Department of Mathematics
University of Notre Dame

Mengwei Hu - Yale University

CLUSTER ALGEBRAS AND LIE THEORY

Speaker: Mengwei Hu
Yale University



Date: Tuesday, March 17, 2026
Time: 4:00 PM
Location: 229 Hayes-Healy Bldg
Zoom URL: NA

Lecture Title:

On certain Lagrangian subvarieties in minimal resolutions of Kleinian singularities

Abstract

Kleinian singularities are quotients of C^2 by finite subgroups of $SL_2(C)$. They are in bijection with the ADE Dynkin diagrams via the McKay correspondence. In this talk, I will introduce certain singular Lagrangian subvarieties in the minimal resolutions of Kleinian singularities that are related to the geometric classification of certain unipotent Harish-Chandra (g,K)-modules. The irreducible components of these singular Lagrangian subvarieties are P^1's and A^1's. I will describe how they intersect with each other through the realization of Kleinian singularities as Nakajima quiver varieties. Time permitting, we will also discuss connections with nilpotent K-orbits and symmetric pairs in semisimple Lie algebras.