Zhen Lu

Ph.D. candidate of Epidemiology and Biostatistics · Sun Yat-sen University

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Education

Sun Yat-sen University — *Shenzhen, China*

Ph.D. candidate of Epidemiology and Biostatistics — *Sep. 2022 - Present*

- Advisor: Siyang Liu, Huachun Zou
- Research fields: Biostatistics, machine learning, clinical epidemiology, casual inference, and statistical genetics

Harbin Medical University — *Harbin, China*

M.Sc. of Epidemiology and Biostatistics — *Sep. 2018 - Jun. 2021*

- Advisor: Yan Liu
- Research fields: Biostatistics, data science, and machine learning

Harbin Medical University — *Harbin, China*

B.Sc. of Preventive Medicine — *Sep. 2013 - Jun. 2018*

- Courses: Epidemiology and biostatistics

Sun Yat-sen University — *Shenzhen, China*

International Summer School — *Jul. 2025 - Aug. 2025*

- Courses: Health medical big data and intelligent statistics

Work Experience

MacroStat (China) Clinical Research Co., Ltd. - Tigermed — *Shanghai, China*

Statistician I — *Jul. 2021 - Mar. 2022*

- Specialized in statistical methods and SAS programming in clinical trials

Publications

Representative Journal Articles [6/38] (* for co-first author)

1. H. Zou, **Z. Lu***, W. Weng, L. Yang, L. Yang, X. Leng, J. Wang, Y.-F. Lin, J. Wu, L. Fu, X. Zhang, Y. Li, L. Wang, X. Wu, X. Zhou, T. Tian, L. Huang, C. M. Marra, B. Yang, T.-C. Yang, and W. Ke. "Diagnosis of neurosyphilis in HIV-negative patients with syphilis: development, validation, and clinical utility of a suite of machine learning models". *eClinicalMedicine* 62 (2023), p. 102080. DOI: 10.1016/j.eclinm.2023.102080. (Advisor as first author, JCR Q1, IF 17.033).

2. **Z. Lu**, L. Fu, L. Yang, T. Tian, Y. Gao, X. Meng, and H. Zou. "Hesitancy to Undergo SARS-CoV-2 Rapid Antigen Testing in China: Nationwide Cross-sectional Study". *JMIR Public Health Surveill* 9 (2023), e43555. DOI: 10.2196/43555. (JCR Q1, IF 14.557).

3. **Z. Lu**, B. Dong, P. Yao, Y. Huang, L. Fu, B. Wang, X. Huang, X. Mao, S. Xu, S. Liu, P. Sun, and H. Zou. "Characteristics of Human Papillomavirus Prevalence and Infection Patterns Among Women Aged 35–65 in Fujian Province, China: A Nine-Year Retrospective Observational Study". *Journal of Medical Virology* 97.2 (2025), e70238. DOI: 10.1002/jmv.70238. (JCR Q1, IF 6.8).

4. **Z. Lu**, B. Dong, H. Cai, T. Tian, J. Wang, L. Fu, B. Wang, W. Zhang, S. Lin, X. Tuo, J. Wang, T. Yang, X. Huang, Z. Zheng, H. Xue, S. Xu, S. Liu, P. Sun, and H. Zou. "Identifying Data-Driven Clinical Subgroups for Cervical Cancer Prevention With Machine Learning: Population-Based, External, and Diagnostic Validation Study". *JMIR Public Health Surveill* 11 (2025), e67840. DOI: 10.2196/67840. (JCR Q1, IF 3.5).

5. L. Yang, **Z. Lu***, J. Bian, F. Li, and H. Zou. "Association between chronic viral infection-related hospitalization and risk of cardiovascular disease: A population-based cohort study". *Journal of Medical Virology* 96.1 (2024), e29350. DOI: 10.1002/jmv.29350. (JCR Q1, IF 12.7).

6. B. Dong, **Z. Lu***, T. Yang, J. Wang, Y. Zhang, X. Tuo, J. Wang, S. Lin, H. Cai, H. Cheng, X. Cao, X. Huang, Z. Zheng, C. Miao, Y. Wang, H. Xue, S. Xu, X. Liu, H. Zou, and P. Sun. "Development, validation, and clinical application of a machine learning model for risk stratification and management of cervical cancer screening based on full-genotyping hrHPV test (SMART-HPV): a modelling study". *The Lancet Regional Health – Western Pacific* 55 (2025). DOI: 10.1016/j.lanwpc.2025.101480. (JCR Q1, IF 7.6).

Software Packages

1. **Z. Lu**. "omixVizR: A Toolkit for Omics Data Visualization". *Software* (2025). DOI: 10.32614/CRAN.package.omixVizR. (R package version 1.1.3).
2. **Z. Lu**. "omixvizpy: A Python package for omics data visualization". *Software* (2025). URL: https://github.com/Leslie-Lu/omixvizpy. (Python package version 0.1.2).

Patents

Non-therapeutic clinical diagnosis system for neurological syphilis based on machine learning, LU504466 (rank 1/1)   *2023*

Honors & Awards

2025	**National Scholarship, China**	*Sep.*
2025	**First Prize Scholarship, Sun Yat-sen University**	*Sep.*
2025	**Outstanding Teaching Assistant, Sun Yat-sen University**	*Sep.*
2024	**National Scholarship, China**	*Nov.*
2024	**Presidential Scholarship, Sun Yat-sen University**	*Sep.*
2024	**Cover Article, Journal of Medical Virology**	*Vol. 96, No. 1, Jan.*
2023	**First Prize Scholarship, Sun Yat-sen University**	*Sep.*
2019	**First Prize Scholarship, Harbin Medical University**	*Dec.*

Teaching Experience

2022-24	Undergraduate Teaching Assistant, Epidemiology	*Sun Yat-sen University*
2023	Undergraduate Teaching Assistant, English for Public Health	*Sun Yat-sen University*
2018-19	Undergraduate Teaching Assistant, Biostatistics	*Harbin Medical University*

Service & Outreach

WeChat Official Account: Biostatistics Education (@luzhen-biostat, ~8.2k subscribers)

OWNER & CREATOR

- Created content on biostatistics, artificial intelligence, and statistical programming
- Founded Biostat Weekly, a weekly newsletter covering new research and resources in biostatistics

Academic Reviewer

SERVED AS PEER REVIEWER

- Completed the peer-review process by providing the review reports for academical journals

Academic Advising

PROVIDED CONSULTATION IN BIOSTATISTICAL AND EPIDEMIOLOGY

- Mentored graduate and undergraduate students in biostatistics and academic writing

Skills

Programming	R, SAS, Python, SQL; Git, Bash/Shell; Markdown, Quarto, LaTeX
Languages	Mandarin (native), English (fluent)
IDE	Visual Studio Code, SAS Enterprise Guide, RStudio, GitHub, Overleaf, PASS