

Derived recollement approach to Tachikawa's second conjecture

Hongxing Chen

Capital Normal University
E-mail: chenhx@cnu.edu.cn

Tachikawa's second conjecture predicts that a finitely generated, orthogonal module over a finite-dimensional self-injective algebra is projective. This conjecture is an important part of the Nakayama conjecture. In this talk, I will report a series of advances on Tachikawa's second conjecture by addressing orthogonal generators over self-injective algebras from the view point of recollements of triangulated categories. In particular, Gorenstein-Morita algebras and (reduced) mirror-reflective algebras are introduced and equivalent characterizations of Tachikawa's second conjecture in terms of relative Gorenstein categories or stratifying ideals of algebras are presented. The talk is based on joint work on orthogonal modules with Changchang Xi and also with Ming Fang.