Abstract.
A model structure on a category is a formal way of introducing a homotopy theory on that category, and if the model structure is abelian and hereditary, its homotopy category is known to be triangulated. So a good way to both build and model a triangulated category is to build a hereditary abelian model structure.

Let $R$ be a ring and $C$ be a left $R$-module. In this talk, we construct a unique hereditary abelian model structure on the category of left $R$-modules, in which the cofibrations are the monomorphisms with $G_{C}$-flat cokernel and the fibrations are the epimorphisms with $C_{C}$-cotorsion kernel belonging to the Bass class $B_{C}(R)$.

REFERENCES