Date: September 22, 2022

Time: 12:30pm-1:30pm * *Start may be delayed due to Statistics Division meeting*

Presenter: Janie Coulombe (Université de Montréal)

Title: Causal inference with data subject to covariate-dependent observation times: An application to a cohort of new users of antidepressants

Abstract: Marginal and conditional treatment effects are often estimated using data from observational studies like those from electronic health records (EHR). These data contain rich, longitudinal information on treatments, outcomes, and potential treatment effect modifiers. Under a set of causal assumptions, they can be used to estimate causal treatment effects. In most observational studies, however, observation (or visit) times are not common across patients, which can affect the inference. In this talk, we discuss the issue of covariate-dependent observation times in causal inference in general. Then, focusing on the estimation of conditional treatment effects, we propose a new consistent estimator for optimal individualized treatment rules that can be used to tailor treatment to patient characteristics all while accounting for visit irregularity across patients. The method is applied to data from the Clinical Practice Research Datalink in the United Kingdom to build an optimal treatment rule that chooses between two commonly prescribed antidepressants, citalopram and fluoxetine. The aim of that rule is to minimize a detrimental weight change in patients with depression.

How to connect? Via [Zoom]

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