

Hypersurfaces, finite dimensional algebras and hereditary categories

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We start with discussing connections between hypersurface singularities of finite representation type and finite dimensional algebras, via McKay quivers/AR-quivers and preprojective algebras. Derived equivalence of hereditary categories is important here, and we discuss in particular noetherian hereditary categories with Serre duality which are derived equivalent to categories of finite dimensional representations of possibly infinite quivers over an arbitrary field, from work with Van den Bergh and with Lenzing. We also mention some connections with comodules over coalgebras from work with Kleiner.