國立中山大學應用數學系
學術演講

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講　題：An Introduction to Analytic Combinatorics

時　間：2026/11/05（Thursday）15:10pm~16:00pm

地　點：理 SC4009-1 教室

茶　會：14:30

Abstract

Random walks, trees, graphs, tilings, permutations, partitions: combinatorial structures are everywhere, from computer science and bioinformatics to probability, economics and physics. Two questions keep coming back: how many objects of size n are there, and what are their typical properties for large n?

Analytic combinatorics answers both with one idea: encode the structures as a power series, then read the asymptotics off the singularities of this generating function in the complex plane. Counting becomes complex analysis!

The approach has natural applications in computer science, notably in Donald Knuth's seminal The Art of Computer Programming, which founded the systematic mathematical analysis of algorithms and made generating functions a central tool.

This talk is a general-audience introduction to these techniques. We will present classic results, and connect them with more recent developments, including some surprising links with the Riemann hypothesis!

敬 請 公 告！ 歡 迎 參 加！

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