THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

PhD Student Seminar

Infinite Dimensional Lie Algebra Action on Cohomology of Hilbert Schemes of Points on Surfaces

By

Mr. Zhongyi SHI

Abstract

In this talk, we will explore the action of the Virasoro algebra on the cohomology group of the Hilbert scheme. The Hilbert scheme is a moduli space that parametrizes length n subschemes of a fixed scheme, and it has been an important object of study in algebraic geometry and mathematical physics. The Virasoro algebra is a fundamental object in conformal field theory and has connections to many areas of mathematics, including representation theory and algebraic geometry. We will begin with the framework of the action, and then talk about some examples of computation.

Date : 5 May 2023 (Friday)
Time : 10:30 am
Venue : Room 5506 (Lifts 25/26)

All are Welcome!