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Stephan Weispfenning* (sweispfe@ucsd.edu). *Generalized Gorensteinness and Homological Determinants for Preprojective Algebras*. Preliminary report.

Studying invariant theory of commutative polynomial rings has motivated many developments in commutative algebra and algebraic geometry. The question under what conditions we can obtain a fixed ring with certain properties has been of particular interest. After generalizing the setting to certain noncommutative non-connected algebras, the main questions remain the same. This talk discusses a sufficient condition on the finite group acting to guarantee that the fixed ring has finite injective dimension and satisfies a generalized Gorenstein condition. Part of this result is the construction of a homological determinant of a non-connected algebra which turns out to be particularly nice for the examined preprojective algebras. (Received January 19, 2018)