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*The global spectrum of commutative rings*

Motivated by algebraic geometry, one studies non-commutative analogs of non-commutative resolutions of singularities. In short, non-commutative resolutions of commutative rings  $R$  are endomorphism rings of certain  $R$ -modules of finite global dimension. However, it is not clear which values of finite global dimensions are possible, even for rings of low Krull-dimension. This leads us to consider the so-called global spectrum of a ring, that is, the set of all possible global dimensions of endomorphism rings of Cohen-Macaulay-modules.

In this talk we will address some questions connected with the global spectrum and discuss several examples coming from algebraic geometry: Leuschke's chains of endomorphism rings, which arises in the Grauert-Remmert normalization algorithm for curves and certain two-dimensional rings of finite Cohen-Macaulay representation type. This is joint work in progress with H. Dao.