# Minimal resolutions of rigid monomial ideals

*Date* Tuesday, March 11

*Time* 3 pm

*Location* 303 Mudd

*Abstract:* Finite atomic lattices, which arise as the lcm-lattice of a monomial ideal, play an important role in studying free resolutions of monomial ideals. In this talk I will discuss this relationship as well as give a brief description of Clark's poset resolution construction. This construction can be seen as a more combinatorial analog to cellular resolutions introduced by Bayer and Sturmfels. Using the poset resolution construction we can construct the minimal free resolution rigid monomial ideals. I will also give a short discussion on how using the structure of the lattice of all finite atomic lattices with a fixed number of ordered atoms, we hope to use these results to construct a minimal free resolution for any monomial ideal.