

1124-20-354

Jie Du, Brian Parshall* (bjp8w@virginia.edu) and **Leonard Scott**. *Stratifying Hecke endomorphism algebras.*

The Hecke algebra in the title is a q -deformation \mathcal{H} of the group algebra of a finite Weyl group. It has a natural enlargement to an endomorphism algebra $\mathcal{A} := \text{End}_{\mathcal{H}}(\mathcal{T})$, where \mathcal{T} is a certain q -permutation module. In type A , \mathcal{A} is a (quasi-hereditary) q -Schur algebra which plays an important role in cross-characteristic representation theory of the finite general linear groups. In other types, \mathcal{A} is not always quasi-hereditary, but the authors conjectured in 1996 that \mathcal{T} can be enlarged to a module \mathcal{T}^+ such that $\mathcal{A}^+ := \text{End}_{\mathcal{A}}(\mathcal{T}^+)$ is “standardly” stratified (with strata associated to Kazhdan-Lusztig cells). In 2015, the authors proved a local version of the conjecture, using rational Cherednik algebras. More recently, much progress has been made on the “global” conjecture (at the moment in the equal parameter case, but over $\mathbb{Z}[t, t^{-1}]$), using constructions in the setting of exact categories in order to make certain Ext^1 -groups better behaved. The talk will concentrate on this recent progress. (Received September 13, 2016)