Topology Seminar

Emanuele Dotto

of MIT will be speaking on

Equivariant Diagrams and Equivariant excision

on February 24 at 4:30 in
MIT Room 2-131

In a non-equivariant setting, a functor is excisive if it takes homotopy pushout squares to homotopy pullback squares. Given a finite group G and a functor from G-spaces to G-spaces (or G-spectra), this definition of excision does not 'capture enough equivariancy'. For example the category of endofunctors of G-spaces with this property does not model G-spectra. One solution is to replace squares by 'cubes with action', where the group is allowed to act on the whole diagram by permuting its vertices.

I will talk about the homotopy theory of these equivariant diagrams and relate the resulting notion of equivariant excision to previous work of Blumberg.

As an application of this theory, I will give a proof of the Wirthmuller isomorphism that uses only the equivariant suspension theorem and formal manipulations of limits and colimits.