

COLLOQUIUM
UNIVERSITY OF PITTSBURGH
FRIDAY, JANUARY 18, 2013
704 THACKERAY HALL
4:00 P.M.
DAVID ANDERSON

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**EQUIVALENT SCHUBERT CALCULUS:
POSITIVITY, FORMULAS, APPLICATIONS**

ABSTRACT: Schubert's enumerative calculus, the subject of Hilbert's 15th problem, is a technique for solving problems of enumerative geometry; for example, how many conics are tangent to five given conics? In its modern formulation, Schubert calculus concerns computations in the cohomology rings of Grassmannians, flag varieties, and related spaces. These spaces carry large group actions, which can be used to both refine and simplify the computations. The cohomology calculations can be modeled by multiplication of polynomials, and a central role is played by these polynomial representatives. Formulas for these polynomials are of both theoretical and computational interest. In this talk, I will survey recent developments in this subject, including some new formulas and applications.

Refreshments served at 3:30 p.m.
in the Math Dept. COMMON ROOM, Thackeray 705

*The speaker is a candidate for a position in the Department.