A-infinity structures on Ext-algebras of standard modules for quasi-hereditary algebras

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It is well known that the number of arrows in the Gabriel quiver of an algebra is given by the dimension of Ext^1 between its simple modules and that the number of relations in a minimal generating set for an admissible ideal is given by the dimension of Ext^2. A theorem of B. Keller makes these facts more explicit by providing a correspondence between projections of A-infinity structures to only Ext^1 and Ext^2 and presentations of an algebra by a quiver with relations. In this talk we discuss an analogous result for projections of A-infinity structures to Hom, Ext^1, and Ext^2 between standard modules for a quasi-hereditary algebra and how it implies uniqueness of exact Borel subalgebras (in the sense of S. Koenig) and bocses, constructed in joint work with S. Koenig and S. Ovsienko. This is joint work in progress with V. Miemietz.

References

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