

# 國立中山大學應用數學系 學術演講

講 者：Dr. Chon Fai Kam (University at Buffalo)

講 題：Classification of Multipartite Entanglement through Majorana Spheres

時 間：2024/03/06 (Wednesday) 10:10~11:00

地 點：理 SC 4009-0 教室（線上與實體同步進行）

Google Meet Link: <https://meet.google.com/evg-ukyx-opd>

## Abstract

In the realm of quantum information, entanglement stands as the cornerstone for achieving exponential speedups over classical computation. Despite its significance, the precise classification of entanglement remains an unresolved challenge. The extension of Schmidt decomposition, which effectively classifies bipartite entanglement, to N-partite entanglement—where N exceeds 2—presents a formidable obstacle. Notably, for symmetric states under permutations, multipartite entanglement can be specified by N unordered points (referred to as Majorana stars) on the unit sphere (referred to as Majorana sphere). Consequently, the classification of the entanglement problem transforms into the spherical design problem. Based on the symmetry group of a tiling of the Majorana sphere, we aim to offer a refined classification of multipartite entanglement.

敬 請 公 告！ 歡 迎 參 加！

應用數學系：<http://math.nsysu.edu.tw>

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