

Meeting: 1001, Evanston, Illinois, SS 19A, Special Session on Algebraic Representations and Deformations

1001-16-250

Darin R Stephenson and **Michaela Vancliff*** (vancliff@math.uta.edu), Department of Mathematics, P.O. Box 19408, University of Texas at Arlington, Arlington, TX 76019-0408. *An Algebro-Geometric Method for Constructing Clifford Quantum \mathbb{P}^3 s with a Predetermined Finite Point Scheme.* Preliminary report.

The classification of generic quantum \mathbb{P}^3 s (generic regular algebras of global dimension four) has been hindered by the lack of sufficiently generic examples of quantum \mathbb{P}^3 s on which to formulate and test conjectures. Candidates for generic quantum \mathbb{P}^3 s are regular algebras of global dimension four that have a finite point scheme and a one-dimensional line scheme, but such algebras are rare in the literature. One possibility for constructing such an algebra is to deform a regular Clifford algebra of global dimension four that has a finite point scheme. The focus of this talk is the presentation of an algebro-geometric method for constructing regular Clifford algebras of global dimension four with a *predetermined* finite number of points which have *semi-predetermined* coordinates. The method will be demonstrated via a detailed example. (Received August 27, 2004)