

Dayu Sun

Curriculum Vitae

Department of Biostatistics and Bioinformatics
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EDUCATION

- 2020 **Ph.D. in Statistics**, *University of Missouri - Columbia*.
Supervisor: Dr. Jianguo (Tony) Sun
- 2019 **M.A. in Statistics**, *University of Missouri - Columbia*.
- 2016 **M.Phil. in Statistics**, *The Hong Kong Polytechnic University*.
Supervisors: Dr. Xingqiu Zhao and Dr. Zhisheng Ye
- 2013 **B.S.**, *The Hong Kong Polytechnic University*, First Class Honours.

PROFESSIONAL APPOINTMENTS

- 06/2020 – **Postdoctoral Fellow**, *Department of Biostatistics and Bioinformatics*,
Now Rollins School of Public Health, Emory University.
Supervisors: Dr. Limin Peng, Dr. Ying Guo, and Dr. Amita Manatunga
- 01/2017 – **Research Assistant (Part-time)**, *School of Journalism*, University of
04/2017 Missouri and Chinese University of Hong Kong.
- Jun 2014 – **Visiting Research Engineer**, *Department of Industrial and Systems*
Aug 2014 *Engineer*, The National University of Singapore.

Publications

* indicates equal contributions; † indicates corresponding author(s)

Statistical Methodology

- [1] **Sun, D.**, Peng, L., Guo, Y., and Manatunga, A. “Partial generalized tensor regression,” In preparation.
- [2] **Sun, D.**, Sun, Z., Zhao, X., and Cao, H. “Kernel meets sieve: transformed hazards models with asynchronous longitudinal covariates,” In preparation.
- [3] **Sun, D.**, Guo, Y., Li, Y., Sun, J., and Tu, W. “A flexible time-varying coefficient rate model for panel count data,” In preparation.
- [4] **Sun, D.**, Guo, Y., Li, Y., Tu, W., and Sun, J. “A new robust approach for regression analysis of panel count data with time-varying covariates,” Under review at *Bernoulli*.
- [5] **Sun, D.**, Qiu, Z., Peng, L., Guo, Y., and Manatunga, A. “Partial quantile tensor regression,” Under review at *JRSSB*.
- [6] Sun, R., **Sun, D.**, Zhu, L., and Sun, J. “Regression analysis of general mixed recurrent event data,” Under review at *Biometrics*.

- [7] Guo, Y.^{*}, **Sun, D.^{*}**, and Sun, J. (2023). “Regression analysis of panel count data with both time-dependent covariates and time-varying effects,” *Statistica Sinica*. DOI: 10.5705/ss.202021.0036. To appear.
- [8] Guo, Y., **Sun, D.[†]**, and Sun, J. (2022). “Inference of a time-varying coefficient regression model for multivariate panel count data,” *Journal of Multivariate Analysis*. To appear.
- [9] **Sun, D.**, Zhao, H., and Sun, J. (2021). “Regression analysis of asynchronous longitudinal data with informative observation processes,” *Computational Statistics & Data Analysis*, 157, 107161. DOI: 10.1016/j.csda.2020.107161.
- [10] Zhao, H., **Sun, D.**, Li, G., and Sun, J. (2019). “Simultaneous estimation and variable selection for incomplete event history studies,” *Journal of Multivariate Analysis*, 171, 350–361. DOI: 10.1016/j.jmva.2019.01.005.
- [11] Zhao, H., **Sun, D.**, Li, G., and Sun, J. (2018). “Variable selection for recurrent event data with broken adaptive ridge regression,” *Canadian Journal of Statistics*, 46 (3), 416–428. DOI: 10.1002/cjs.11459.
- [12] Shen, L., **Sun, D.**, Ye, Z., and Zhao, X. (2017). “Inference on an adaptive accelerated life test with application to smart-grid data-acquisition-devices,” *Journal of Quality Technology*, 49 (3), 191–212. DOI: 10.1080/00224065.2017.11917990. Alphabetical authorship.

Collaborative Work

- [1] Liu, L., Bachman, R., Qiu, J., and **Sun, D.** (2021). “Do both petty and serious female offenders have shorter incarcerations than their male counterparts? Testing the universality of chivalrous treatment,” *Women & Criminal Justice*, 1–15. DOI: 10.1080/08974454.2021.1962479.
- [2] Liu, L., Visser, C. A., O’Connell, D. J., and **Sun, D.** (2021). “When post-incarcerated individuals return to high-risk neighborhoods: staying out of trouble, social withdrawal, and mental health,” *Crime & Delinquency*, 001112872110647. DOI: 10.1177/00111287211064785.
- [3] Liu, L., Miller, S. L., Qiu, J., and **Sun, D.** (2020). “An early adverse experience goes a long, criminogenic, gendered way: the nexus of early adversities, adult offending, and gender,” *Women & Criminal Justice*, 31 (1), 24–39. DOI: 10.1080/08974454.2020.1805395.
- [4] Liu, L., Visser, C. A., and **Sun, D.** (2020). “Do released prisoners’ perceptions of neighborhood condition affect reentry outcomes?,” *Criminal Justice Policy Review*, 32 (7), 764–789. DOI: 10.1177/0887403420980806.

