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Eleonore Faber* (efaber@math.toronto.edu), 1265 Military Trail, Toronto, Ontario M1A 1C4, Canada. *Computing the global spectrum of a commutative ring*. Preliminary report.

In this talk we consider the problem of computing the global spectrum $g_{\text{MCM}(R)}(R)$ of a commutative ring R , that is, the set of all possible global dimensions of endomorphism rings of Cohen–Macaulay-modules. This notion was motivated by the study of non-commutative resolutions of singularities: in short, non-commutative resolutions of a commutative ring 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. This leads us to consider the global spectrum $g_{\text{MCM}(R)}(R)$.

In particular we focus on rings R of low Krull-dimension, where one can use Auslander–Reiten theory to compute the global dimension of an endomorphism ring of a Cohen–Macaulay module. We will illustrate our methods with several examples, in particular the ADE-curves. This is joint work in progress with Hailong Dao and Colin Ingalls. (Received September 02, 2014)