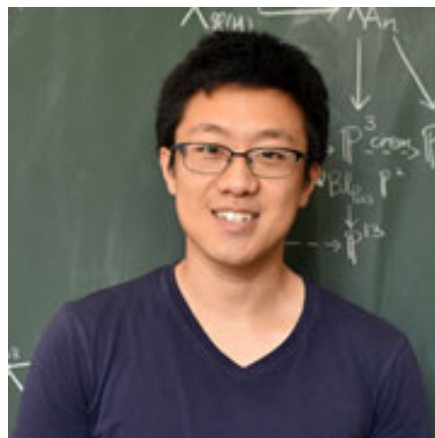


ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Chris Eur
University of California, Berkeley



Date: Thursday, September 12, 2019

Time: 3:00 PM

Location: 258 Hurley Hall

Lecture Title:

Simplicial generation of Chow rings of matroids

Abstract

Matroids generalize combinatorially the notion of linear independence and graphs, and has recently seen a breakthrough via the development of Hodge theory on Chow rings of matroids by Adiprasito, Huh, and Katz. We introduce a new presentation of the Chow ring of a matroid whose variables now admit a combinatorial interpretation via the theory of matroid quotients and display a geometric behavior analogous to that of nef classes on smooth projective varieties. We discuss various applications, including the recovery of the Hodge theory of matroids. This is joint work with Spencer Backman and Connor Simpson.