

Title: Finiteness properties of Affine Springer sheaves and Lusztig conjecture.

Abstract: In the first part of the talk I will talk about finiteness properties of Affine Springer sheaves, which implies among other things that the homology of affine Springer fibers are finitely generated  $W_{\text{aff}}$ -modules.

As an application, I will explain a proof of Lusztig conjecture for  $GL(n)$  expressing traces of representations of representations of  $p$ -adic groups with Iwahori invariant vectors in terms of homologies of affine Springer fibers.

This is a joint work with Roman Bezrukavnikov and David Kazhdan.