Van C. Nguyen* (v.nguyen@northeastern.edu), Department of Mathematics, Northeastern University, Boston, MA 02115, and Xingting Wang. On the structures of Hopf algebras in prime characteristic.

The goal of this talk is to present some recent progress in the classification of finite-dimensional Hopf algebras, over any algebraically closed field of prime characteristic $p > 0$. In particular, we discuss the classification of pointed $p^3$-dimensional Hopf algebras $H$, focusing on the cases when $H$ is pointed but is not connected nor a group algebra. Structures of Nichols algebras over $p$-groups in characteristic $p$ as well as non-primitively generated braided Hopf algebras over $C_p$ occur in this work. Our results provide many new examples of (parametrized) non-commutative and non-cocommutative finite-dimensional Hopf algebras in positive characteristic. Necessary background will be given. (Received September 16, 2016)