

# 國立清華大學數學系學術演講

## NTHU MATH Colloquium

- 講題 Inverse scattering by corners and regular of transmission eigenfunctions
- 講者 鄒駿祥教授 ( 中央數學 )
- 時間 2022.11.14 (Mon.) 16:00 – 17:00
- 地點 第三綜合大樓**2樓 Room 201** ( 請同學配戴口罩 )
- 茶會 15:30, Room 707

### Abstract

This work concerns on the recovery of polygonal shaped scatterers using a single far-field pattern measurement. At the same time, we studied the associated transmission eigenvalue problem and derived the regularity results on the transmission eigenfunctions. On the side of inverse problems, we have applied the micro-local analysis and the quantitative unique continuation property. One of our original initiative is to use the singular decomposition of the solutions to elliptic equations near polygonal corners. We finally derived a double logarithmic type stability estimate to the inverse problem and an Hölder type regularity to the associate transmission eigenfunctions. This a joint work with Prof. Hongyu Liu at City University HK.