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**Chelsea M Walton\*** (notlaw@umich.edu), 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109. *Generalizing Twisted Homogeneous Coordinate Rings.*

Sklyanin algebras play an important role in the study of physical phenomenon. Hence, we will first review techniques of Artin-Tate-van den Bergh (ATV) that describe the ring-theoretic and homological behavior of these structures. In particular, we highlight the significance of twisted homogeneous coordinate rings.

The focus of the talk, however, is to introduce a generalized twisted homogeneous coordinate ring  $P$  associated to a degenerate version of the three-dimensional Sklyanin algebra. The surprising geometry of these algebras yields an analogue to a result of ATV; namely that  $P$  is a factor of the corresponding degenerate Sklyanin algebra. (Received June 01, 2009)