

Deformations of skew group algebras

A skew group algebra encodes the structure of an algebra with an action by a group of automorphisms. In the special case of groups acting on polynomial rings, for example, deformations of the corresponding skew group algebras include many algebras of interest in various contexts, such as graded Hecke algebras, symplectic reflection algebras, and rational Cherednik algebras. In this talk, we introduce these algebras and put them in a wider context of deformations and cohomology of skew group algebras.