

# GEOMETRIC INVARIANT THEORY AND HOPF 2-COCYCLES

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Abstract:

In this talk I will discuss applications of geometric invariant theory to the study of Hopf algebras. I will consider the question of classification of Hopf 2-cocycles on a given finite dimensional Hopf algebra, explain why this is in fact a geometric problem, and how geometric invariant theory can help us here. I will give some examples arising from Bosonizations of nonabelian group algebras and dual group algebras, and present some new family of Hopf algebras arising from such cocycle deformations.