

Semibricks in τ -tilting theory

Sota Asai

Nagoya University

In representation theory of a finite-dimensional algebra A over a field K , there are useful notions bricks and semibricks. Here, a brick means an A -module whose endomorphism ring is a division K -algebra, and a semibrick means a set of bricks which are pairwise Hom-orthogonal. I study semibricks from the point of view of τ -tilting theory. I proved that there is a one-to-one correspondence between the basic support τ -tilting modules and the semibricks satisfying a certain condition called left finiteness. I would like to explain the new perspective of τ -tilting theory given by this bijection.