清 華 大 學 、 交 通 大 學
統 計 學 研 究 所
專 題 演 講

題　目：Estimation and Model Checking for General Semiparametric

Recurrent Event Models with Informative Censoring

主講人：江金倉 教授（國立臺灣大學數學系）

時　間：109 年 10 月 30 日 (星期五) 上午 10:40 – 11:40

(10：20 - 10：40 茶會於統計所 821 室舉行)

地　點：清大綜合三館 837 室

Abstract

This research aims to explore a recurrent event process with informative censoring using more general semiparametric latent intensity regression models. When the distributions of the subject-specific latent variable and the censoring time are left unspecified, the distinct distributional features of the recurrent event times are found to be linked to the shape parameter, which, hence, merits the development of estimation and testing procedures. In light of this finding, two contrasting estimation methods are proposed for shape-dependent and –independent models. Especially, the estimation criteria are useful in building test rules to distinguish between competing rate regression models without the need to specify a significance level. Under very mild conditions, we establish large-sample properties of the estimators and test statistics. Comprehensive simulations are further conducted to assess their finite-sample performance. Moreover, our methodology is demonstrated by applying it to recurrent event samples of intravenous drug users needing inpatient care and patients with chronic granulomatous disease.

(This is a joint work with Hung-Chi Ho and Ming-Yueh Huang)

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