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Applications of Frobenius–Schur indicators

Given an irreducible character of a finite group, one can define its (second) Frobenius–Schur indicator by evaluating this character on the sum of the squares of all elements of the group, divided by the order of the group. Linchenko and Montgomery extended this definition to semisimple Hopf algebras and generalized the classical Frobenius–Schur theorem from groups to semisimple Hopf algebras. The set of Frobenius–Schur indicators proved to be a very important invariant of a Hopf algebra; in particular they can be used to compute the trace of the andipode of a Hopf algebra. In this talk we will discuss some recent applications of Frobenius–Schur indicators.