

Department of Applied Mathematics Seminar

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Topic

Learning Robust Decision Rules for Censored and Confounded Data

Date| Time

4 December 2025 (Thursday) | 16:30 – 17:30 (HK Time)

Venue

Y301

Abstract:

In this talk, we propose two robust criteria for learning optimal treatment rules with censored survival outcomes. The first one aims to identify a treatment rule that maximizes the restricted mean survival time, where the restriction is specified by a given quantile such as the median; the second one focuses on maximizing buffered survival probabilities, with the threshold adaptively adjusted to account for the restricted mean survival time. Moreover, we develop robust treatment rules that enable reliable policy recommendations when unmeasured confounding is present, using the proximal causal inference framework. Simulation studies and real-world applications demonstrate the superior performance of the proposed methods.

ALL ARE WELCOME