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Cotorsion classes in higher homological algebra. (English) [Zbl 07389885]

Summary: In this paper, the notion of cotorsion classes is introduced into the higher homological algebra. Our results motivate the definition, showing that this notion of n-cotorsion classes satisfies usual properties one could expect. In particular, a higher version of Wakamatsu’s Lemma is proved. At the last section, connections with wide subcategories are studied.

MSC:
18G25 Relative homological algebra, projective classes (category-theoretic aspects)
18E10 Abelian categories, Grothendieck categories
18G80 Derived categories, triangulated categories
16G10 Representations of associative Artinian rings
16E30 Homological functors on modules (Tor, Ext, etc.) in associative algebras

Keywords:
cluster tilting subcategories; cotorsion classes; higher homological algebra

Full Text: DOI

References:
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