Berlin Mathematics Research Center

MATH+

MATH+ Spotlight Talk

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Computational Aspects of Quadratic Forms in Determining the Representation Type of Quiver Algebras

Abstract:

First, we formulate the tame-wild dichotomy for algebras that are not representation finite. The relevance of these decision problems is in part a consequence the Krull-Schmidt theorem, stating that representations of quiver algebras possess a unique decomposition into indecomposable submodules. The class of algebras that was originally of interest was the class of commutative ladders, but our results are applicable to a lager class of strongly simply connected algebras. These classes will be carefully introduced before, finally, the developed procedure will be discussed that determines the representation type of the latter class of algebras and what the computations have yielded for the former.