

# MATHEMATICS COLLOQUIUM SERIES

## TOPIC:

**LOCAL CONNECTIVITY OF JULIA SETS OF  
SOME RATIONAL MAPS WITH SIEGEL DISKS**

## DATE

18th August 2025 (Monday)

## TIME

10.00 – 11.00 AM

## VENUE

Conference Room, PPSM



## SPEAKER

**Professor Fei Yang**

School of Mathematics,  
Nanjing University

### Who should attend?

Students, Researchers,  
Academic Staff, and  
especially Postgraduate  
Research Students!

### This talk focuses on:

- The local connectivity of Julia sets in complex analytic dynamical systems.
- A new finding: Long iterations of certain rational maps exhibit expansion near the boundaries of bounded type Siegel disks.
- This discovery extends Petersen's local connectivity result (originally for quadratic Siegel polynomials) to a more general case, notably without relying on traditional puzzle techniques.



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