



Twisted Frobenius-Schur indicators for Hopf algebras

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The classical Frobenius-Schur indicators for finite groups are character sums defined for any representation and any integer m greater or equal to 2. In the familiar case $m=2$, the Frobenius-Schur indicator partitions the irreducible representations over the complex numbers into real, complex, and quaternionic representations. In recent years, several generalizations of these invariants have been introduced. Bump and Ginzburg, building on earlier work of Mackey, have defined versions of these indicators which are twisted by an automorphism of the group. In another direction, Linchenko and Montgomery have defined Frobenius-Schur indicators for semisimple Hopf algebras. In this paper, the authors construct twisted Frobenius-Schur indicators for semisimple Hopf algebras; these include all of the above indicators as special cases and have similar properties.

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