Yang Li

Contact Information

410 West 10th Street, Suite 3000, Indianapolis, IN 46202
Phone: 317-278-5449
E-mail: yli18@iu.edu

Education

PhD in Statistics, University of Missouri-Columbia (Advisor: Dr. Jianguo (Tony) Sun), May 2013
Master of Science in Mathematics, University of Arkansas-Little Rock, May 2007
Bachelor of Engineering, Beijing Institute of Technology, June 2005

Research Expertise

Statistical methodology for *Survival Analysis, Recurrent Event Data Analysis, Longitudinal Data Analysis*, *Panel Count Data Analysis*

Professional Positions and Employment

- Associate Professor of Biostatistics, Department of Biostatistics, Indiana University, July 2020-Present
- Assistant Professor of Statistics, Department of Mathematics and Statistics, UNCC, 2013-2020 (maternity leave during August-December, 2016)
- Graduate Instructor/Teaching Assistant/Research Assistant, Department of Statistics, University of Missouri-Columbia (Mizzou), 2008-2013
- Graduate Instructor/Teaching Assistant, Department of Mathematics and Statistics, University of Arkansas-Little Rock (UALR), 2005-2007

Publications

Refereed Articles on Statistical Methodology

Li, Y., Liu, H., Wang, X. & Tu, W. (2022+). "Semiparametric Time-to-Event Modeling of Lengths of Hospital Stays", *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, accepted.

Feng, Y., Wang, J., & **Li, Y.** (2022). "Goodness-of-fit Inference for the Additive Hazards regression model with clustered current status data", *Journal of Applied Statistics*, 1-21.

Feng, Y., Lin, S., & **Li, Y.** (2019). Semiparametric regression of clustered current status data. *Journal of Applied Statistics*, 46(10), 1724-1737.

Yu, G., **Li, Y.**, Zhu, L., Zhao, H., Sun, J., & Robison, L. L. (2019). An additive-multiplicative mean model for panel count data with dependent observation and dropout processes. *Scandinavian Journal of Statistics*, 46, 414-431.

Li, Y., Qi, L., & Sun, Y. (2018). Semiparametric varying-coefficient regression analysis of recurrent events with applications to treatment switching. *Statistics in Medicine*, 37(27), 3959-3974.

Liang, Y., **Li, Y.,** & Zhang, B. (2018). Bayesian nonparametric inference for panel count data with an informative observation process. *Biometrical Journal*, 60(3), 583-596.

Yu, G., Zhu, L., **Li, Y.**, Sun, J., & Robison, L. L. (2017). Regression analysis of mixed panel count data with dependent terminal events. *Statistics in Medicine*, 36(10), 1669-1680.

Feng, Y., Dong, Y., & **Li, Y.** (2017). Additive hazards regression of current status data with auxiliary covariates. *Communications in Statistics-Theory and Methods*, 46(21), 10657-10671.

Li, Y., & Sun, Y. (2016). Semiparametric random effects models for longitudinal data with informative observation times. *Statistics and Its Interface*, 9(3), 333-341.

Li, Y., He, X., Wang, H., & Sun, J. (2016). Joint analysis of longitudinal data and informative observation times with time-dependent random effects. In *New Developments in Statistical Modeling, Inference and Application* (pp. 37-51). Springer, Cham.

Li, Y., He, X., Wang, H., & Sun, J. (2016). Regression analysis of longitudinal data with correlated censoring and observation times. *Lifetime Data Analysis*, 22(3), 343-362.

Li, Y., He, X., Wang, H., Zhang, B., & Sun, J. (2015). Semiparametric regression of multivariate panel count data with informative observation times. *Journal of Multivariate Analysis*, 140, 209-219.

Wang, H., **Li, Y.**, & Sun, J. (2015). Focused and model average estimation for regression analysis of panel count data. *Scandinavian Journal of Statistics*, 42(3), 732-745.

Li, Y., Zhao, H., Sun, J., & Kim, K.M. (2014). Two-sample nonparametric comparison for panel count data with unequal observation processes. *Computational Statistics & Data Analysis*, 73, 103-111.

Zhao, H., **Li, Y.**, & Sun, J. (2013). Semiparametric analysis for multivariate panel count data with a terminal event. *Journal of Nonparametric Statistics*, 25(2), 379-394.

Zhao, H., **Li, Y.**, & Sun, J. (2013). Analyzing panel count data with dependent observation process and a terminal event. *The Canadian Journal of Statistics*, 41(1), 174-191.

