

**Indiana University-Purdue University
Indianapolis**
Department of Mathematical Sciences

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, October 08, 2019
LD 018

Speaker: Dr. Mohler, George Owen
Department of Computer & Information Science, IUPUI

Title: Point process methods for social harm modeling and intervention

Abstract:

A variety of social harm occurs in our cities including crime, traffic crashes, drug overdoses, medical emergencies, and more extreme events (e.g. disasters, conflict, terrorism). In this talk we will provide an overview of our research on 1) point process modeling of space-time event patterns and 2) building and testing software systems aimed at reducing social harm through data-driven interventions. We will present several applications including deterring burglaries in crime hotspots, early warning of overdose clusters, dynamic ambulance placement, and gunshot detection. We will also discuss issues of fairness that can arise if biases in data and/or decision making are amplified by algorithms that provide feedback into these social systems.