

# 國立中央大學

## 統計研究所

### 學術演講

主 講 人：蔡欣甫 助理教授（國立臺灣大學農藝學系）

講 題：Generating Order-of-Addition Designs with Flexible Run Sizes

時 間：109年9月22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

In some industrial, chemical and pharmaceutical studies, physical and/or chemical properties of the process outputs can be very different depending on the order in which materials are added. A series of trials for exploring the impact of sequentially adding the materials in various orders is called an order-of-addition experiment. In this talk, I will introduce a systematic method to generate optimal designs for these kinds of experiments. The main idea of the proposed method is to split the full design into several Latin squares, then a fractional design can be obtained by juxtaposing some selected Latin squares. A computer-assisted search procedure is first implemented to generate optimal designs with small to moderate run sizes. On the basis of computer-generated designs, a recursive method is then used to generate optimal designs with large run sizes. By applying the proposed method, a series of optimal designs with flexible run sizes is generated for practical applications.

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