

Department of Mathematics, BGU

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# AGNT

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*On Wednesday, May ,15 2019*

*At 15:10 – 16:25*

*In 101-*

Yakov Varshavsky (HUJI)

will talk about

## **Perverse sheaves on certain infinite-dimensional spaces, and affine Springer theory**

Abstract: A classical Springer theory is an important ingredient in the classification of representations of finite groups of Lie type, completed by Lusztig.

The first result of this theory is the assertion that the so-called Grothendieck-Springer sheaf is perverse and is equipped with an action of the Weyl group. Our main result asserts that an analogous result also holds in the affine (infinite-dimensional) case.

In the first of my talk I will recall what are perverse sheaves, and why the Grothendieck-Springer sheaf is perverse. In the rest of the talk I will outline how to extend all this to the affine setting.

We believe that this should have applications to the representations theory of p-adic groups.

This is a joint work with Alexis Bouthier and David Kazhdan