



Short Communications

IV Seminar on Categories and Applications

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Model structures on Frobenius categories

We give a recognition criterion to detect model structures (close to those which are cofibrantly generated) on Frobenius categories. In the particular case of Frobenius categories with kernels, we get relevant derivable categories in the sense of Cisinski. When we apply the recognition criterion to:

- 1) a small object argument situation, it provides a very general method of constructing Bousfield localizations of an algebraic triangulated category (including as a particular case the construction of the derived category of a dg category),
- 2) an adjunction between Frobenius categories, then
 - (a) it allows us to show that every algebraic triangulated category is the homotopy category of a model category,
 - (b) it provides some tools to deal with A-infinity algebras over an arbitrary commutative ground ring (not necessarily a field) and A-infinity algebras with non-vanishing curvature.

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