

SPEED TORA - SATURDAY 4:30 - 5:30 PM

Speaker: **Gordon Brown** (University of Oklahoma)

Title: Web categories for type Q Lie superalgebras

Abstract: I will outline joint work with Jonathan Kujawa (also the content of my poster), in which we give a diagrammatic presentation of the morphisms between supersymmetric powers of the natural module over the type Q Lie superalgebra. To do so, I will mostly outline the analogous situation in non-super type A, involving symmetric powers of the natural module over the general linear Lie algebra.

Speaker: **Amit Ghosh** (Oklahoma State University)

Title: Integral points on Markoff type cubic surfaces

Abstract: Cubic surfaces in affine three space tend to have few integral points. However certain cubics such as $x^3 + y^3 + z^3 = m$, may have many such points but very little is known. I will announce some results, in joint work with Peter Sarnak, for Markoff type cubic surfaces $x^2 + y^2 + z^2 - xyz = m$ for which a (nonlinear) descent allows for a study. We show some failures of the Hasse Principle, together with a notion of “class numbers” and their averages for the corresponding nonlinear group action. Lastly, we make some progress on the question of the existence of integral points on such surfaces.

Speaker: **Mee Seong Im** (United States Military Academy)

Title: Representations of affine Nazarov-Wenzl algebras

Abstract: I will explain the construction of unital associative algebras called signed affine Brauer algebras, which are an extension of Brauer algebras constructed by D. Moon. Our algebras could also be viewed as the periplectic version of the affine Nazarov-Wenzl algebras. I will introduce these algebras algebraically and diagrammatically, providing many examples, and I will discuss the representation theory of these algebras. This is joint with M. Balagovic, Z. Daugherty, I. Entova-Aizenbud, I. Halacheva, J. Hennig, G. Letzter, E. Norton, V. Serganova, and C. Stroppel.

Speaker: **Abhishek Parab** (Purdue University)

Title: Continuity of the Twisted Trace Formula

Abstract: We show that the distributions occurring in the twisted Arthur-Selberg trace formula are continuous and extend to non-compactly supported test functions.

Speaker: **Siddhesh Wagh** (University of Oklahoma)

Title: Maass space for liftings from $SL(2, \mathbb{R})$ to $GL(2, \mathbb{B})$ over a division quaternion algebra

Abstract: Muto, Narita and Pitale created liftings from $SL(2, \mathbb{R})$ to $GL(2, \mathbb{B})$ which violate the Generalized Ramanujan Conjecture. I am trying to exactly characterize these lifts in terms of recurrence relations between their Fourier coefficients.