

## Minimal models for operadic algebras over arbitrary rings

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The classical theory of minimal models for operadic algebras works when they have projective homology, e.g. if they are defined over a field. In the associative case, Sagave extended the theory to arbitrary algebras over any ring by means of a new kind of structure which merges A-infinity algebras and projective resolutions, called derived A-infinity algebras. We will endow the category of derived A-infinity algebras with a homotopical structure equivalent to that of differential graded algebras. We will show that, in this new homotopy category, any differential graded algebra is equivalent to its minimal model. Moreover, we will extend all this beyond the associative setting by using Koszul duality results from Maes's thesis, which extend work of Livernet-Roitzeim-Whitehouse.

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