ON DERIVED EQUIVALENCES OF SIMPLICES, PRISMS AND BOXES

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We will present a method to construct new tilting complexes from existing ones using tensor products, generalizing a result of Rickard. This has several applications, which will be outlined in the talk.

In particular, certain endomorphism algebras, including (stable) Auslander algebras of Dynkin quivers and more generally, (stable) n-Auslander algebras of certain n-representation-finite algebras introduced by Iyama, will turn out to be derived equivalent to suitable tensor products of algebras. An analogous result holds also for algebras generalizing the ADE-chain related to singularity theory studied by Lenzing and others. Many of these algebras will turn out to be fractionally Calabi-Yau.

The zoology of the quivers of these algebras includes triangles, rectangles, lines and more generally simplices, prisms and boxes.