

Abstract

Tilting theory, originally introduced in the context of module categories over finite dimensional algebras, plays an important role in the study of many areas of mathematics, including representation theory of finite groups, Lie theory, commutative and non-commutative algebraic geometry. Tilting modules and tilting complexes, as two fundamental concepts in tilting theory, are used widely for constructing equivalences between categories. Besides the classical module categories, there is another standard example of hereditary categories with a tilting object the category of coherent sheaves on a weighted projective line. In this talk, we introduce some new progress on tilting objects in the coherent sheaves on the weighted projective lines.