



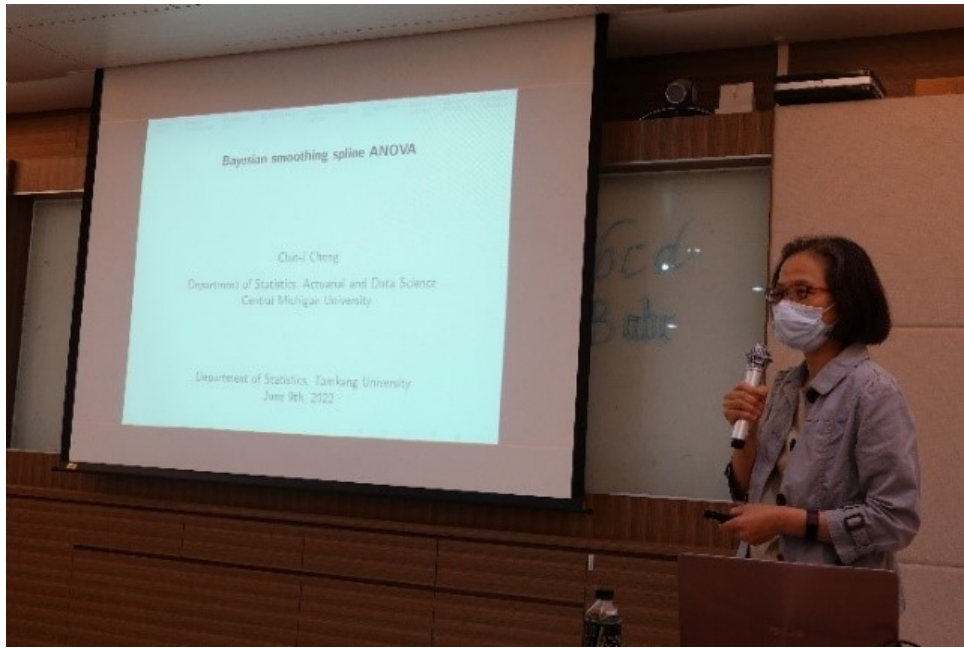
## 「國外教授來訪學術演講」-Bayesian smoothing spline ANOVA models

時間：2022-06-09  
地點：商管大樓 B302A

This presentation will start with an example of a linear regression model which included an interaction effect. Three of the assumptions for this model will be discussed: (1) explanatory variables,  $X_s$ , are linearly related to the response variable,  $Y$ , (2) the unknown parameters in the model are fixed values and estimated by least square method, and (3) the response variable follows a normal distribution. The first assumption of linear relationships could be loosened by adopting nonparametric regression models. I will specifically discuss the smoothing spline models. To account for interaction effects in smoothing spline models, the smoothing spline ANOVA models are introduced. Bayesian approach assumes the parameters to be estimated to be random variables instead of fixed values as stated in the second assumption. There is also a Bayesian interpretation for the solution of smoothing spline models. Therefore, Bayesian estimates are considered. This Bayesian interpretation will be further extended to the smoothing spline ANOVA models. I will also extend this Bayesian smoothing spline ANOVA for normally distributed response variable to binary and Poisson distributed response variables.



演講者與老師們在討論演講內的論點



演講者認真講述



同學們都很認真聽演講者帶來精彩的演講