

東海大學統計學系學術演講

時 間：115 年 10 月 20 日（星期二下午 14:10~15:00）

地 點：管理學院新大樓 M240

主講人：溫啟仲 教授（國立陽明交通大學 公共衛生研究所）

講 題：Variable Selection for Privacy-Protected Current-Status Survival
Data Using Adaptive Lasso

Abstract

Surveys involving sensitive behaviors may produce current-status survival data that are susceptible to response bias due to respondents' concerns about privacy. Randomized response techniques (RRTs) offer an effective means of mitigating this problem by allowing respondents to provide sensitive information with enhanced privacy protection. This study develops an adaptive lasso method for simultaneous estimation and variable selection in current-status survival data collected under RRT designs. A flexible class of transformation models is adopted for the event-time distribution, encompassing the proportional hazards and proportional odds models as special cases. To accommodate the latent response mechanism introduced by RRT, an EM-based estimation procedure is developed and combined with a modified shooting algorithm for efficient implementation. The proposed estimator is shown to possess the oracle property, and analytical standard error estimates are derived to facilitate statistical inference. Simulation studies evaluate the finite-sample performance of the method in terms of variable selection, estimation accuracy, and inferential properties. The proposed approach is further illustrated using data on extramarital sexual behavior from the Taiwan Social Change Survey, demonstrating its applicability to the analysis of sensitive time-to-event outcomes under privacy protection.

敬請公告，歡迎參加！

* 爾後演講公告將於本系網站刊載 *

<http://stat.thu.edu.tw/>