Cyclotomic quiver Hecke algebras and seminormal form

Hu, Jun

Abstract. Brundan and Kleshchev have shown that over arbitrary field the cyclotomic Hecke algebras of type $G(l, 1, n)$ is isomorphic to the type A cyclotomic quiver Hecke algebra. In particular, the former admits a KLR Z-grading and a homogeneous presentation. In this talk, I will explain the close relationship between this KLR grading and the classical seminormal form, which allows us to lift Brundan–Kleshchev isomorphism to an integral setting. As an application, we obtain an integral version of the (type A) quiver Schur algebras. This is a joint work with Andrew Mathas.