Topology Seminar

Aaron Landesman

of Harvard/MIT will be speaking on

Homological stability for generalized Hurwitz spaces with an application to number theory

on February 26 at 4:30 in
MIT Room 2-131

We describe a new homological stability result for a generalized version of Hurwitz spaces. This builds on previous work of Ellenberg-Venkatesh-Westerland, showing that homology groups of certain Hurwitz spaces stabilize. We generalize this in two directions. First, we work with covers of arbitrary punctured Riemann surfaces instead of just the disc. Second, we generalize the result to 'coefficient systems,' which are essentially a sequence of compatible local systems on configurations spaces. After detailing the above homological stability result, we will then explain how both these generalizations are employed to prove versions of numerous conjectures from number theory relating to the distributions of ranks of elliptic curves and Selmer groups of elliptic curves.

For information, write: jhahn01@mit.edu