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**Speaker:** Angela Kohlhaas  
University of Notre Dame

Monday, April 14, 2008  
4:15 PM  
231 Hayes-Healy Hall

**Title:** Pictures of Commutative Algebra

**Abstract:**

Commutative algebra is often thought of as a technical, non-pictorial version of algebraic geometry. However, when we consider the case of monomial ideals in polynomial rings, many algebraic properties can be illustrated with lattice diagrams and graphs. In this talk, we will first state some of the basic questions in commutative algebra. Using the combinatorial properties of monomial ideals, we can then create pictures to answer these questions in the monomial case. We will talk briefly about how monomial ideals provide information about general ideals, and hopefully end by introducing the core of an ideal.