Li, Y., Sun, J., & Song, S. (2012). Statistical analysis of bivariate failure time data with Marshall-Olkin Weibull models. *Computational Statistics & Data Analysis*, 56(6), 2041-2050.

Scientific and Other Publications

Halim, A., Burney, H. N., Li, X., **Li, Y.**, Tomkins, C., Siedlecki, A. M., Lu, T. , Kalim S., Thadhani, R., Moe, S. M., Ting, S. M. S., Zehnder, D., Hiemstra, T. F. & Lim, K. (2022). FGF23 and Cardiovascular Structure and Function in Advanced Chronic Kidney Disease. Kidney360.

Arroyo, E., Umukoro, P. E., Burney, H. N., **Li, Y.**, Li, X., Lane, K. A., Sher, S. J., Lu, T., Moe, S. M., Moorthi, R., Coggan, A. R., McGregor, G., Hiemstra, T. F., Zehnder, D. & Lim, K. (2022). "Initiation of Dialysis Is Associated With Impaired Cardiovascular Functional Capacity", *Journal of the American Heart Association*, e025656.

Jan, M. Y., Moe, S. M., Adebiyi1, O., Chen, J., Powelson, J., Burney, H., Yaqub, M. S., Mishler, D., Moorthi, R., Taber, T., Anderson, M., **Li, Y.**, Li, X., Fridell, J., Goggins, W., Sharfuddin, A. (2022). "Vasopressin for Post Kidney Transplant Hypotension", *Kidney International Reports*.

Jan, M. Y., Yaqub, M. S., Adebiyi, O. O., Taber, T. E., Anderson, M. D., Mishler, D. P., Burney, H. N., **Li, Y.**, Li, X., Sharfuddin, A. A. (2022). "Nondirected Living Kidney Donation and Recipient Outcomes in the United States: A 20-Year Review", *Kidney International Reports*.

Li, Y. (2014). Book review: statistical analysis of panel count data. *Austin Statistics*, 1(1), 1. (Invited editorial-board article)

Zhang, Y., Yu, F., Feng, Y., Zhou, Y., & **Li, Y.** (2004). Math-model and data disposal of spot space orientation system with double-area CCD. *Journal of Optoelectronics Laser*, 15(6), 695-697.

Conference Abstracts

Ajrouch, A., Jennewein, L., **Li, Y.**, Pike, F., Hanna, N. (2022), "The association of social and demographic factors on the time interval between a suspected diagnosis of cancer, diagnosis, treatment, and outcomes in a lung cancer patient population", *American Society of Clinical Oncology (ASCO) Annual Meeting*.

Jan, M. Y., Yaqub, M. S., Taber, T., Adebiyi1, O., Anderson, M., Mishler, D., Burney, H., **Li, Y.**, Li, X., Sharfuddin, A. (2021), "Altruistic Kidney Donations: Optimizing Utility and Beneficence", *Transplant International*, 34(111), 26-26.

Manuscripts in Preparation

Manuscripts on Statistical Methodology

- **Li, Y.**, Zhang, B. (2022+). "Semiparametric Analysis of Multivariate Recurrent Events with Informative Censoring".

- Sun, D., Guo, Y., **Li, Y.**, Tu, W., Sun, J. (2022+). "A New Robust Approach for Regression Analysis of Panel Count Data with Time-varying Covariates".

Honors and Awards

Women in Statistics and Data Science Travel Award, the National Science Foundation (NSF), 2018

Junior Researcher Award (paper award), International Chinese Statistical Association (ICSA), 2017

Junior Faculty Development Award, UNCC, 2016-2017

Boyd Harshbarger Student Travel Award, Southern Regional Council on Statistics, 2012

Outstanding Achievement by a Graduate Student, UALR, 2006-2007

Tuition Assistance for Minority Students (TAMS) Award, UALR, 2005-2007

People's Scholarship, Beijing Institute of Technology, 2001-2005

Undergraduate Registration Scholarship, Beijing Institute of Technology, 2001-2005

Grants

Funded Projects

- Indiana CTSI UL1TR002529 Risk assessment, stratification and prediction for cognitive impairment in the Health and Retirement Study (2022-2023)
  Role: PI
- 1R01CA255480-01A1 (PI: Johns)
  Acceptance and Commitment Therapy for Fear of Recurrence in Breast Cancer Survivors (2021-2025)
  Role: Co-I
- NIAAA 5U24 AA026969-04 (PI: Tu)
  Data Coordinating Center for the Alcoholic Hepatitis Research Network (2018-2013)
  Role: Co-I

