

# Periodic and virtually periodic modules selforthogonal by resolutions modules Homological dimensions

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## Abstract

Joint work with Alarcón, Leonardo (UNS, Argentina) and Gatica, Andrea (UNS, Argentina).

In this talk, the definition of periodic, virtually periodic [1] module, and auto-orthogonal module by resolution, will be presented. This last concept makes it possible to generalize the results known so far on subcategories with zero  $\phi$ -dimension (such as the Gorenstein projective modules, the left orthogonal modules to the algebra [2], etc.). Also, results that relate the three previously presented concepts will be shown.

## Bibliography

- [1] Igusa, Kiyoshi; Zacharia, Dan. Syzygy pairs in a monomial algebra. *Proceedings of the American Mathematical Society*, 108, no. 3, 1980.
- [2] Lanzilotta, Marcelo; Mata, Gustavo. Igusa-Todorov functions for Artin algebras. *J. Pure Appl. Algebra*, 222, no. 1, 202 - 212, 2018.