



**Speaker:** Sonja Mapes  
University of Notre Dame

Tuesday, September 18, 2012  
1:00 PM  
117 Hayes-Healy Hall

**Title:** Monomial ideals and combinatorics

**Abstract:**

One reason monomial ideals are interesting to commutative algebraists is that many algebraic computations, such as computing minimal free resolutions, are easier for monomial ideals. The reason that these computations are easier is because monomial ideals can be realized as combinatorial objects in several different ways. In this talk, I will give a summary of some of these different ways. After giving a survey of the edge ideal of a graph, and Stanley-Reisner ideals, I will discuss in more detail the connection between finite atomic lattices and monomial ideals which has been the focus of my research. This talk will assume no familiarity with commutative algebra.