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*Representation theory using surfaces*

We introduce a class of finite dimensional gentle algebras, surface algebras, coming from certain partially triangulated surfaces. The construction of these algebras is motivated by the combinatorial relationship between iterated tilted algebras of Dynkin type and the cluster-tilted algebras of Dynkin type given admissible cuts of quivers. We will discuss some of the ways we can study the representation theory of these algebras using only data coming from the surface.