

ALGEBRA AND GEOMETRY SEMINAR

Speaker: Ray Maresca (Brandeis University)

Title: On the relationship between t -structures and exceptional collections over hereditary algebras

Abstract: In this talk, we fix a finite dimensional hereditary algebra Λ . We will introduce the bounded derived category of finitely-generated modules over Λ , denoted \mathcal{D}^b . We will explore some of the properties of \mathcal{D}^b such as triangles, t -structures, simple-minded collections, exceptional sequences of objects in \mathcal{D}^b , and exceptional sequences of Λ modules. We will use Koenig and Yang's bijection between 'algebraic' t -structures and simple-minded collections to construct a new bijection between equivalence classes of 'algebraic' t -structures of \mathcal{D}^b and exceptional collections of Λ modules.