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Constructing equivariant cohomology theories

Equivariant cohomology theories that are cohomology theories incorporate a group action on spaces. These types of cohomology theories are increasingly important in algebraic topology but can be difficult to understand or construct. In recent work, Angelica Osorno and I have developed a construction for building them out of purely algebraic data based on symmetric monoidal categories. Our method is philosophically similar to classical work of Segal on building nonequivariant cohomology theories. In this talk I will discuss this work, and as well as an extension to the more general world of Waldhausen categories. Our new construction is more flexible and is designed to be suitable for equivariant algebraic K-theory constructions.