

HOMOLOGICAL DIMENSION OF QUANTUM GENERALIZED WEYL ALGEBRAS

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ABSTRACT. In this talk, based on joint work with Quimey Vivas and Mariano Suárez Alvarez, I will explain how to compute Hochschild homology and cohomology of the class of quantum generalized Weyl algebras defined in [1], adapting methods from [2]. Examples of such algebras are the quantum n -th Weyl algebras, the quantum enveloping algebra of $\mathfrak{sl}(2)$, and subalgebras of invariants of these algebras under finite cyclic groups of automorphisms. I will also relate the results with the global dimension of these algebras.

REFERENCES

- [1] V. Bavula, *Generalized Weyl algebras and their representations*. St. Petersburg Math. J. 4 (1), (1990) pp.71-90.
- [2] M. Farinati, A. Solotar, M. Suárez-Alvarez *DHochschild homology and cohomology of generalized Weyl algebras*. Ann. Inst. Fourier (Grenoble) 53(2), (2003) pp.465-488.
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