

## **abstract**

JOINT IAS/PU NUMBER THEORY SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

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It is well-known that there are connections between the representation theory of a reductive  $p$ -adic group and the topology of the flag variety of the Langlands  $L$ -group. We will discuss Whittaker functions in this light. The Casselman-Shalika formula shows that the values of the spherical Whittaker function are the same as the characters of irreducible representations of the  $L$ -group. The Borel-Weil-Bott theorem identifies these same characters as cohomology groups of line bundles on the flag variety. Generalizing the Borel-Weil-Bott theorem, cohomology groups of line bundles on Schubert varieties are "Demazure characters". We will show how Demazure characters also appear in Iwahori Whittaker functions. This is joint work with Ben Brubaker and Anthony Licata.