Manizheh Nafari
University of Toledo

Title: Regular Graded Skew Clifford Algebras that are Twists of Regular Graded Clifford Algebras

Abstract: We prove that if A is a regular graded skew Clifford algebra and is a twist of a regular graded Clifford algebra B by an automorphism, then the subalgebra of A generated by a certain normalizing sequence of homogeneous degree-two elements is a twist of a polynomial ring by an automorphism, and is a skew polynomial ring. We also present an example that demonstrates that this can fail when A is not a twist of B.

Padmini P. Veerapen
University of Texas, Arlington

Title: Point Modules over Regular Graded Skew Clifford Algebras

Abstract: In a recent paper by T. Cassidy and M. Vancliff, the authors introduce a quantized analog of a graded Clifford algebra called a graded skew Clifford algebra (GSCA). In this poster, we use our notion of μ-rank defined on noncommutative quadratic forms (in Vancliff and Veerapen, 2012) to show that the point modules over a regular GSCA, A, are determined by the quadratic forms of μ-rank at most two in the Koszul dual of A.

Amy Stout
University of San Diego

Title: Non-regular Algebras of Dimension 3

Abstract: Finding suitable methods for associating geometry to noncommutative graded algebras has been a goal for noncommutative algebraists for the last 20 years. While one method is to study the relationship between an algebra and its associated noncommutative category Proj, another method is to examine an algebra's corresponding point modules. This poster describes the point modules associated to some noncommutative graded algebras of dimension 3, where the graded pieces have the same dimensions as the graded pieces of a polynomial ring. These algebras have an infinite set of point modules and are regular if and only if they are domains.

Johanna Hennig
University of California San Diego

Title: A Generalization of Lie's Theorem

Abstract: A locally finite dimensional Lie algebra is a Lie algebra in which every finitely generated subalgebra is finite dimensional. We prove an infinite dimensional version of Lie's theorem: namely, that every Borel subalgebra of a locally finite Lie algebra is the stabilizer of a maximal, generalized flag in a certain type of infinite dimensional module.