

1134-55-16

Clover May* (clover@uoregon.edu). *A structure theorem for $RO(G)$ -graded cohomology.* Preliminary report.

Computations of singular cohomology groups are very familiar. An equivariant analogue is $RO(G)$ -graded Bredon cohomology with coefficients in a constant Mackey functor. Computations in this setting are often more challenging and are not well understood. In this talk I will present a structure theorem for $RO(C_2)$ -graded cohomology with $\mathbb{Z}/2$ coefficients that substantially simplifies computations. The structure theorem says the cohomology of any finite C_2 -CW complex decomposes as a direct sum of two basic pieces: shifted copies of the cohomology of a point and shifted copies of the cohomologies of spheres with the antipodal action. I will sketch the proof, which depends on a Toda bracket calculation, and give some examples. (Received September 12, 2017)