國立中山大學應用數學系
學術演講

講　者：蔡長宇 助理教授（國立高雄大學 統計學研究所）

講　題：Semiparametric estimation of the transformation model by leveraging external aggregate data in the presence of population heterogeneity.

時　間：2026/03/26（Thursday）14:10～15:00

地　點：理 SC4009-1 教室

茶　會：13:30

Abstract

In this talk, we introduce the use of aggregate information from external sources to improve estimation efficiency. We propose an empirical likelihood-based framework for semiparametric transformation models that incorporates t-year subgroup survival probabilities from external data. The proposed estimation procedure synthesizes an additional likelihood component to account for uncertainty in the external information and employs a density ratio model to address population heterogeneity. We will present both the large-sample properties and simulation results, which show that the proposed estimator is more efficient than conventional approaches. Finally, we demonstrate the practical utility of our method through an application to a pancreatic cancer dataset.

Keywords: Synthesizing information; Empirical likelihood; Population heterogeneity; Survival analysis

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