

Lili Wang

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Education

[†] *Indicates expected*

2016–2020 [†] Ph.D., Biostatistics, University of Michigan (GPA: 4.0/4.0)

Thesis Title: Flexible Methods for the Analysis of Clustered Event Data in Observational Studies

Supervisors: Dr. Douglas E. Schaebel and Dr. Peter Xuekun Song

Research topics: recurrent events, frailty models, causal inference, and control charts

2014–2016 M.Sc., Biostatistics, University of Michigan (GPA: 4.0/4.0)

2011–2014 M.Sc., Molecular, Cellular, and Developmental Biology, University of Michigan

Research topics: directed evolution and engineering of small proteins by introducing random mutations and biased selections

2007–2011 B.Sc., Biological Science, Zhejiang University (GPA: 3.9/4.0)

Appointments

2015–Present Research Assistant, Kidney Epidemiology and Cost Center (UM-KECC), University of Michigan

2015–2015 Instructor, Biostatistics, University of Michigan

2013–2014 Teaching assistant, Molecular, Cellular, and Developmental Biology, University of Michigan

2012–2013 Research Assistant, Molecular, Cellular, and Developmental Biology, University of Michigan

2010–2010 Summer researcher, Genetics and Biology, University of California, Davis

Teaching

2015	BIOSTAT605, Intro SAS Programming	University of Michigan
2014	BIO172, Intro Biology (Discussion)	University of Michigan
2014	BIO173, Intro Biology (Lab)	University of Michigan

Selected Honours and Awards

2019	The International Biometric Society Eastern North American Region's (ENAR) Distinguished Student Paper Award
2015	Outstanding Academic Performance Award for Master Students in Biostatistics, University of Michigan
2011	Graduate Student Fellowship from the University of Michigan
2011	Outstanding Graduates of Zhejiang Province, China
2011	Outstanding Graduates of Zhejiang University, China
2009	National Scholarship from the Chinese Ministries of Education
2008	The First Prize Scholarship from Zhejiang University, China

Publications

Journals

- [1] **Wang, L.** An Integrative O-E CUSUM Chart for Mortality Outcomes. *In preparation*
- [2] **Wang, L.**, He, K., Schaubel, D.E. Penalized Survival Models for the Analysis of Alternating Recurrent Event Data. *Submitted*
**This paper has won the International Biometric Society Eastern North American Region's (ENAR) Distinguished Student Paper Awards for the 2019 ENAR Spring Meeting in Philadelphia, PA, USA.*
- [3] Shen, X., Wang, B., Li, K., **Wang, L.**, Zhao, X., Xue, F., ... & Zheng, J. (2018). MicroRNA Signatures in Diagnosis and Prognosis of Cutaneous T-Cell Lymphoma. *Journal of Investigative Dermatology*
- [4] Horowitz, S., Salmon, L., Koldewey, P., Ahlstrom, L.S., Martin, R., Quan, S., Afonine, P.V., van den Bedem, H., **Wang, L.**, Xu, Q. and Trievel, R.C. (2016). Visualizing chaperone-assisted protein folding. *Nature Structural & Molecular Biology*
- [5] Quan, S., **Wang, L.**, Petrotchenko, E.V., Makepeace, K.A., Horowitz, S., Yang, J., Zhang, Y., Borchers, C.H. and Bardwell, J.C. (2014). Super Spy variants implicate flexibility in chaperone action. *Elife*
- [6] Marimuthu, M.P., Jolivet, S., Ravi, M., Pereira, L., Davda, J.N., Cromer, L., **Wang, L.**, Nogu  , F., Chan, S.W., Siddiqi, I. and Mercier, R. (2011). Synthetic clonal reproduction through seeds. *Science*

Posters

- [1] **Wang, L** (2018). Armed with Head-start: an Improved Risk-Adjusted O-E CUSUM with Monitoring Bands for Mortality Outcomes. Poster session presented at 2018 Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS), University of Michigan, Ann Arbor, US.
- [2] **Wang, L.** & Tang, A. (2016). Depression Effect on Infant Outcomes. Poster session for the Analysis Of Biostatistical Investigations course (BIOSTAT699). *Selected as one of the top 3 posters in the session.*

Presentations

- [1] **Wang, L.**, He, K., Schaubel, D.E. Penalized Survival Models for the Analysis of Alternating Recurrent Event Data. Invited session, The 2nd Conference on Lifetime Data Science (LiDS), Pittsburgh, United States, May 2019.
- [2] **Wang, L.**, He, K., Schaubel, D.E. Penalized Survival Models for the Analysis of Alternating Recurrent Event Data. Contributed session, International Biometric Society Eastern North American Region's (ENAR), Philadelphia, United States, March 2019.
- [3] **Wang, L.**, He, K., Schaubel, D.E. Penalized Survival Models for the Analysis of Alternating Recurrent Event Data. Contributed session, Joint Statistical Meetings (JSM) by American Statistical Association (ASA), Vancouver, Canada, July 2018.

Softwares

- [1] **Wang, L.** R-package BivPPL: Flexible estimation of alternating recurrent events using penalized partial likelihoods (PPL). <https://github.com/lilywang1988/BivPPL>
- [2] **Wang, L.** R-package MortCUSUM: O-E Cumulative-Sum (CUSUM) method for real-time monitoring of the mortality outcomes (under development).
- [3] **Wang, L.** R-package IAfrac: Sample size and information fraction calculation for weighted log-rank tests (under development).

Research Projects

[1] **Recurrent Events and Frailty Models for Large Datasets:**

Developing novel and flexible methods to analyze recurrent event data using frailty models, either parametric or non-parametric. The methods under exploration aim to analyze not only regular-size clinical data, but also national and international datasets, and updating data collected from wearable devices.

[2] **Control Charts for Mortalities and Readmissions**

Improving the traditional O-E CUSUM charts by integrating observations by years and adding head-starts to the two-sided monitoring bands.

[3] **Causal Effect Estimation using Tree Models**

Estimating causal effects and subgrouping among time-to-event data using tree models.

[4] **Weighted Log-rank Test**

I am also working on a research project for the Sanofi US. to improve the sample size calculation for weighted log-rank tests in the framework of interim analysis.