

Selfextensions and a recursion

This is based on joint work with V. Klsz and R. Marczinzik. Let A be a finite-dimensional algebra and M an indecomposable A -module. One would like to know whether $\text{Ext}_A^1(M, M) \neq 0$ implies that $\text{Ext}^i(M, M) \neq 0$ for any $i \geq 1$.

We give a positive answer when A is the group algebra of a finite group in several special cases, also for Nakayama algebras. Moreover, when A is a tame block and M is simple, we obtain a positive answer. The proof uses a recursion (more generally for hybrid algebras). This can be lifted to bimodules, and is expected to give information for more general modules.