

# The World of Mathematics and Statistics

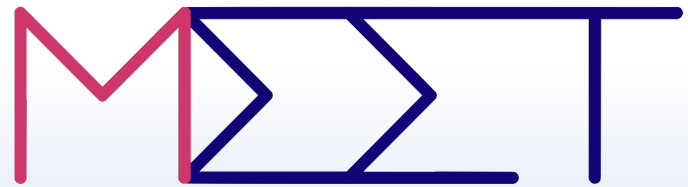
SWARTHMORE COLLEGE • DEPARTMENT OF MATHEMATICS AND STATISTICS

## Math/Stat Colloquium



**Selvi Kara**

Bryn Mawr College



a Mathematician!



Monomial ideals: a bridge between algebra and combinatorics

One of the central problems in commutative algebra concerns understanding the structure of an ideal in a polynomial ring. Abstractly, an ideal's structure can be expressed through an object called its minimal resolution, but there is no explicit method to obtain a minimal resolution in general, even for the simpler and fundamental class known as monomial ideals.

In this talk, we will focus on resolutions of monomial ideals. In particular, I will introduce a new combinatorial method that provides a resolution of any monomial ideal using tools from discrete Morse theory.

**Tuesday, October 10**

Science Center 199

Refreshments 4:15pm; Lecture: 4:30-5:30pm