

Renwen Luo

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Education

- 2022 – 2026 📖 **PhD candidate** in Probability and Mathematical Statistics
- *Hong Kong Baptist University*, supervised by Prof. Jianxin Pan. *Expected graduation in June 2026.*
 - Major GPA: 3.9/4.00 • **Top 1%** | CGPA: 3.8/4.00 • **Top 1%**
- 2025.06 – 2025.11 📖 **Visiting PhD student at the University of Cambridge**
- *MRC Biostatistics Unit*, supervised by Prof. Jessica Barrett and Prof. Brian Tom
- 2019 – 2022 📖 **Master** in Mathematical Statistics
- *Sichuan University*
 - Major GPA: 3.8/4.00 • **Top 1%** | CGPA: 3.75/4.00 • **Top 5%**
- 2015 – 2019 📖 **Bachelor** in Natural Science in Mathematics and Applied Mathematics
- *Sichuan University*
 - Major GPA: 3.68/4.00 • **Top 1%** | CGPA: 3.70/4.00 • **Top 5%**

Publications


Journals and Conferences

- 1 **Luo, R.**, Ma, C., & Pan, J. (2025). Semiparametric modeling of biomarker trajectory and variability with correlated measurement errors. *Statistics in Medicine*, 45. [doi:10.1002/sim.70028](https://doi.org/10.1002/sim.70028)
- 2 Peng, C., **Luo, R.**, Han, Y., & Pan, J. (2024). Joint mean-angle for spatial binary data. *Statistica Sinica*, 36, 1–39. [doi:10.5705/ss.202023.0237](https://doi.org/10.5705/ss.202023.0237)
- 3 **Luo, R.**, & Pan, J. (2021). Conditional generalized estimating equations of mean-variance-correlation for clustered data. *Computational Statistics and Data Analysis*, 1978, 1–15. [doi:10.1016/j.csda.2021.107386](https://doi.org/10.1016/j.csda.2021.107386)
- 4 **Luo, R.**, Yang, Y., Guo, B., Luo, Y., & Pan, J. (2021). Sampling estimating equation for logistic regression with multi-dimensional missing binary covariates: Application to a divorce data, 012065. [doi:10.1088/1742-6596/1978/1/012065](https://doi.org/10.1088/1742-6596/1978/1/012065)
- 5 Yang, Y., **Luo, R.**, Guo, B., Luo, Y., & Pan, J. (2021). Network estimation of multi-dimensional binary variables with application to divorce data, 012056. [doi:10.1088/1742-6596/1978/1/012056](https://doi.org/10.1088/1742-6596/1978/1/012056)







Research

- 2022-present 📖 **Joint Modeling of Longitudinal and Survival Data**
- Statistical modeling of trajectory and variability of systolic blood pressure and time to cardiovascular events, the work has been published on *Statistics in Medicine* (2025, 1st author).
 - Semiparametric model, martingale theory and empirical process theory




Research (continued)

- 2019-2022  **Statistical Modeling of Correlated data**
- Joint mean-covariance modeling of longitudinal data, spatial data, temporal spatial data. One work has been accepted by *Statistica Sinica* (2024, 2nd author). Another has been published on *Computational Statistics and Data Analysis* (2021, 1st author)
 - Estimating equations, Z-estimators, high-dimensional variable selection



Competitions and Awards

- 2022  **Finalist of the 2022 Alibaba Global Mathematics Competition**, Alibaba DAMO Academy for Discovery, Adventure, Momentum and Outlook
- 2021  **National Scholarship**, Ministry of Education of the People's Republic of China.
- 2018  **Silver Medal in First Al-Khorezmi International Mathematical Olympiad**, Ministry of Higher Education of the Republic of Uzbekistan.
-  **Merit Scholarship**, Sichuan University.
- 2016  **Championship in the Sichuan University Mathematics Competition**, Sichuan University.
-  **Bronze Trophy in the Chinese Mathematics Competition**, Chinese Mathematical Society.

Project Experience

- March, 2024  **Battery Material Storage Planning and Design**
- Collaborative institution: Contemporary Amperex Technology Co., Limited
 - Zero inflated Poisson model, linear programming, concordance index, R project and Python.
- April, 2023  **Impact of Sudden Temperature Drops on Cardiovascular Diseases**
- Collaborative institution: The Fifth Affiliated Hospital of Sun Yat-sen University
 - Cox regression model, deep neural network for survival analysis, R project and Python.
- April, 2021  **Divorce Big Data Analysis**
- Collaborative institution: The Intermediate People's Court of Sichuan Province
 - Generalized linear model, random forest, social network analysis and nonconvex optimization.

Technical Skills

- Programming  R project (professional), Python and Matlab
- Languages  English (professional), Chinese (native speaker).