

Cohomology of character varieties

Friday, June 23, 2017 11:20 AM (1 hour)

Abstract

A conjecture of Hausel, Letellier and Rodriguez-Villegas gives an explicit formula for the mixed Hodge polynomials of character varieties, which hints on a connection with Hilbert schemes. In another development Gorsky, Oblomkov, Rasmussen and Shende conjecture a connection between Hilbert schemes and homological invariants of torus knots and links. The purpose of this talk is to show that certain cell decompositions of character varieties produce an explicit connection between the two conjectures, allows us to calculate the cohomologies in some examples, and implies the so-called curious hard Lefschetz property.

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