

Title: A geometric realization of the center of the small quantum group

Abstract: The small quantum group is a finite-dimensional non commutative algebra, which is important in 3d TQFTs. Its center is unknown. It is conjecturally related to Cherednik's DAHA. In particular, in type A, one expects the dimension of its principal block to be the dimension of the diagonal coinvariant ring. The lecture will be (hopefully) self-contained. After having recalled the basic theory of the small quantum group and (affine) Springer theory, we'll explain a new conjectural description of the center in terms of the cohomology of affine Springer fibers.