

Homological torsion originating from finite subgroups

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For calculating the part of the torsion in the homology of an arithmetic group which is induced by its finite subgroups, some ad-hoc tricks have been known to experts [4], but those tricks did for decades not get explained in published form. The speaker did rediscover these tricks, and organise them into a technique, Torsion Subcomplex Reduction [2]. The advantage of using this systematic technique rather than a set of ad-hoc tricks, is that one is no more limited to example calculations, but can develop number-theoretic formulas which hold for whole classes of arithmetic groups [1]. This sort of formulas is fuelling the recent progress on the Quillen–Wendt conjecture [3].

References

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