

1123-16-136

Van C. Nguyen* (v.nguyen@northeastern.edu), Northeastern University, Department of Mathematics, Boston, MA 02115. *On Classification of Quantum p -Groups via Primitive Deformations.*

Our goal is to study the structures of finite-dimensional connected Hopf algebras, to which we refer as finite quantum p -groups, over an algebraically closed field k of prime characteristic p . In particular, we introduce a concept, called Primitive Deformation, to provide a structured technique to classify all p^{n+1} -dimensional connected Hopf algebras whose primitive space is an abelian restricted Lie algebra of dimension n . As an application for case $n = 2$, this work helps us to complete the classification of p^i -dimensional, where $i \leq 3$, connected Hopf algebras over k . All necessary background will be given. This is a joint work with Linhong Wang and Xingting Wang. (Received August 22, 2016)