Topology Seminar

Jack Morava

of Johns Hopkins University will be speaking on

Some interesting perfectoid fields with possible topological applications

on March 6 at 4:30 in
MIT Room 2-131

A Lubin-Tate group for a local field L defines a maximal totally ramified abelian extension of L, whose completion is perfectoid; Artin reciprocity identifies the Galois group of this extension with the group of units of L. Scholze and Nikolaus, following work of Hesselholt on the algebraic closure of Q_p, have calculated the topological Hochschild homology of such fields; these are complex orientable GEM spectra, whose associated formal groups seem to be rigid analytic versions of the Lubin-Tate group defining the extension, with the Galois group acting as generalized Adams operations. These spectra may have interesting connections with chromatic homotopy theory.