

HIGHER RELATION EXTENSIONS

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ABSTRACT. Given a finite dimensional algebra C (over an algebraically closed field) of finite global dimension, we define its higher relation extension $C \rtimes (\bigoplus_{i \geq 2} \text{Ext}_C^i(DC, C))$ of C by the $C - C$ -bimodule $\bigoplus_{i \geq 2} \text{Ext}_C^i(DC, C)$. These algebras are a generalisation of the relation extension algebras which were defined by I. Assem, T. Brüstle and R. Schiffler in 2006.

The objective of this talk is to describe the higher relation extension algebra of a string algebra. In particular, we give a construction of the bound quiver of its relation extension algebra.

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