

**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium

Variable Screening for Censored Survival Data

By

Dr. Jinfeng Xu

**Department of Statistics & Actuarial Science
The University of Hong Kong**

Abstract

Existing screening procedures for right censored data either posit a specific model or adopt a marginal approach, hence prone to model misspecification or erroneous screening. To address these problems, we develop a joint feature screening method in nonparametric transformation model for censored survival data. A sparsity-restricted estimator is proposed using a smoothed partial rank objective function and an iterative hard thresholding algorithm. We rigorously show that with probability tending to 1, it is capable of retaining all relevant features in the model and more desirable than marginal screening. Furthermore, because the transformation model encompasses many popular models such as the Cox model as special cases, the developed joint screening method is more robust than its competitors. Its finite sample performance is illustrated using both simulation studies and a real data example.

Date : 26 May, 2020 (Tuesday)

Time : 14:00-15:00 (Hong Kong Standard Time GMT +8)

Venue : Online Talk via Zoom(Meeting ID: 939 4571 4352)

Click to join : <https://polyu.zoom.us/j/93945714352>

* The Talk will be given in English.



[Click to join \(Zoom\)](#)

***** ALL ARE WELCOME *****

For enrolment, please send your name and email to chingching.lu@polyu.edu.hk on or before 25 May 2020, Monday.