

# Some minimal representation-infinite algebras

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## Abstract

A finite-dimensional  $K$ -algebra  $A$  (associative, with 1) is said to be minimal representation infinite, provided there are infinitely many isoclasses of indecomposable  $A$ -modules, and almost all are faithful. We are going to describe in detail two related classes of minimal representation-infinite algebras and their module categories, namely the "barbell algebras" and the "windwheel algebras". All these algebras are obtained from hereditary algebras of type  $A$  by what we call barification.

The barbell algebras are non-polynomial growth algebras and are new examples of Gorenstein algebras of Gorenstein dimension 1. The windwheel algebras are 1-domestic and may have an arbitrary finite number of non-regular  $AR$ -components.