

Homotopical characterization of exceptional complete intersection maps

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A surjective map between commutative noetherian local rings $(R, \mathfrak{m}) \rightarrow S$ is exceptional complete intersection (eci) if its kernel is generated by a regular sequence that is part of a minimal generating set of \mathfrak{m} . I present two characterizations of eci maps: First, a map is eci if and only if the truncated Atiyah class vanishes at the residue field. This establishes a second characterization in terms of the lattices of thick subcategories of complexes of finite length homology. This is joint work with Srikanth Iyengar, Jian Liu and Josh Pollitz.