

Speaker: Bhramar Mukherjee (University of Michigan)

Date: 29/11/2022 at 13:15 in CB 3.1

Title: Using Electronic Health Records for Scientific Research: Promises and Perils

Abstract:

Electronic Health Records (EHR) linked with other auxiliary data sources hold tremendous potential for conducting real time actionable research. However, one has to answer two fundamental questions before conducting inference: "Who is in my study?" and "What is the target population of Inference?". Without accounting for selection bias, one can quickly produce rapid but inaccurate conclusions. In this talk, I will discuss a statistical framework for jointly considering selection bias and phenotype misclassification in analyzing EHR data. Examples will include genome and phenome-wide association studies of Cancer and COVID-19 outcomes using data from the Michigan Genomics initiative and the UK Biobank. This is joint work with Lars Fritsche, Lauren Beesley and Maxwell Salvatore at the University of Michigan School of Public Health.