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Two-sided gluings of tilted algebras your preferred talk length(50-60)

We shall report here a joint work with I. Assem [2]. The class of tilted algebras is now considered to be one of the most useful for the general theory of representations of algebras and so, it was natural to consider various generalizations of this notion. Thus, over the years, the following classes of algebras were defined and investigated: the quasi-tilted (which generalize the tilted and the canonical algebras of [7]) [5], the shod algebras (which generalize the quasi-tilted) [3], the weakly shod algebras (which generalize the shod and the representation- directed algebras) [4] and the left and the right glued algebras (which generalize the tilted and the representation-finite algebras) [1]. The purpose of this talk is to introduce a new class of algebras which generalizes all the previous classes. We define an artin algebra A to be a *laura algebra* if all but at most finitely many non-isomorphic indecomposable A -modules are such that all their predecessors have projective dimension at most one, or all their successors have injective dimension at most one. We start by giving various examples and characterizations of laura algebras. We then study the representation theory of laura algebras, and our main theorem gives a full description of the Auslander-Reiten quiver of a laura algebra. The class of laura algebras is then characterized in the spirit of [1] as a double gluing of tilted algebras. During the writing of our work, we have learnt that I. Reiten and A. Skowroński have also independently considered such class of algebras [6].

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