

1079-13-268

**Timothy B.P. Clark** and **Sonja Mapes\*** ([smapes1@nd.edu](mailto:smapes1@nd.edu)), Mathematics Department,  
University of Notre Dame, Notre Dame, IN 46556. *Poset resolutions and rigid monomial  
ideals*. Preliminary report.

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. Using the poset resolution construction we can construct the minimal resolution of a certain class of rigid monomial ideals and we hope to extend our result to all rigid monomial ideals. (Received January 16, 2012)