Department of Mathematics
University of Notre Dame

ALGEBRA SEMINAR

Speaker: Reuven Hodges
University of Illinois at Urbana-Champaign

Date: Thursday, October 15, 2020

Time: 1:00 PM

Location: Zoom

Zoom URL: https://notredame.zoom.us/s/93342319824?pwd=SzQwMGNrTjRKb0l1NEgxUE9KTXIwQT09

Lecture Title:

Coxeter combinatorics and spherical Schubert geometry

Abstract

This talk will introduce spherical elements in a finite Coxeter system. These spherical elements are a generalization of Coxeter elements, that conjecturally, for Weyl groups, index Schubert varieties in the flag variety G/B that are spherical for the action of a Levi subgroup. We will see that this conjecture extends previous sphericality results for Schubert varieties in G/B due to P. Karuppuchamy, J. Stembridge, P. Magyar–J. Weyman-A. Zelevinsky. In type A, the combinatorics of Demazure modules and their key polynomials, multiplicity freeness, and split-symmetry in algebraic combinatorics are employed to prove this conjecture for several classes of Schubert varieties. This talk is based on joint work with Alexander Yong.

Reuven Hodges - University of Illinois at Urbana-Champaign