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2. Algebra

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Global Krull dimension and global dual Krull dimension of rings

Associated with any ring R are two ordinal numbers α and β. The ordinal α (respectively, β) is the supremum of the (dual) Krull dimensions of all the right R-modules which have (dual) Krull dimension. In this talk we investigate these ordinals and relationships between them for the following classes of rings: arbitrary noncommutative rings, commutative rings, valuation domains, valuation rings, and rings whose completion have a Morita duality. We denote α by r. gl. $k(R)$, β by r. gl. $k^0(R)$ and refer to them as the *right global Krull dimension* and *right global dual Krull dimension of* R, respectively.
The results which will be presented have been obtained jointly with *Patrick F. Smith* (University of Glasgow, UK) or with *Peter Vámos* (University of Exeter, UK).