

Topology Seminar

Marco Varisco

of University at Albany, SUNY will be speaking on

Algebraic K-Theory of Group Rings and Topological Cyclic Homology

on May 13 at 4:30 in
MIT Room 2-131

The Farrell-Jones Conjecture predicts the structure of the algebraic K-theory $K(\mathbb{Z}G)$ of the integral group ring of an arbitrary discrete group G . It asserts that a so-called assembly map (whose target is the spectrum $K(\mathbb{Z}G)$ and whose source is the homotopy colimit of $K(\mathbb{Z}H)$ over all virtually cyclic subgroups H of G) is an equivalence. I will describe joint work with Wolfgang Lück, Holger Reich, and John Rognes, in which we prove partial injectivity results about the rationalized assembly map under finiteness assumptions on the group G , generalizing a theorem of Bökstedt-Hsiang-Madsen. The main tool is the cyclotomic trace map from algebraic K-theory to topological cyclic homology.