

Parallel unprojection of type Kustin–Miller

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Abstract

Unprojection theory, initiated by Miles Reid, aims to construct and analyze complicated commutative rings in terms of simpler ones. The unprojection of type Kustin–Miller is the simplest type of unprojection. It is specified by the data of a Gorenstein local ring R and a codimension 1 ideal I with the quotient ring R/I being Gorenstein, and constructs a new Gorenstein ring S , which geometrically corresponds to the birational contraction of the closed subscheme $V(I)$ of $\text{Spec } R$. The talk will be about recent joint work with Jorge Neves (Coimbra) concerning the parallel unprojection of type Kustin–Miller, which is a generalization corresponding to the case where there are more than one Gorenstein subschemes of $\text{Spec } R$ to be contracted.