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Triangulations and maximal almost rigid representations

Let kQ/I be a finite representation type gentle algebra. Two modules M and N are called almost rigid if they do not have any nonsplit extensions or if any extension between M and N is indecomposable. A module T is maximal almost rigid (mar) if its indecomposable summands form a maximal collection of pairwise almost rigid modules. In this talk, we show each mar module T has the same number of summands. We use a modified version of the surface model for the modules of kQ/I developed by Coelho-Simoes and Baur to show that each mar T corresponds bijectively to a permissible triangulation of our surface. Finally, we show that the endomorphism algebra of a mar module over kQ/I is the endomorphism algebra of a tilting module over a bigger gentle algebra. Our results generalize the hereditary type A case, where the mar modules correspond to triangulations of a polygon, and their endomorphism algebras are tilted algebras.