Indiana University-Purdue University Indianapolis

Department of Mathematical Sciences

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, April 12, 2022
Zoom Meeting: Meeting ID: 845 0989 4694

Speaker: **Yang Li**
Department of Biostatistics and Health Data Science,
Indiana University School of Medicine

Title: **Semiparametric Regression of Recurrent Events with Informative Censoring**

Abstract:

In healthcare and clinical studies, recurrent events are frequently encountered both during hospitalizations and after hospital discharge. By "recurrent events", we mean that one subject can potentially experience the same type of event repeatedly. A possible complicating factor in many recurrent event studies is informative censoring. Compared to rate or intensity models, mean functions on recurrent event occurrences can be clinically more interpretable especially when the event recurrence is likely fatal. We consider semiparametric regression analyses on the mean functions with informative censoring when the observation process is either continuous or discrete. For modeling capacity and flexibility, both additive and multiplicative covariate effects are included. Marginal models are employed to avoid distributional assumptions or specified correlation structures between recurrent events and censoring events. Estimating-equation based inference procedures are developed for the parametric and nonparametric components. Simulation studies show that the proposed inference procedures perform well. The proposed approaches are applied to analyze datasets from two motivating examples.

Bio:
Dr. Yang Li joined the Department of Biostatistics and Health Data Science in July 2020 as an Associate Professor. She got her PhD in Statistics from University of Missouri in 2013. Her current research focuses on time-to-event data analysis, recurrent event analysis, longitudinal data analysis, and applications of statistical methods in nephrology, cancer, and alcholic liver disease. Before joining IU, Dr. Li worked as an Assistant Professor at the Department of Mathematics and Statistics at the University of North Carolina at Charlotte during 2013-2020.