

BOSTON UNIVERSITY NUMBER THEORY SEMINAR

# On the automorphic spectrum of non-quasi-split groups

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Monday, Oct 5 at 4:15 pm  
111 Cummington Street, MCS B21  
Tea and cookies in MCS 144 at 4:00 pm

**Abstract:** Langlands' conjectures provide a description of the discrete automorphic representations of connected reductive groups defined over global fields, as well as of the irreducible admissible representations of such groups defined over local fields. When the group in question is quasi-split, a precise form of these conjectures has been known for a long time and important special cases have recently been proved. For non-quasi-split groups (such as special linear, symplectic, and special orthogonal groups over division algebras), the conjectures have been vague and their proof out of reach.

In this talk we will present a precise formulation of the local and global conjectures for arbitrary connected reductive groups in characteristic zero. It is based on the construction of certain Galois gerbes defined over local and global fields and the study of their cohomology. These cohomological results place the conjectures for classical groups well within reach of the currently available methods.