Stanford Algebraic Geometry
— Seminar —

MIRKOVIC-VILONEN CYCLES ON THE AFFINE GRASSMANNIAN

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Abstract

The geometric Satake correspondence relates representation theory to the geometry of the affine Grassmannian. In particular, certain subvarieties of the affine Grassmanian, called Mirkovic-Vilonen cycles, give bases for representations of complex semisimple groups. Moreover, their moment map images, called MV polytopes, can be used to understand the combinatorics of these representations. In this talk, we will explain these results as well as give new results concerning an explicit description of these cycles and polytopes. These new results provide a combinatorial link between MV cycles and Lusztig's canonical basis.

Friday, February 25
3:15 p.m.
Room 383-N

http://math.stanford.edu/~vakil/s0405/