

Cotorsion pairs and homological conjectures

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The notion of cotorsion pairs goes back to the 1970s when it was introduced by Salce in the case of abelian groups. Cotorsion pairs have been used to study covers and envelopes, particularly in the proof of the flat cover conjecture. They have also been used in homotopy theory and in tilting theory. In this talk, we present some homological properties of cotorsion pairs with a view to applications to the finitistic dimension conjecture, the Wakamatsu tilting conjecture, and the Auslander and Reiten conjecture. This talk is based on several joint works with L.W. Christensen, N.Q. Ding, S. Estrada, H.H. Li, Y.X. Li, P. Thompson and J. Wang.

References

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