COLLOQUIUM

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Lifting trivial actions from group cohomology to spectra, for profinite groups

Mathematics and Statistics

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Zoom link:
https://uregina-ca.zoom.us/j/92508741353?pwd=UzFOMjVMelVkRWhqR215cjd6dTlCQT09

Abstract: Let G be a topological group that is compact, Hausdorff, and totally disconnected (such a group is "profinite"), and let A be any abelian group. Then A can be regarded as a G-module by letting G act trivially on A, and it is a known result that the continuous group cohomology of G with coefficients in A can be obtained by taking a "union" of the ordinary group cohomology of certain finite quotient groups of G with the same coefficients.

In this talk, we consider what happens when A is replaced by any spectrum (in the sense of homotopy theory), and group cohomology, which in degree 0 is just the fixed points of the group action, is replaced with homotopy fixed points. We give some conditions that guarantee that in this new setting, there is an analogue of the aforementioned "known result".

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