Queen's Algebraic Geometry
— Seminar —

The Grothendieck gamma-filtration, varieties of Borel subgroups, and the Rost invariant for linear algebraic groups

KIRILL ZAINOULLINE
University of Ottawa

Abstract

Let X be the variety of Borel subgroups of a simple and strongly inner linear algebraic group G over a field k. We prove that the torsion part of the second quotient of Grothendieck's gamma-filtration on X is a cyclic group of order dividing the Dynkin index of G. As a byproduct of the proof we obtain an explicit cycle which generates this cyclic group; and we relate the generating cycle with the Rost invariant and the torsion of the respective generalized Rost motives.

Monday 22 November 2010
16:30 – 17:30
319 Jeffery Hall