How zero is zero?

Abstract:

The quotient of a monoidal category by its largest tensor ideal - given by the so-called negligible morphisms - is often a semisimple category.

I will introduce a generalization of the notion of negligible morphism for some monoidal categories and discuss the associated tensor ideals in the setting of Deligne categories and tilting modules for quantum groups and algebraic groups. It turns out that they are related to other notions from representation theory like modified dimensions and the a-function.