R. Clifton Bailey Statistics Seminar Series

Intensive Longitudinal Data: What is it? Where are we now? What happens next?

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Student Union 1 – Room 3B
4400 University Drive, Fairfax, VA 22030
October 19, 2018
11:00 A.M. - 12:00 Noon

Abstract: Intensive Longitudinal Data (ILD) can be defined as any data situation in which "characteristics or multiple individuals or study units are recorded at more than a handful of times points." While the data type stretches back into the previous century through, for example, diary studies and ecological momentary assessment studies, ILD have become increasingly common because of the prevalence of digital devices that make data retrieval fast and easy. While the characteristics of ILD are mathematically similar to traditional longitudinal data, the goals of collecting such high-intensity short-term observations tend to differ from those of traditional longitudinal studies. Instead of changes over time, ILD studies tend to focus on periodic trends, short-term within-subjects changes, or effects on the variation of outcomes around the mean. In this presentation we will consider a number of different ILD studies and corresponding analysis techniques, providing a quick "tour" of currently employed ILD methods along with some discussion of future needs.

Bio: Trent Lalonde is currently an Associate Professor and Chair for the Department of Applied Statistics and Research Methods at the University of Northern Colorado. Dr. Lalonde earned his PhD from Arizona State University in 2009, with a research focus on quasi-likelihood estimation for joint Generalized Linear Mixed Models. He finds applications of his research in longitudinal data analysis, intensive longitudinal data, marginal estimation in the presence of time-dependent covariates, and the joint modeling of multiple outcome properties. Dr. Lalonde has contributed

to longitudinal studies as a co-investigator on projects funded by the NSF, NIH, and IES, among others.