

Queen's Algebraic Geometry — Seminar —

CHERN CLASS FORMULAS FOR G_2 DEGENERACY LOCI

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Abstract

Let $f: E \rightarrow F$ be a morphism of vector bundles on a variety X . The locus of points of X where the map f drops rank is a simple example of a degeneracy locus. A basic problem is to find formulas for the cohomology classes of such loci in terms of the Chern classes of E and F . Many variations are possible: there should be one for each Lie type, and for each element of the corresponding Weyl group. For classical types, formulas were given by Giambelli-Thom-Porteous, Kempf-Laksov, Harris-Tu, and Fulton. Here I will give formulas corresponding to exceptional type G_2 . Along the way, I'll discuss octonion bundles, and describe the G_2 flag variety in concrete, linear-algebraic terms.

Monday, March 10, 2008
4:30pm – 5:30pm
319 Jeffery Hall