

Combinatorics and Geometry — Seminar —

CHERN CLASS FORMULAS FOR G_2 DEGENERACY LOCI

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Abstract

Let V be a vector bundle of rank n on a variety X , with subbundles E and F of respective ranks e and f . The locus of points of X where the fibers of E and F intersect in dimension more than $e + f - n$ is a basic example of a degeneracy locus. What is a formula for the cohomology class of such a locus, in terms of the Chern classes of E , F , and V ? In this simple case, the answer is easy, but many variations are possible: there is a similar problem for each classical 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. In this talk, I will define degeneracy loci and give formulas corresponding to exceptional type G_2 . Along the way, I'll describe the G_2 flag variety in concrete, linear-algebraic terms.

Wednesday, October 24
5:15 p.m.
Room 381-U

<http://math.stanford.edu/~sampayne/seminar/>