

國立中央大學

統計研究所

學術演講

主 講 人：李宜真 助理教授（國立成功大學統計學系）

講 題：**Building Degradation Index with Variable Selection for
Multivariate Sensory Data**

時 間：111年11月15日（星期二）上午11：00 ~ 12：00

地 點：中央大學鴻經館M429室

茶 會：上午 10：30 ~ 11：00 地 點：鴻經館 510 室

ABSTRACT

The modeling and analysis of degradation data have been an active research area in reliability engineering for reliability assessment and system health management. As the sensor technology advances, multivariate sensory data are commonly collected for the underlying degradation process. However, most existing research on degradation modeling requires a univariate degradation index to be provided. Thus, to construct a degradation index for multivariate sensory data is a fundamental step in degradation modeling. In this paper, we propose a novel degradation index building method for multivariate sensory data with censoring. Based on an additive nonlinear model with variable selection, the proposed method can handle censored data, and can automatically select the informative sensor signals to be used in the degradation index. The penalized likelihood method with adaptive group penalty is developed for parameter estimation. We demonstrate that the proposed method outperforms existing methods via both simulation studies and analyses of the jet engine sensor data.

It's a joint work with Dr. Yueyao Wang, Dr. Yili Hong and Dr. Xinwei Deng.

◎敬請張貼

歡迎參加◎