Awards

- 2020 **Poster Award**, *ICSA Applied Statistics Symposium*.
- 2019 **First Place in Poster Competition**, *ICSA Midwest & NIC-ASA Joint all Meeting*.
- 2019 **First Place in Poster Competition**, *Statistical Analyses of Multi-Outcome Data Workshop*.
- 2018 **Registration Award**, *Symposium on Data Science & Statistics*.
- 2016 - 2020 **G. Ellsworth Huggins Scholarships**, *University of Missouri*.
- 2011 - 2013 **The Hong Kong Polytechnic University Scholarship**, *The Hong Kong Polytechnic University*.

- 2013 **Scholarship in Economics**, *The Hong Kong Polytechnic University*.
 2012 **Dean's Honored List**, *The Hong Kong Polytechnic University*.

Conferences and Presentations

Invited Talks

- Oct 2022 A new robust approach for regression analysis of panel count data with time-varying covariates, *ICOSDA 2022*
 Jun 2022 A new robust approach for regression analysis of panel count data with time-varying covariates, *Ecosta 2022*
 Jan 2022 Panelist, *NISS GSN Webinar: Postdoctoral Panel*
 May 2021 Kernel meets sieve: transformed hazards models with asynchronous longitudinal covariates, *Biostatistics Group Seminar*, University of Missouri
 Mar 2021 Kernel meets sieve: transformed hazards models with asynchronous longitudinal covariates, *Statistics Department Seminar*, Georgia State University
 Mar 2021 Kernel meets sieve: transformed hazards models with asynchronous longitudinal covariates, *Dr. Hongyuan Cao's group*, Florida State University

Contributed Presentations

- Aug 2022 Envelop-based quantile tensor regression model with application to neuroimaging data, *Joint Statistical Meeting*
 Mar 2022 Envelop-based quantile tensor regression model with application to neuroimaging data, *ENAR Spring Meeting*
 Mar 2021 Tensor partial least squares for the quantile regression model with multi-way neuroimaging data, *ENAR Spring Meeting*
 Aug 2020 Semiparametric maximum likelihood estimation for panel count data with time-dependent covariates, *Joint Statistical Meeting*
 Mar 2020 Semiparametric maximum likelihood estimation for panel count data with time-dependent covariates, *ENAR Spring Meeting*
 Jul 2019 Regression analysis of sparse asynchronous longitudinal data with informative observation times, *Joint Statistical Meeting*
 May 2018 Variable selection for recurrent event data with broken adaptive ridge regression, *Symposium on Data Science & Statistics*

Posters

- May 2021 Examining the Association Between Angiopoietin-2 Levels and Acute Respiratory Distress Syndrome Subtypes in Critically Ill Patients with Sepsis, *The American Thoracic Society (ATS) International Conference*
 Dec 2020 Semiparametric maximum likelihood estimation for panel count data with time-dependent covariates, *ICSA Applied Statistics Symposium*
 Oct 2019 Regression analysis of sparse asynchronous longitudinal data with informative observation times, *ICSA Midwest & NIC-ASA Joint all Meeting*
 Jun 2018 Variable selection for recurrent event data with broken adaptive ridge regression, *Statistical Analyses of Multi-Outcome Data Workshop*

Teaching Experience

- Aug 2020 – **Instructor**, *Emory University*.
Now
 - Guest instructor for BIOS 522: Survival Analysis Methods, Fall 2020
 - Guest instructor for BIOS 711: Statistical Inference II, Spring 2021
 - Guest instructor for BIOS 707: Linear Models, Fall 2021
 - Guest instructor for BIOS 711: Statistical Inference II, Spring 2022
- Aug 2016 – **Teaching Assistant**, *University of Missouri-Columbia*.
May 2020
 - Supervised discussion sessions for STAT1200 Introductory Statistical Reasoning
 - Instructed lectures for STAT4420/7420 Applied Survival Analysis
- Aug 2014 – **Independent Tutor**, *The Hong Kong Polytechnic University*.
May 2015
 - Tutorials for calculus and probability in Mathematics Learning Support Center

Services

Referee/Reviewer

- Journal *JASA* (1), *Biometrics* (1), *Computational Statistics & Data Analysis* (2), *Lifetime Data Analysis* (3), *Statistics and its interface* (2), *International Journal of Biostatistics* (1), *BMC Medical Research Methodology* (1).
- Grant/Fund Research Development Fund of Xi'an Jiatong-Liverpool University

Conference Committee

- Jul 2022 Program committee member, *ICSA China Conference 2022*
- May 2021 Organization Committee Member and Session Chair, *The Statistical Methods in Imaging (SMI)*

Conference Session Chair and Organizer

- Jun 2022 Session Chair, *Joint Statistical Meeting*
- Mar 2022 Session Chair, *ENAR Spring Meeting*
- Mar 2021 Session Chair, *ENAR Spring Meeting*
- June 2022 Invited Session Organizer and Chair, *The 5th International Conference on Econometrics and Statistics*
- Mar 2021 Session Chair, *Georgia Statistics Day 2021*

Department Service

- June 2022 Ph.D. qualifying exam proctor, *Emory University*
- April 2022 Post-Doc research talk for accepted students, *Emory University*
- 2020/2022 Survival and Longitudinal Data Analysis Study Group organizer, *Emory University*
- 2019-2020 Biostatistics Group seminar organizer, *University of Missouri*

Skills

- Programming skills Matlab, Mathematica, Python, R, RCpp/C++, SAS, Linux shell scripting
- Languages Mandarin (Native), English (Fluent), Cantonese (Conversant)