

BOSTON UNIVERSITY NUMBER THEORY SEMINAR

# On the Local Langlands Correspondence: New Examples from the Epipelagic Zone

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

**Abstract:** The conjectural local Langlands correspondence (LLC) can be thought of as a generalization of local class field theory: given a split reductive group  $G$  over a finite field extension  $k$  of  $\mathbb{Q}_p$ , it predicts that every irreducible supercuspidal representation of  $G(k)$  should correspond to a finite, Galois field extension of  $k$ , uniquely characterized in some way. The LLC has been proven in many cases for large primes  $p$ , but remains mysterious when  $p$  is small. Building on work of Reeder-Yu, Jessica Fintzen and I have found new supercuspidal representations for small  $p$ , each of which should correspond to a wildly ramified field extension. In my talk, I will describe both representations and corresponding field extensions for the case when  $G = G_2$ .