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m-replicated algebras and m-cluster categories

Let A be a hereditary algebra. Its cluster category as well as its m -cluster category are by definition quotients of the derived category $\mathcal{D}^b(\text{mod } A)$. One can construct a fundamental domain for these categories as the left part, respectively the m -left part, of the m -replicated algebra of A .

In this talk, we will define the m -replicated algebra, its (m -)left part and study the projective dimension of its indecomposable modules, which is crucial for the construction of the fundamental domain mentioned before.