

EQUIVALENCES OF HOPF (CO)MODULE STRUCTURES ON ALGEBRAS

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Abstract: It turns out that for many applications (say, if we study H -sub(co)modules, H -invariant ideals, polynomial H -identities...) it is not really important, which particular Hopf algebra is (co)acting on a given H -(co)module algebra. Here we come naturally to the notion of equivalence of Hopf (co)module structures on algebras which is the direct generalization of the notion of equivalence of group gradings. In addition, among all Hopf algebras that realize a given Hopf (co)module structure there are distinguished ones which we call universal Hopf algebras. In the talk we will discuss all these notions as well as their possible applications.