David Eisenbud, Serkan Hosten and Sorin Popescu* (sorin@math.sunysb.edu),
Department of Mathematics, SUNY at Stony Brook, Stony Brook, NY 11794-3651. Resolutions of
monomial ideals and regularity bounds.

Describing the shape of the minimal free resolution of an arbitrary monomial ideal I is in general a difficult problem. I will describe several explicit - however in general non-minimal - free resolutions of arbitrary monomial ideals and mention related applications and conjectures for embeddings of toric varieties. (Received September 16, 2005)