UNIVERSITY AT ALBANY
State University of New York

College of Arts and Sciences
Department of Mathematics and Statistics

Algebra/Topology Seminar

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Constructing Equivariant Homology Theories — Part 1

Thursday, November 6, 2014
1:15 p.m. in ES-143

Abstract. In this series of talks I will present a new machinery that, for arbitrary discrete groups G, produces generalized G-equivariant homology theories that, as the group G varies, are related by compatible induction and restriction structures. The compatibility condition is expressed in terms of a double-coset formula, and in particular it implies that the coefficients form a Mackey functor and therefore Lück's proper equivariant Chern characters become available. I will then show that this machinery can be used to construct compatible induction and restriction structures for the equivariant homology theories with coefficients in algebraic K-theory (or Hochshild homology, or cyclic homology, or their topological variants, et cetera) of rings or even ring spectra, which appear in the Farrell-Jones isomorphism conjectures. This is joint work with Holger Reich.