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Johannes Flake* (flake@math.rutgers.edu). *Dirac cohomology for generalized Hecke algebras.*

Dirac operators have played an important role in the representation theory of real reductive Lie groups and various types of Hecke algebras. In particular, their cohomology is often related to the central character of a representation. We explain recent work on how this can be shown in a generalized setting for a class of PBW deformations, using the theory of Hopf algebras, smash products, and superalgebras. Our results generalize known results for several special cases, but also apply to new cases, including infinitesimal Cherednik algebras. The classification of objects in the considered class of PBW deformations is an open problem, and we will present partial results on this question. (Received February 05, 2018)