

Reduction techniques for finitistic dimension

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One of the longstanding open problems in Representation Theory of Finite Dimensional Algebras is the so called "Finitistic Dimension Conjecture". The latter homological conjecture is known to be related with other important problems concerning the homological behaviour and the structure theory of finite dimensional algebras. Our aim in this talk is to present two new reduction techniques for the finitistic dimension. In particular, we show that we can remove some vertices and some arrows from a quotient of a path algebra such that the problem of computing the finitistic dimension can be reduced to a possibly simpler algebra, at least in size. The results will be illustrated with examples. This is joint work with E. L. Green and C. Psaroudakis.