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

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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 $G = G_2$. 