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*Spherical symplectic reflection algebras via quantum Hamiltonian reduction*

The main tool to study representations of affine Hecke algebras is the notion of spherical subalgebra. By Satake Theorem it forms the center of the affine Hecke algebra, and the quotient can be easily described in classical terms.

For double affine Hecke algebras (DAHA) and symplectic reflection algebras notion of spherical subalgebras is well defined, but they are not even commutative in general. Rational DAHAs and symplectic reflection algebras inherit a parameter  $t$ , such that the spherical subalgebra is commutative if and only if  $t = 0$ . So it can be considered as a quantization of an affine variety.

In this talk we discuss various constructions of these spherical subalgebras in terms of quantum Hamiltonian reduction.