

Variations on a theme of Auslander-Tachikawa

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Auslander-Tachikawa in the early seventies proved the following remarkable result which is responsible for much of the latter developments in the representation theory of Artin algebras:

**Theorem:** There are bijective correspondences between Morita equivalence classes of:

- Representation finite Artin algebras.
- Auslander algebras, that is, Artin algebras with global dimension at most two and dominant dimension at least two.
- Artin algebras such that their category of (finitely generated) projective modules is abelian.

We review the background and explore extensions of Auslander-Tachikawa result, also in a more general setting by considering rings and categories more general than those arising in the context of Artin algebras and subcategories different or more general than the subcategory of projective modules.