

1081-20-177

Pramod N. Achar* (pramod@math.lsu.edu), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70808, and **Anthony Henderson, Daniel Juteau** and **Simon Riche**. *Geometric Satake, Springer correspondence, and small representations*. Preliminary report.

This talk is concerned with a kind of “compatibility” between two deep results in geometric representation theory: the geometric Satake isomorphism and the Springer correspondence. Both of these involve realizing representations (of a reductive group G and its Weyl group W , respectively) in terms of perverse sheaves on some variety (the dual affine Grassmannian Gr and the nilpotent cone \mathcal{N} , respectively). I will explain how the geometry of \mathcal{N} is related to that of Gr , as well as what this implies on the representation-theoretic side. For the latter, the notion of *small representations*, which has been studied by Broer and Reeder, plays a key role. (Received February 09, 2012)