

Topology Seminar

John Harper

of University of Western Ontario will be speaking on

On a finiteness theorem and Quillen homology completion for

on February 7 at 4:30 in
MIT Room 2-131

We prove a finiteness theorem relating finiteness properties of topological Quillen homology groups and homotopy groups — this result should be thought of as an algebras over operads in spectra analog of Serre’s finiteness theorem for the homotopy groups of spheres. We describe a rigidification of the derived cosimplicial resolution with respect to topological Quillen homology, and use this to define Quillen homology completion — in the sense of Bousfield-Kan — for algebras over operads in symmetric spectra. We prove that under appropriate connectivity conditions, the coaugmentation into Quillen homology completion is a weak equivalence — in particular, such algebras over operads can be recovered from their topological Quillen homology. Many of the results described are joint with K. Hess.