

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Amber Russell

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Date: Wednesday, November 9, 2016

Time: 3:00 PM

Location: 258 Hurley Hall



Lecture Title:

The Generalized Springer Correspondence and Graham's Variety

Abstract

The Springer correspondence relates irreducible representations of the Weyl group for a reductive Lie algebra to a subset of simple perverse sheaves on the nilpotent cone for that Lie algebra. Essential to this result is the Springer resolution and its fibers. In his generalization of the Springer correspondence, Lusztig relates each simple perverse sheaf on the nilpotent cone with an irreducible representation of a relative Weyl group. In this talk, I will discuss a map defined by William Graham in Type A which plays a role in Lusztig's generalized setting that is similar to that of the Springer resolution in the classical version. I will focus on a combinatorial description of the irreducible components of the fibers of Graham's map, and the connection to Lusztig's generalized Springer correspondence. This is joint work with William Graham and Martha Precup.