

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

COLLOQUIUM

Stable homotopy groups of spheres and motivic homotopy theory

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Abstract

The computation of stable homotopy groups of spheres is one of the most fundamental problems in topology. It has connections to many topics in topology, such as cobordism theory and the classification of smooth structures on spheres.

In this talk, we will survey some classical methods, explain their difficulty via Mahowald's Uncertainty Principles, and describe a new technique using motivic homotopy theory. This new technique yields streamlined computations through previously known range, and gives new computations through dimension 90.

Date: September 26, 2023 (Tuesday)

Time: 4:00 - 5:00pm

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

All are welcome