國 立 清 華 大 學 數 學 系 學 術 演 講
NTHU MATH Colloquium

講題　　Extremal bounds for pattern avoidance in 0-1 matrices

講者　　蔡昇甫教授 (中央數學系)

時間　　2023.11.27 (Mon.) 16:00 – 17:00

地點　　第三綜合大樓**2樓 Room 201**

茶會　　15:30, Room 707

Abstract

A 0-1 M matrix contains another 0-1 matrix P if M has a submatrix that can be transformed to P by flipping any number of 1s to 0s. Otherwise M avoids P. M is P-saturated if it avoids P and flipping any of its 0 makes it contain P. Extremal functions ex(n,P) and sat(n,P) are the maximum and minimum possible number of 1s in a n-by-n 0-1 matrix that is P-saturated, respectively. In this talk, we will review this research area, including the overview, its connection with classical extremal problem for graphs, developed techniques, and our findings over the years.