CLUSTER EQUIVALENCES AND GRADED DERIVED EQUIVALENCES

CLAIRE AMIOT (TRONDHEIM) AND STEFFEN OPPERMANN (TRONDHEIM)

We will call two algebras of global dimension at most 2 cluster equivalent if their generalized cluster categories are triangle equivalent. For example, two derived equivalent algebras are cluster equivalent. However, the converse is not true in general. In these talks, we will explain how to put $\mathbb{Z}$-gradings on cluster equivalent algebras Λ_1 and Λ_2 to get a derived equivalence

$$\mathcal{D}^b(gr\Lambda_1) \simeq \mathcal{D}^b(gr\Lambda_2).$$

We will also explain how to detect if two cluster equivalent algebras are derived equivalent. All results will be illustrated by examples.