

#### THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

### **Department of Mathematics**

### SEMINAR ON PURE MATHEMATICS

# Graph density inequalities

by

## Prof. Fan WEI

**Duke University** 

### **Abstract**

Graph limits is a recently developed powerful theory in studying graphs from a continuous perspective. In this talk, we will show it is undecidable to prove general inequalities of homomorphism densities into (edge weighted) graphs. Then I will show how the perspective of graph limits helps with graph homomorphism inequalities and how to make advances in a common theme in extremal combinatorics: when does randomness give nearly optimal bounds?

Date: 04 June 2024 (Tuesday)

Time : 3:00pm - 4:00pm

Venue: Room 2404 (near Lift 17/18)

All are Welcome!