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Representation finite m-cluster tilted algebras of Euclidean type

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In this talk we note that, in contrast with 1-cluster tilted algebras, the type is not well defined for m-cluster tilted algebras. We also observe that, in contrast with 1-cluster tilted algebras, m-cluster tilted algebras of Euclidean type can be of finite representation type. Both remarks come from an example of an m-cluster tilted algebra of type A_n and $\tilde{A}_n$, shown by Viviana Gubitosi in her Ph.D. thesis

We study when m-cluster tilted algebras arising from an Euclidean quiver are of finite representation type. For such algebras, we characterize representation finite type in terms of the position of the summands of the m-cluster tilting object in the cluster category. Finally, when the m-cluster tilted algebra arises from a quiver of type $\tilde{A}_n$, we get a more precise description of representation finite type in terms of m-relations extensions of representation finite iterated tilted algebras of type $\tilde{A}_n$ or of type A_n.

Joint work with Elsa Fernández, which is still in progress.

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