

Pablo Boixeda Alvarez, March 3, 2023

Title: Microlocal sheaves and affine Springer fibers

Abstract: The resolutions of Slodowy slices  $\tilde{\mathcal{S}}_e$  are symplectic varieties that contain the Springer fiber  $(G/B)_e$  as a Lagrangian subvariety.

In joint work with R. Bezrukavnikov, M. McBreen and Z. Yun, we construct analogues of these spaces for homogeneous affine Springer fibers. We further understand the categories of microlocal sheaves in these symplectic spaces supported on the affine Springer fiber as some categories of coherent sheaves.

In this talk I will mostly focus on the case of the homogeneous element  $ts$  for  $s$  a regular semisimple element and will discuss some relations of these categories with the small quantum group providing a categorification of joint work with R. Bezrukavnikov, P. Shan and E. Vasserot.