### THE UNIVERSITY



### OF HONG KONG

#### **Department of Mathematics**

# COLLOQUIUM

## Thin groups and related topics

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#### Abstract

A thin group is a discrete subgroup of a Lie group, such that it has infinite covolume in its Zariski closure. I will explain how thin groups arise naturally in problems concerning arithmetic, geometry and combinatorics, via an ancient Greek construction named the Apollonian circle packing, whose symmetry group is a thin group. I will survey some recent progress in this area and describe my own contributions along the way.

Date: March 6, 2018 (Tuesday)

Time: 2:00 - 3:00pm

Venue: Room 210, Run Run Shaw Bldg., HKU