Algebraic Models for Rational Equivariant Cohomology Theories

Spaces with a group action occur almost everywhere in mathematics and one approach to studying these spaces is to use equivariant cohomology theories. We are interested in rational equivariant cohomology theories – those theories which always take values in rational vector spaces. These still give useful information about equivariant spaces and are much easier to work with.

We will describe how one can classify these theories in terms of an algebraic category when the group of equivariance is the circle group, the group of two-by-two orthogonal matrices or a finite group.

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