Cluster-tilted algebras as trivial extensions

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Given an algebra C of global dimension at most two, we study the trivial extension $\tilde{C} = C \ltimes \mathrm{Ext}^2(DC, C)$ of C by the $C-C-$bimodule $\mathrm{Ext}^2(DC, C)$. If the algebra C is tilted, then the extension $\tilde{C}$ is cluster-tilted, and every cluster-tilted algebra arises in this way. The aim of the lecture is to study various properties of the construction $C \mapsto \tilde{C}$. For instance, the quiver of the trivial extension $\tilde{C}$ is easliy obtained from the quiver of C by adding an arrow in the reverse direction wherever there is a relation in C.
This is based on joint work with Ibrahim Assem and Ralf Schiffler.