
JULIA PEVTSOVA, University of Washington

Detection of nilpotence and projectivity for finite unipotent group schemes

For a finite group G , classical theorems of Quillen and Chouinard tell us how to detect whether a cohomology class is nilpotent or whether a module is projective: one has to restrict to elementary abelian subgroups of G . For connected finite group schemes, the detecting family consists of one-parameter subgroups as shown by Suslin, Friedlander, and Bendel. In this talk I'll describe what plays the role of elementary abelian subgroups for finite unipotent super group schemes. Some interesting new phenomena arise when one introduces grading; the theory of Dieudonne modules plays an important role.

This is a preliminary report on joint work with D. Benson, S. Iyengar, and H. Krause.