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In the late 1980s, the field of Noncommutative Projective Algebraic Geometry emerged through several individuals' aim to classify certain noncommutative graded algebras with use of geometric data. We first discuss techniques of Artin-Tate-van den Bergh that describe the ring-theoretic and homological behavior of these structures. In particular, the roles of Sklyanin algebras and twisted homogeneous coordinate rings are highlighted.

Moreover we 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 August 10, 2009)