- UNCC Faculty Research Grant
  Regression analysis of panel count data with correlated observation times (2014-2015)
  Role: PI

Submitted but Unfunded Grant Proposals

- NIH-R01 (submitted on October 5, 2020); **Role: Co-I**), "Redefining cardiovascular risk assessment in chronic kidney disease patients (ROCK)".
- IU Health grant (submitted on August 21, 2020); **Role: Collaborator**), "Effects of Thrice Weekly versus Daily Hemodialysis on Cardiovascular Functional Capacity (ELDEN) study".
- National Institutes of Health (NIH)-R03 (submitted on July 16 2020; **Role: Collaborator**), "Enabling Older Adults by Identifying the Individual and Environmental Determinants of Recovery from Mobility Disability".
- Open Education North Carolina Faculty Adoption Grant (Submitted in March 2019; **Role: Sole PI**), "Linear Statistical Models".
- Department of Defense (DOD) Breast Cancer Research Program Breakthrough Award Level 1 (Submitted in March 2019; **Role: Co-I**), "Inflammasome inhibition and TMUC1 antibody immunotherapy to prevent breast tumor progression".
- NIH-R03 (Submitted in February 2019; **Role: Sole PI**), "Joint analysis of recurrent illnesses and severe diseases under complex observation schemes".
- NIH-R15 (Submitted in February 2019; **Role: Co-I**), "TMUC1 and inflammasome-driven inflammatory microenvironment in breast cancer".
- DOD Breast Cancer Research Program Breakthrough Award Level 1 (Submitted in November 2018; **Role: Co-I**), "Combining inflammasome inhibitors and immune checkpoint treatments to prevent breast tumor progression".
- National Cancer Institute (NCI)-R03 (Submitted in October 2018; **Role: PI**), "Statistical analysis of panel count data with stage-varying covariate effects and interstage correlations".
- UNCC Faculty Research Grant (Submitted in October 2018; **Role: Sole PI**), "Statistical analysis of panel count data with stage-varying covariate effects and interstage correlations".
- NIH-R15 (Submitted in June 2018; **Role: Senior/Key Participant**), "TMUC1 and inflammasome driven inflammatory microenvironment in breast cancer".
- Association for Women in Mathematics (AWM) Travel Grants (Submitted in February 2018; **Role: Sole PI**), "Treatment comparison and prediction with internal-censored cancer data".
- Simons Foundation Collaboration Grants for Mathematicians (Submitted in January 2018; **Role: Sole PI**), "Treatment comparison and prediction with internal-censored cancer data".
- DOD Reconstructive Transplant Research Program Concept Award (Submitted in December 2017; **Role: Statistician**), "Anti-MUC1 and anti-PD1 immunotherapy to prevent breast cancer progression".
- DOD Reconstructive Transplant Research Program Concept Award (Submitted in December 2017; **Role: Statistician**), "Preventing inflammasomes' activation to improve transplantation success".
- AWM Travel Grants (Submitted in January 2016; **Role: Sole PI**), "Flexible modeling of panel count data with correlated observation times".
- Oak Ridge Associated Universities Junior Faculty Enhancement Award (Submitted in September, 2013; **Role: Sole PI**), "Nonparametric Tests for Panel Count Data with Unequal Observation Processes".

Professional Activities

- **Journal Reviewer** for: *Biometrics*, *Communications in Statistics-Theory and Methods*, *Computational Statistics & Data Analysis*, *Computer Methods and Programs in Biomedicine*, *Environmetrics*, *International Journal of Clinical Biostatistics and Biometrics*, *International Statistical Review*, *Journal of Applied Statistics*, *Journal of Nonparametric Statistics*, *Journal of Dermatology Research and Therapy*, *Journal of Testing and Evaluation*, *Journal of the American Statistical Association*, *Statistics and Its Interface, Statistica Sinica*
- **Grant Reviewer** for: Medical Research Council (MRC, UK), 2017; NSF Social Psychology Program, 2015
- **Editorial Board Member** for: ARC Journal of Cancer Science, Austin Mathematics, Austin Statistics (2014), JSM Mathematics and Statistics
- **Conference Organizer and Chair** for: "Recent Advances in Analysis of Interval-Censored Failure Time Data and Longitudinal data", 2016 ICSA Symposium, Atlanta, Georgia, June 2016.

