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Twisted Bredon Cohomology is a Morita Invariant

Bredon cohomology is an equivariant cohomology theory that is designed to consider information from various fixed sets of the action. In its standard form, it is NOT Morita invariant without restrictions on the coefficients, as shown in [PS]. In order to rectify this, we instead use a twisted version of Bredon cohomology defined in [MM], indexed over the tom Dieck fundamental groupoid. We prove that this twisted Bredon cohomology is Morita invariant. In this talk, I will explain this result and the concepts that underly it via examples.

This talk is based on joint work with C. Farsi and J. Watts.

[MM] Amiya Mukherjee and Goutam Mukherjee. "Bredon-Illman cohomology with local coefficients". *Quart. J. Math. Oxford Ser. (2)* 47.186 pp. 199–21 (1996).

[PS] Dorette Pronk and Laura Scull. "Translation Groupoids and Orbifold Bredon Cohomology". *Canad. Jour. Math.* vol 62 pp 614–645 (2010).