Topology Seminar

Kyle Ormsby

of MIT will be speaking on

Galois-equivariance and motivic homotopy

on December 2 at 4:30 in
MIT Room 2-131

Let L/k be a finite Galois extension with Galois group G. In joint work with Jeremiah Heller, I construct and analyze a functor $F_{L/k}$ from genuine G-spectra to P^1-spectra over $\mathrm{Spec}(k)$ which agrees with the constant presheaf functor c when $G = e$. Marc Levine has recently proven that when k is algebraically closed of characteristic 0, (the left derived functor of) c is full and faithful on homotopy categories. I will show that when k is real closed, $F_{k[i]/k}$ induces a full and faithful embedding of the C_2-equivariant stable homotopy category into the stable motivic homotopy category of k. In particular, there is an isomorphism between the integer-graded stable homotopy groups of the C_2-equivariant sphere spectrum and the motivic sphere spectrum over k.