



Colloquium Series



Combinatorial Cones & the Moduli Space of Abelian Surfaces

Juliette Bruce
UC Berkeley

Abstract: An overarching theme, appearing in many different parts of math, is that to study some type of geometric object, it is often useful to package all of your geometric objects together into one space (often called a moduli space). One such situation is studying a generalization of elliptic curves called abelian surfaces, which can roughly be thought of as 4-dimensional donuts. We will use a bit of combinatorics and group theory to construct special cones, from which we will learn about the geometry and topology of the moduli of 4-dimensional donuts (e.g. Abelian surfaces). This is joint work with Madeline Brandt, Melody Chan, Margarida Melo, Gwyneth Moreland, and Corey Wolfe.

Keywords: algebraic geometry, combinatorics, tropical geometry

Wed. Nov. 10, 1:05 – 1:50 pm on Zoom

For more info visit the [department website](#) for the colloquium