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Double affine Frobenius Hecke algebras

In this talk, I will discuss a version of the GL_n double affine Hecke algebra (DAHA) that is decorated by a symmetric Frobenius superalgebra. This is a double affine version of Rosso and Savage's *quantum affine wreath algebras*. When the Frobenius algebra is the group algebra of a finite cyclic group, we obtain new double affine versions of the affine Yokonuma–Hecke algebras. I will explain how the diagrammatic interpretation of DAHA using braids on a torus motivates the presentations, basis theorem and symmetries such as the $\mathrm{SL}_2(\mathbb{Z})$-action by outer automorphisms on this more general version.