Topology Seminar

Craig Westerland

of University of Minnesota will be speaking on

The unit spectrum of Morava E-theory

on October 21 at 4:30 in
MIT Room 2-131

Atiyah-Segal and others define a twisted form of K-theory associated to classes in $H^3(X)$. Their method is geometric, using the Fredholm operator model for the spaces which define K-theory. Homotopically, this amounts to a multiplicative map from $K(Z, 2)$ to the space of units of K-theory, $GL_1(K)$. In joint work with Hisham Sati, we extended this construction to higher-chromatic versions of K-theory, Morava's E-theories, E_n. We computed the space of E-infinity maps from $K(Z, n+1)$ to $GL_1(E_n)$, thereby introducing a natural form of twisted E-theory. I will talk about these constructions and subsequent work which applies them to the study of the stable homotopy groups of the ($K(n)$-local) sphere.