



Speaker: Ben Wyser
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Thursday, November 29, 2012
2:00 PM
258 Hurley Hall

Title: Schubert constants associated to Richardson varieties with actions of spherical Levi subgroups

Abstract:

It is well-known that the Schubert cycles, or fundamental classes of Schubert varieties, form an integer basis for the cohomology ring of the flag manifold. The structure constants with respect to this integer basis are known to be non-negative, and are readily computable. Yet it remains an open problem, even in type A, to give a positive formula for a general structure constant. I will explain how certain of these structure constants can be computed positively by applying a theorem of M. Brion to Richardson varieties (intersections of Schubert varieties with opposite Schubert varieties) stable under spherical Levi subgroups. I will discuss some of the combinatorial details in the case which is likely of most interest, namely type A Richardson varieties stable under the Levi subgroups $GL(p, \mathbb{C}) \times GL(q, \mathbb{C}) \subset GL(p+q, \mathbb{C})$.