

RELATIVE IGUSA-TODOROV FUNCTIONS

Marcelo Lanzilotta

Universidad de la República, Uruguay

marclan@fing.edu.uy

We develop the theory of the \mathcal{E} -relative Igusa-Todorov functions in an exact IT-context $(\mathcal{C}, \mathcal{E})$. In the case when $\mathcal{C} = \text{mod}(\Lambda)$ is the category of finitely generated left Λ -modules, for an artin algebra Λ , and \mathcal{E} is the class of all exact sequences in \mathcal{C} , we recover the usual Igusa-Todorov functions. We use the setting of the exact structures and the Auslander-Solberg relative homological theory to generalise the original Igusa-Todorov's results. Furthermore, we introduce the \mathcal{E} -relative Igusa-Todorov dimension and also we obtain relationships with the relative global and relative finitistic dimensions and the Gorenstein homological dimensions.

Joint work with Octavio Mendoza (Universidad Nacional Autónoma de México).