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On Standardly Stratified Algebras (25-30)

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Let A be a finite-dimensional algebra over an algebraically closed field k . For any fixed partial ordering of an index set, Λ say, labelling the simple A -modules $L(i)$, there are standard modules, denoted by $\Delta(i)$, $i \in \Lambda$. By definition, $\Delta(i)$ is the largest quotient of the projective cover of $L(i)$ for $j \leq i$. Denote by $F(\Delta)$ the category of A -modules which have filtrations whose quotients are isomorphic to standard modules. The algebra A is said to be standardly stratified if all projectives belong to $F(\Delta)$. In this talk we will define a 'stratifying system' and we show that this produces a module Y whose endomorphism ring A is standardly stratified. We will apply the results to construct stratifying systems for special biserial self-injective algebras.