

abstract

Members Seminar
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

Part of geometric representation theory involves constructing representations of algebras on the cohomology of algebraic varieties. A great example of such a construction is the work of Nakajima and Grojnowski, who independently constructed an action of a Heisenberg algebra on the singular cohomology of the Hilbert Scheme of points on a complex surface. Of course, there is no reason to stop at cohomology, as it is also natural to consider other vector spaces (such as equivariant K-theory) or even categories (such as the derived category of coherent sheaves, or the Fukaya category). In this talk we will attempt to describe a small part of the tremendous structure (braid groups, vertex operators, affine Lie algebras,...) that emerges when one considers the symmetries of categories associated to the Hilbert scheme.