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Morphisms determined by objects.

Abstract: The notion of Morphism Determined by Object was introduced by Maurice Auslander in order to construct and classify morphisms, mostly in module categories. A recent renewed interest in this notion is coming from C. M. Ringel for module categories and also from H. Krause, who extended and studied this notion in triangulated categories. In this talk, I will discuss functorial interpretation of the morphisms determined by objects in terms of the socle of the cokernel functor induced by the given morphism. I will give applications in cluster categories and other related categories.