

In these lectures, we will give an introduction to exact dg categories. We will start by recalling the definition and main examples of extriangulated categories. We will then present the notion of homotopy cartesian square in a dg category, using the homotopy theory of dg categories and  $A$ -infinity functor categories.

We will then present the notion of exact structure on an additive dg category using homotopy bicartesian squares, mimicking Quillen's notion of exact structure on an additive category. An important property is that it can be transferred along quasi-equivalences. We then define the dg derived category of an exact dg category and present its basic properties in the connective case. As a consequence, the  $H^0$  of an exact dg category carries a canonical extriangulated structure in the sense of Nakaoka-Palu. We will illustrate our theory in typical examples of exact dg categories arising as extension-closed subcategories of pretriangulated dg categories.