  "Recent Developments in Survival Analysis and Longitudinal Studies", 2015 ICSA China Statistics Conference, Shanghai, China, July 2015.
- **Seminar Co-Organizer** for Biostatistics Working Seminar, University of Missouri, Columbia, Missouri, August 2012-May 2013.

Teaching

Courses Taught at UNCC

- New Course Designed: STAT 6113/ECON 6113 (Cross-Section and Time-Series Econometrics) for the Master of Science Program in Mathematical Finance ;

- Graduate Courses: STAT 7127/8127 (Linear Statistical Models): Spring 2019 (8 students);
  STAT 6113/ECON 6113 (Cross-Sectional and Time-Series Econometrics): Spring 2016 (8 students);
  STAT 6113/ECON 6113: Spring 2015 (7 students)
- Undergraduate Courses: STAT 3128 (Prob & Stat for Engineers): Summer 2020 (35 students);
  STAT 2122 (Introduction to Probability and Statistics): Spring 2020 (57 students);
  STAT 3123 (Probability and Statistics II): Spring 2020 (27 students);
  STAT 2122 (Introduction to Probability and Statistics): Fall 2019 (66 students);
  STAT 3122 (Probability and Statistics I): Fall 2019 (36 students);
  STAT 1220 (Elements of Statistics I): Summer 2019 (7 students);
  STAT 1222 (Introductory Statistics): Spring 2019 (65 students);
  STAT 3122/MATH 3122 (Probability and Statistics i): Fall 2018 (51 students);
  STAT 1222 (Introductory Statistics): Fall 2018 (41 students);
  STAT 1220 (Elements of Statistics I): Summer 2018 (14 students);

STAT 2122 (Introduction to Probability and Statistics): Spring 2018 (54 students);
STAT 2122 (Introduction to Probability and Statistics): Spring 2018 (56 students);
STAT 3160 (Applied Multivariate Analysis): Fall 2017 (13 students);
STAT 1222 (Introductory Statistics): Fall 2017 (52 students);
STAT 1222 (Introductory Statistics): Spring 2016 (69 students);
STAT 1222 (Introductory Statistics): Fall 2015 (35 students);
STAT 1222 (Introductory Statistics): Fall 2015 (51 students);
STAT 1222 (Introductory Statistics): Fall 2014 (45 students);
STAT 1222 (Introductory Statistics): Fall 2014 (41 students);
STAT 1222 (Introductory Statistics): Spring 2014 (70 students);
STAT 1222 (Introductory Statistics): Spring 2014 (62 students);
STAT 1222 (Introductory Statistics): Fall 2013 (45 students);
STAT 1222 (Introductory Statistics): Fall 2013 (35 students)

Courses Taught at Mizzou

- STAT 1200 (Introductory Statistical Reasoning): 3 semesters (about 35 students each semester)

Courses Taught at UALR

College Algebra (1 semester, about 35 students)
Computer Labs for Calculus II (2 semesters, about 25 students each semester)
Computer Labs for Calculus III (2 semesters, about 25 students each semester)

Student Advising

Students Advised

- Ph.D.: Unkung Lee (co-advised with Dr. Yanqing Sun in 2014), "Analysis of semiparametric regression models for the cumulative incidence functions under the two-phase sampling designs".
- Masters: 1. Xueji Wang (advised in 2017-2018), "Longitudinal data analysis using generalized estimating equations", *graduated* in Spring 2018;
  2. Gordon Black (advised in Fall 2015), "A flexible modeling of panel count data with informative observation times and drop-outs".
- Senior project: Christopher Burleson (advised in Fall 2018), "Regression analysis of ischemic heart disease".

