

SPEAKER: Arkady Berenstein (University of Oregon)

TITLE: Double canonical bases.

ABSTRACT: The goal of my talk (based on joint work with Jacob Greenstein) is to introduce a new class of bases B_g for quantized universal enveloping algebras $U_q(\mathfrak{g})$ and other doubles attached to semisimple and Kac-Moody Lie algebras.

These bases contain dual canonical bases of upper and lower halves of $U_q(\mathfrak{g})$ and are invariant under all known symmetries including (yet conjecturally) Lusztig's braid group action. We expect that the bases B_g carry a cluster-like structure extending that from the upper and lower halves.

We also expect that the center of $U_q(\mathfrak{g})$ is spanned by a part of B_g and this part can be identified with "Schur functions", i.e., with the characters of simple \mathfrak{g} -modules.