



Speaker: Geordie Williamson
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Thursday, April 3, 2008
1:00 PM
258 Hurley Hall

Title: Knot homology and equivariant cohomology

Abstract:

Khovanov-Rozansky link homology is a categorical knot invariant: starting with any knot (or link) one obtains an invariant consisting of a triply graded vector space. Moreover, taking the Euler characteristic yields the HOMFLYPT polynomial. I will describe one way of constructing Khovanov Rozansky homology (due to Khovanov) in terms of Soergel bimodules and explain joint work with Ben Webster in which we reinterpret the steps in its construction geometrically. Along the way we calculate the cohomology of certain smooth orbit closures in a reductive complex algebraic group.