

國立中正大學數學系
暨應用數學碩士班、統計科學碩士班
學 術 演 講

**A probabilistic approach in understanding Eulerian number's
connection to Euler numbers**

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Abstract

Everyone knows that Euler's number ($e = 2.718\dots$), having many expressions, is irrational and its decimal representation goes on infinitely without repeating. In contrast to the role of Euler's number in mathematics, less is known about the Euler numbers and Eulerian number and the relationship of the two.

We present in this talk a method, using a Markov chain approach, to obtain the exact distribution of the number of peaks associated with a random permutation of $\{1, 2, \dots, n\}$. Not only the number of alternating permutations in the group of all permutations generated by $\{1, 2, \dots, n\}$ for given n can be obtained, along the way, its connection to the number of descents (falls) is established through the distribution of peaks.

Reference

<https://doi.org/10.1007/s11009-023-09987-0>

日 期:114 年 10 月 1 日(星期三) 16:10~17:00

地 點:本校數學館 527 教室 (嘉義縣民雄鄉大學路 168 號)

茶 會:15:30~16:00 數學館四樓 409 室舉行

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