

Deformations of triangulated categories and the curvature problem

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joint talk on joint work by Alessandro Lehmann and Wendy Lowen

It is well known that the deformation theory of dg-algebras — and by extension, triangulated categories — has some pathological aspects, due to the existence of curved deformations; this is the so called curvature problem. We will discuss a construction that associates a triangulated category, called the n -derived category, to a curved deformation of a dg-algebra. We will explain how this category can be interpreted as a deformation of the derived category of the base algebra and how this leads to considering a novel notion of deformation for (enhanced) triangulated categories.