

# 國立臺北大學統計學系

## 專題演講

講題： A pattern-clustering method for longitudinal data – heroin users receiving methadone

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時間：105 年 10 月 26 日 (星期三，13：00~15：00)

地點：三峽校區商學大樓商 **7F01**

### Abstract

Methadone is used as a substitute of heroin and there may be certain groups of users according to methadone dosage. In this work we analyze data for 314 participants of a methadone study over 180 days. The data consist of seven categories in which six categories have an ordinal scale for representing dosages and one category for missing dosages. We develop a clustering method involving the so-called  $p$ -dissimilarity and a null model test. The  $p$ -dissimilarity is used to measure dissimilarity between the 180-day time series of the participants. It accommodates ordinal and categorical scales by using a parameter  $p$  as a switch between data being treated as categorical and ordinal. Moreover, we construct a Markov null model without structure of clusters, in which the distributions of the categories are the same as those of the real data. The null model test uses the null model and parametric bootstrap to investigate whether the clusters found can be explained by random variation. (In this talk, I would like to share two projects that I have been working on. I will focus more on the role of statistics rather than details of methodology.)

~歡迎參加~

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