmed Avian Influenza A H7N9 Patients”, *International Journal of Infectious Diseases*, 103, 573-578.
11. Chen, Z., Handel, A., Martinez, L., **Xiao, Q.**, Li, C., Chen E., Pan, J., Li, Y., Ling, F., & Shen, Y.* (2021), “The Impact of Social Distancing, Contact Tracing, and Case Isolation Interventions to Suppress the COVID-19 Epidemic: A Modeling Study”, *Epidemics*, 36, 100483.
12. Lukemire J., **Xiao Q.**, Mandal A*, & Wong W (2021), “Statistical analysis of complex computer models in astronomy”, *The European Physical Journal Special Topics*, 230:2253–2263.
13. Zhou, Y., **Xiao, Q.**, Sun, F.* (2021), “Construction of uniform projection designs via level permutation and expansion”, *Journal of Statistical Planning and Inference* (accepted).

BOOK CHAPTERS

14. Jankar J., Wang H., Wilkes L.R., **Xiao Q.** & Mandal A. (2022) Design and Analysis of Complex Computer Models. In: Srinivas R., Kumar R., Dutta M. (eds) *Advances in Computational Modeling and Simulation. Lecture Notes in Mechanical Engineering*. Springer, Singapore. https://doi.org/10.1007/978-981-16-7857-8_2

SOFTWARE

15. Wang H., **Xiao Q.** & Mandal A. (2021), LHD: Latin Hypercube Designs (LHDs), R Library <https://cran.r-project.org/web/packages/LHD/index.html>, 16,364 cumulative downloads as of 3/20/2022.
16. Wang H., **Xiao Q.** & Mandal A. (2021), LA: Lioness Algorithm (LA), R Library <https://cran.r-project.org/web/packages/LA/index.html>, 3,843 cumulative downloads as of 3/20/2022.

WORKS SUBMITTED BUT NOT YET ACCEPTED - UNDER REVISION

17. **Xiao, Q.**, Wang, Y., Mandal, A. & Deng, X.* (2020), “Modeling and active learning for experiments with quantitative-sequence factors”, under the second round of revisions at *Journal of the American Statistical Association – Theory and Methods*.
18. Li, Y., Pu, Y., **Xiao, Q.***, Chang, C. (2022) “A Scalable Gaussian Process for Large-Scale Periodic Data”, under revisions at *Technometrics*.

WORKS SUBMITTED BUT NOT YET ACCEPTED

19. **Xiao, Q.**, Joseph V. R.* , Ray. D. M. (2022), “Maximum one-factor-at-a-time designs for screening in computer experiments”, submitted to *Technometrics*.
20. Wang, Y., Liu, S. & **Xiao, Q.*** (2022), “Construction of orthogonal-MaxPro Latin hypercube designs”, submitted to *Statistica Sinica*.

ANY OTHER - UNDER PREPARATION

21. Wang, H., **Xiao, Q.**, Mandal, A.* (2022) “Lioness algorithm for finding optimal design of experiment”; R package: “LA” on CRAN.
22. Wang, Y. & **Xiao, Q.*** (2022), “Optimal designs for experiments with quantitative-sequence factors”.
23. Wang, H., **Xiao, Q.**, Mandal, A.* (2022) “An all-encompassing R library for constructing optimal Latin hypercube designs”; R package: “LHD” on CRAN.

GRANTS

“Additive Gaussian Process Modeling for Complex Data” – Junior Faculty Seed Grant in STEM Program provided by the University of Georgia Office of Research. (PI, \$5000, July, 2019 – June, 2021).

AWARDS AND HONORS

Junior researcher scholarship, (DAE, UCLA, 2018; SRC, Rutgers University, 2017; ICODE, University of Memphis, 2016)

The Most Promising Applied Statistician Award (UCLA, 2014)

Distinguished Graduate of Class 2012, (CUFE, 2012)