Algebraic Geometry and Commutative Algebra Seminar

UNIVERSITY OF NOTRE DAME

Department of Mathematics

Speaker: Martha Precup
Northwestern University

Wednesday, April 5, 2017
3:00 PM
258 Hurley Hall

Title: The singular locus of Semisimple Hessenberg varieties

Abstract:

Semisimple Hessenberg varieties are subvarieties of the flag variety with important connections to representation theory, algebraic geometry, and combinatorics. Like Schubert varieties, the structure of semisimple Hessenberg varieties can be studied using the combinatorics of the Weyl group. In this talk, we will define these varieties and compute their GKM-graphs. Then we'll give a combinatorial criterion for identifying singular points in certain semisimple Hessenberg varieties. These results are joint work with Erik Insko.