

THE SHAPE OF THE AR-QUIVER OF A SELF-INJECTIVE ALGEBRA

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Given a finite dimensional selfinjective algebra over an algebraically closed field, which graphs can occur as tree classes of the components of the stable AR-quiver? For group algebras of finite groups, the answer is completely known: the finite and tame cases are “classical”, whereas Erdmann proved in 1995 that every component of a wild block is of tree class A_∞ .

In this talk, we completely describe the tree classes of the components of the stable AR-quiver of a quantum complete intersection. These algebras are noncommutative analogues of truncated polynomial rings, and homologically they are in some sense similar to group algebras. In particular, their cohomology is “finitely generated”. As in the group algebra case, we show that the tree class of a stable component is always A_∞ whenever the algebra is of wild representation type. Moreover, in the tame case, there is one component of tree class \tilde{A}_{12} , whereas all the others are of tree class A_∞ .

This talk is based on joint work with Karin Erdmann.

REFERENCES

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