

# Algebra/Topology Seminar

LI LI

Oakland University

## NAKAJIMA'S QUIVER VARIETIES AND QUANTUM CLUSTER ALGEBRAS

Thursday, April 16, 2026  
3:00 p.m. in Massry B012

ABSTRACT. Nakajima's affine graded quiver varieties are rich geometric objects that play an important role in algebraic geometry and representation theory. In this talk, I will discuss how these quiver varieties provide a geometric framework for studying certain structures in quantum cluster algebras. In particular, I will explain how they can be used to study the support for triangular bases. I will also describe some combinatorial features of the defining ideals of these varieties and how they reflect underlying structures of the associated cluster algebras.