Sonja Mapes\* (mapes@math.columbia.edu), Dept. of Mathematics, Columbia University, room 509, MC 4406, 2990 Broadway, New York, NY 10027. Finite atomic lattices and resolutions of associated monomial ideals. Preliminary report.

The minimal free resolution of a monomial ideal can be expressed in terms of the LCM lattice of the ideal. It has also been shown that given a finite atomic lattice L one can construct certain monomial ideals M whose LCM lattice is L. This talk will explore the relationship between LCM lattices with similar associated monomial ideals and their resolutions. (Received September 13, 2008)