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Mitja Mastnak and **Julia Pevtsova***, University of Washington, Department of Mathematics, Seattle, WA 98195, and **Peter Schauenburg** and **Sarah Witherspoon**. *Cohomology of pointed Hopf algebras*.

Finite generation of the cohomology ring of a group algebra for a finite group G with coefficients in a field of positive characteristic is a classical result dating back to the 60th due to Golod, Venkov, and Evens (independently). Towards the end of the last century, Friedlander and Suslin vastly generalized this result proving that the cohomology ring of any finite dimensional cocommutative Hopf algebra with coefficients in a field of positive characteristic is finitely generated.

An analogous result for cohomology of a small quantum group at a root of unity with complex coefficients is due to Ginzburg and Kumar (with some restrictions on the order of the root of unity) and Bendel-Nakano-Parshall-Pillen in a more general case. In this talk, I shall describe a theorem from a joint work with Mastnak, Schauenburg and Witherspoon: the (Hochschild) cohomology ring of a finite dimensional pointed complex Hopf algebra with abelian group of group-like elements is finitely generated. The result uses in an essential way the recent classification of pointed Hopf algebras by Andruskiewitsch and Schneider. (Received September 10, 2009)