# TOWARDS A BERNSTEIN PRESENTATION OF THE AFFINE HECKE CATEGORY

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Abstract:
The affine Hecke algebra has a remarkable commutative subalgebra corresponding to the coroot lattice inside the affine Weyl group. Its nature is encoded in the Bernstein presentation and reveals some fundamental representation theoretic properties of the Hecke algebra. If one considers categorifications of this algebra, for instance the diagrammatic category, this subalgebra corresponds to a class of objects (in the homotopy category) called Wakimoto sheaves, that can be seen as Rouquier complexes. In this talk I will introduce these notions and I will present some reduction results about Rouquier complexes and the study of extension groups between Wakimoto sheaves in affine type $A_1$, for arbitrary coefficients.