

Harvard-M.I.T. Algebraic Geometry Seminar

COHOMOLOGY AND CHOW RING OF THE CLASSIFYING SPACE OF PGL_p

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The cohomology rings of the classifying spaces of algebraic groups are classical objects of study in algebraic topology. A few years ago Totaro defined the Chow rings of such classifying spaces; surprisingly, they seem to be better behaved than the integral cohomology rings. Both have been computed for all the classical groups, except for the \mathbf{PGL}_n series.

In my talk I will discuss the Chow ring and the cohomology ring of the classifying space of \mathbf{PGL}_p , when p is a prime. I will show how they can be obtained from the ring of invariants in the cohomology of a maximal torus under the action of the Weyl group; this determines their additive structures, and gives an algorithm to derive presentations by generators and relations.

Tuesday, February 17th

3:00 p.m.

MIT Room 2-139

Note: Today only, the seminar meets in a different room.

<http://www-math.mit.edu/~jstarr/04sem/>.