

Meeting: 998, Houston, Texas, SS 2A, Special Session on Representations of Algebras

998-16-295 **Claus M. Ringel** and **Markus Schmidmeier*** (markus@math.fau.edu). *Subgroup Categories of Wild Representation Type.*

Let Λ be a commutative local uniserial ring with radical factor ring k such that the nilpotency index of the maximal ideal is at least seven.

We show that the category $\mathcal{S}(\Lambda)$ of all possible embeddings of a submodule in a finitely generated Λ -module is controlled k -wild with a single control object $I \in \mathcal{S}(\Lambda)$.

Hence each finite dimensional k -algebra can be realized as a quotient $\text{End}(X)/I(X, X)$ of the endomorphism ring of some object $X \in \mathcal{S}(\Lambda)$ modulo the ideal $I(X, X)$ of all maps which factor through the control object I .

Of particular interest is the case $\Lambda = \mathbf{Z}/(p^n)$, so we are dealing with the possible embeddings of a subgroup in a p^n -bounded finite abelian group.

In an application to metabelian groups (so the commutator subgroup is contained in the center), we show that the number of isomorphism classes of metabelian p -groups of fixed order tends to infinity with p . (Received March 01, 2004)