Lu(Laura) Wang | Curriculum Vitae

Assistant Professor, Department of Mathematics, Western New England University

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Degrees

- **Ph.D., Statistics**
  Dept of Statistics, University of South Carolina, Columbia, SC, United States *2014–2020*
  PhD Dissertation: Semiparametric Regression Analysis of Arbitrarily Censored Data and Panel Count Data
  Advisor: Lianming Wang

- **Bachelor of Medicine, Clinical Laboratory Science**
  West China School of Medicine, Sichuan University, Chengdu, P.R China *2008–2013*

Experience

- **Assistant Professor of Statistics** **Western New England University**
  August 2020 - Present
- **Graduate Teaching Assistant** **University of South Carolina**
  2014–2020
- **Internship** **GCP Centre (Chengdu)**
  Project: LC-MS/MS Method for Analyzing Glimepiride in Human Plasma *2013*
- **Internship** **Geriatrics Medical Centre**
  Maintaining health records, documenting information *2013*
- **Internship** **West China Hospital**
  Department of Laboratory Medicine: laboratory tasks *2012*
- **Trainee** **West China Hospital**
  Division of Clinical Molecular Diagnostics: paternity testing *2009*

Teaching Experience

- **DATA 410: Introduction to Statistical Learning** **WNEU**
  Fall 2024
- **MAMT 547: Statistics** **WNEU**
  Fall 2023
- **QR 112: Quantitative Reasoning for Business** **WNEU**
  Spring & Fall 2023 & Spring 2024
- **MATH 372: Probability** **WNEU**
  Spring 2022 & Spring 2023
- **MATH 383: Mathematical Statistics** **WNEU**
  Fall 2020 & Fall 2022 & Fall 2024

- **MATH 441: Data Visualization and Technique** **WNEU**
  Spring 2022 & Spring 2024
- **MATH 121: Introductory Probability and Statistics** **WNEU**
  Fall 2021 & Fall 2022 & Fall 2023 & Spring 2024
- **Hon 192: Introductory Statistics** **WNEU**
  Spring 2023
- **MATH 221: Introductory Probability and Statistics II** **WNEU**
  Fall 2021 & Fall 2023 & Fall 2024
- **MATH 451 & 452: Senior Project I & II** **WNEU**
  Fall 2021 & Spring 2022 & Fall 2023 & Spring 2024 & Fall 2024
- **MATH 331: Computation in Statistics** **WNEU**
  Spring 2021
- **MATH 120: Introductory Statistics for the Arts & Sciences** **WNEU**
  Fall 2020 & 2021 & 2022 & Spring 2023
- **STAT 509: Statistics for Engineers** **UofSC**
  Fall 2018 & Summer 2019
- **STAT 201: Elementary Statistics** **UofSC**
  Springs 2018,2020 & Fall 2019

Research Interests

Semi-parametric modeling, complex censored data, survival analysis, Bayesian modeling and computing, panel count data, longitudinal data, causal inference, machine learning, and reinforcement learning.

Refereed Journal Articles/Book Chapters

- L. Wang and L. Wang (2020). "EM algorithm for analyzing right-censored data under the semiparametric proportional odds model". Communications in Statistics –Theory and Methods.(`https://doi.org/10.1080/03610926.2020.1837879`)
- Minsuk Shin, Lu Wang, and Jun Liu (2020). "A novel MCMC sampling method based on an invertible neural network". – the first version. (Go to `https://doi.org/10.48550/arXiv.2006.00767` and select v1. unpublished work.)
- L. Wang and L. Wang (2021). "Regression analysis of arbitrarily censored survival data under the proportional odds model". Statistics in Medicine.(`https://doi.org/10.1002/sim.8994`)
- L. Wang, L. Wang, and X. Lin (2021) "Bayesian inferences for panel count data and interval-censored data with nonparametric modeling of the baseline functions". A book chapter in book "Bayesian Inference and Computation in Reliability and Survival Analysis" Edited by Professors Yuhlong Lio, Ding-Geng (Din) Chen, Hon Keung Tony Ng and TzongRu Tsai. (`https://doi.org/10.1007/978-3-030-88658-5_14`)
- Lu Wang, Chunling Wang, Xiaoyan Lin, Lianming Wang (2024) "Bayesian regression analysis of panel count data under frailty nonhomogeneous Poisson process model with an unknown frailty distribution," Electronic Journal of Statistics, Electron. J. Statist. 18(2), 3687-3705. (`https://doi.org/10.1214/24-EJS2288`)

- Lu Wang and Lianming Wang. (2025+) "An EM algorithm for arbitrarily censored and left truncated data under the proportional odds model" (*Under major revision for Biometrical Journal*.)
- Lu Wang, Jiwei Zhao, and Yanyuan Ma. (2025+) "Borrowing Information from an Unidentifiable Model: Guaranteed Efficiency Gain with a Dichotomized Outcome in the External Data." (*Under major revision for Biometrics*. `https://doi.org/10.48550/arXiv.2501.06360`)
- Lu Wang, Xiaoyan Lin and Lianming Wang. "Regression analysis of arbitrarily censored and truncated survival data under the proportional hazards model". (on going)

Statistics Journal Reviewer

- Statistical Papers
- Journal of Applied Statistics
- BMC Medical Research Methodology
- International Journal of Machine Learning and Cybernetics
- Journal of Cancer Research and Clinical Oncology
- Scientific Report
- BMJ Open
- PeerJ

Department/University Service

- Nominations and Rules Committee, 2024 - Present
- Assessment Committee in the Department of Mathematics, Spring 2023 -Present
- Senior Project Committee in the Department of Mathematics, Spring 2023 -Present
- Academic Advisor to Fall 2023 cohort of Actuarial Science majors, 2023–present
- A & S Curriculum Committee, Spring 2022-2024
- Actuarial Science Club Advisor, Fall 2023 & Sping 2024
- First-Year Advisor, Fall 2023 (Advised Mathematics, Actuarial Science, and selected Computer Science majors.)
- JEDI Committee, 2023
- Alumni Survey Committee in the Department of Mathematics, Fall 2023
- Developed the Data Science and Statistics major under the lead of Dr. Marcel Cacea, 2022
- Actuarial Science Committee in the Department of Mathematics, Fall 2021

Statistical Packages

- regPOspline: Regression analysis of arbitrarily censored and left-truncated data under the proportional odds model. (available on: https://github.com/luwstat/regPOspline)
- regPO: Regression analysis of arbitrarily censored data under the proportional odds models (available on: https://github.com/luwstat/regPO)

- regPOr: An expectation-maximization (EM) algorithm for analyzing right-censored survival data. (available on: https://github.com/luwstat/regPOr)

Presentations

- "Semiparametric Bayes Proportional Odds Models for arbitrarily censored failure time data", Joint Statistical Meetings, Baltimore, 2017
- "Fitting Semi-parametric Proportional Odds Models to Arbitrarily Censored Data with EM Algorithm", South Carolina Chapter of the American Statistical Association, 2018
- "Bayesian inferences for panel count data and interval-censored data with nonparametric modeling of the baseline functions", ICSA 2020 Applied Statistics Symposium.

Technical and Personal skills

- **Programming Languages:** R, Python, SAS, LaTeX.
- **Industry Software Skills:** Tableau, MS Office products including Excel, PowerPoint, and Word.