

## Sessão: Métodos Categóricos em Álgebra e Topologia

### Cohomology with trivial coefficients and central extensions in higher dimensions

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We establish an interpretation of cohomology in semi-abelian categories for which cohomology with trivial coefficients classifies central extensions, also in arbitrarily high degrees. This allows us to obtain a duality, in a certain sense, between “internal” homology and “external” cohomology in semi-abelian categories. These results depend on a geometric viewpoint of the concept of a higher central extension, as well as the algebraic one in terms of commutators.

### References

- [1] D. RODELO, AND T. VAN DER LINDEN, *Higher central extensions and cohomology*, *Advances in Mathematics* 287 (2016) 31-108.