Committee Member

- Master's Thesis: Sayantika Nag, Summer 2019; Zhiyuan Weng, Fall 2017;
  Chengwei Sun, Spring 2016; Shilue Zhang, Fall 2014
- Dissertation: Chengwei Sun, Fall 2019; Fei Heng, Spring 2019;
  Liqiu Deng, Spring 2019; Unkung Lee, Spring 2016

Professional Service

- 2020-Present: faculty biostatistician, Division of Nephrology & Hypertension at Indiana University School of Medicine (IUSM)
- 2020-Present: faculty biostatistician, IU Simon Comprehensive Cancer Center (IUSCCC)
- 2020-Present: reviewer for the scientific review committee (SRC), IUSCCC
- 2019-2020: statistics representative for the UNC system-wide math pathways initiative
- 2019-2020: statistics consulting service founding and planning group
- 2018-2020: department's representative on the CLAS Faculty council
- 2018-2020: department undergraduate curriculum committee
- 2015-2019: statistics subcommittee for statistics hire
- 2015-2018: comprehensive exam writer and grader for math-finance master's program
- 2015-2016: alternate department representative to the university faculty council
- 2014-2020: statistics Ph.D. qualifying exam reader
- 2014-2018: reader of the STAT 1222 and STAT 1220 common final exams
- 2013-2019: frequent host of statistics colloquium talks
- 2013-2017: math finance committee
- 2013-2017: high school contest committee

Research Presentations

Invited Talks

- " Semiparametric Analysis of Multivariate Recurrent Events with Informative Censoring", The 5th International Conference on Econometrics and Statistics (EcoSta 2022), Kyota, Japan, June 2022.
- "Analysis of Recurrent Events under Complex Observation Schemes", The 2020 ICSA Applied Statistics Symposium, Houston, Texas, December 2020.
- "Joint Analysis of Interval-Censored Recurrent Events and Survival Data", The 2019 ICSA Applied Statistics Symposium, Raleigh, North Carolina, June 2019.
- "A General Additive-Multiplicative Mean Model for Panel Count Data Analysis", The 2019 Conference on Lifetime Data Science, Pittsburgh, Pennsylvania, May 2019.
- "Semiparametric Regression of Panel Count Data with Informative Observation and Dropout Processes", A Statistics Seminar at University of South Carolina, Columbia, South Carolina, April 2018.
- "Semiparametric Varying-Coefficient Regression Analysis of Recurrent Events", The 2017 ICSA China Conference with the Focus on Lifetime Data Science, Jilin, China, July 2017.
- "Semiparametric Varying-Coefficient Regression for Recurrent Events", The First International Conference on Econometrics and Statistics, Hong Kong, June 2017.

- "Semiparametric Varying-Coefficient Regression Analysis of Recurrent Events", The 2016 ICSA Applied Statistics Symposium, Atlanta, Georgia, June 2016.
- "Regression Analysis of Multivariate Panel Count Data with Informative Observation Times", The 2015 ICSA China Statistics Conference, Shanghai, China, July 2015.
- "Semiparametric Regression of Multivariate Panel Count Data with Informative Observation Times", The Fifth International Biostatistics Workshop of Jilin University, Jilin, China, June 2015.
- "Regression Analysis of Panel Count Data with Informative Observation Times", The 2014 Joint Applied Statistics Symposium of ICSA & Korean International Statistical Society, Portland, Oregon, June 2014.
- "Analyzing Panel Count Data with a Terminal Event", A Biostatistics Working Seminar at University of Missouri, Columbia, Missouri, September 2012.
- Series Presentations "The Statistical Analysis of Failure Time Data", Biostatistics Working Seminars at University of Missouri, Columbia, Missouri, February-May 2010.

Contributed Talks

- "An Additive-Multiplicative Mean Model for Panel Count Data with Dependent Observation and Dropout Processes", The 2018 Joint Statistical Meetings (JSM), Vancouver, Canada, July 2018.
- "Semiparametric Varying Coefficient Regression for Analysis of Recurrent Event Data", The 2016 International Biometric Conference, Victoria, Canada, July 2016.
- "Semiparametric Random-Effect Models for Panel Count Data with Informative Observation Times", The 2015 JSM, Seattle, Washington, August 2015.
- "Regression Analysis of Longitudinal Data with Correlated Censoring and Observation Times", The 2014 Eastern North American Region (ENAR) Meetings, Baltimore, Maryland, March 2014.
- "Regression Analysis of Panel Count Data with Informative Observation Times", The 2014 JSM, Boston, Massachusetts, August 2014.
- "Two-Sample Nonparametric Comparison for Panel Count Data with Unequal Observation Processes", The 2013 ENAR Meetings, Orlando, Florida, March 2013.
- "Semiparametric Transformation Model for Panel Count Data with Dependent Observation Process and a Terminal Event", The 2012 Southern Regional Council on Statistics Summer Research Conferences, Jekyll Island, Georgia, June 2012.