

abstract

MEMBERS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

Let us fix m conjugacy classes C_1, \dots, C_m inside $GL(n)$. The variety of m -tuple of matrices such that: $X_i \in C_i, \quad i=1, \dots, m$ and $X_1 \dots X_m = 1$ is a solution of the Deligne-Simpson problem. Double affine Hecke algebras (DAHAs) are natural generalizations of Affine Hecke algebras and Weil algebras. I will explain how to interpret DAHAs as universal quantization of the Deligne-Simpson problem. It provides a link between the theory of noncommutative surfaces and the theory of DAHAs. In particular, the spherical subalgebras of (generalized) DAHAs are universal quantizations of the affine Del Pezzo surfaces. The higher rank algebras are conjecturally related to the Hilbert schemes of point on the Del Pezzo surfaces. The talk is based on the joint papers with Etingof, Gan and Rains.