

國立中山大學應用數學系

學術演講

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講題：Linking Group Testing and Combinatorial Testing: From Defective Items to Faulty Interactions

時間：2025/6/19 (Thursday) 10:10 ~ 11:00

地點：理 SC 4009-0 教室

茶會：9:45

Abstract

Group testing (GT) is a classical method for identifying defective items by testing pooled samples, using combinatorial structures such as separable and disjunct matrices for efficient identification.

Combinatorial testing (CT), while sharing similar mathematical ideas, aims to detect faults caused by interactions among a small number of factors, rather than individual components. It employs combinatorial structures like covering arrays, locating arrays, and detecting arrays. Notably, many CT models can be seen as generalizations or extensions of GT under broader assumptions.

This talk will explore the combinatorial structures for CT, using GT as a starting point, and emphasizes the connections between the two frameworks. If time permits, recent developments in GT and CT related to combinatorial design theory and coding theory will also be presented.

敬 請 公 告 ！ 歡 迎 參 加 ！

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