Topology Seminar

Gabriel Angelini-Knoll

of Sorbonne Paris Nord will be speaking on

Syntomic cohomology of real topological K-theory

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

Work of Hahn-Raksit-Wilson extended the Bhatt-Morrow-Scholze filtration on topological cyclic homology and topological periodic cyclic homology to sufficiently nice ring spectra. This allows one to define syntomic cohomology and prismatic cohomology at this level of generality. One example of such a nice ring spectrum is real topological K-theory. In joint work with Christian Ausoni and John Rognes, we compute the syntomic cohomology of real topological K-theory modulo $(2, \eta, v_1)$. This computation produces a new example of pure redshift and arithmetic duality. As an application, we compute the algebraic K-theory of real topological K-theory modulo $(2, \eta, v_1)$ and show that it satisfies a higher chromatic complexity version of the Lichtenbaum-Quillen conjecture.

For information, write: jhahn01@mit.edu