



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

**Department of Mathematics**

**SEMINAR ON PURE MATHEMATICS**

**Rigidity Results in Scalar Curvature**

**by**

**Harry Yipeng Wang**  
Columbia University

**Abstract**

A central theme in Gromov's program is the exploration of the implications of metric geometry for spaces with scalar curvature bounded from below. Inspired by Toponogov's triangle comparison theorem on manifolds with nonnegative sectional curvature, Gromov postulated a conjecture regarding the scalar curvature extremality property of convex polytopes. In his 'Four Lectures', he also outlined a proof based on a smoothing procedure. In this talk, I will discuss some recent progress on this problem, as well as several aspects of its generalizations and open questions.

**Date : 26 June 2024 (Wednesday)**

**Time : 4:00p.m.-5:00p.m.**

**Venue : Room 4504 (near Lift 25/26)**

*All are Welcome!*