1131-16-278   **Briana Foster-Greenwood*** (`brianaf@cpp.edu`) and **Cathy Kriloff** (`krilcath@isu.edu`).
Deforming skew group algebras of dihedral and symmetric groups: Which cocycles lift?

Since their introduction in the 1980's, graded Hecke algebras have appeared in various guises and settings ranging from symplectic reflection algebras in orbifold theory to rational Cherednik algebras used to prove results in algebraic combinatorics. Graded Hecke algebras, and their generalization to Drinfeld orbifold algebras, may be viewed as quotient algebras as well as formal deformations of skew group algebras. In the latter perspective, one invokes cohomological tools and asks: Which Hochschild 2-cocycles lift to define a Drinfeld orbifold algebra? We explore this question in the context of deformations of skew group algebras arising from certain representations of symmetric and dihedral groups, comparing and contrasting with the graded Hecke algebra case along the way. (Received July 17, 2017)