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Lars Winther Christensen* (lars.w.christensen@ttu.edu). *Vanishing of Ext and Tor with coefficients in residue fields.*

The injective and flat dimensions of modules and complexes can be characterized in terms of vanishing of derived functors: Ext and Tor. It is classic that vanishing can be detected with cyclic modules. Over a local ring, the homological dimensions of finitely generated modules can even be detected by vanishing of Ext and Tor with coefficients in the residue field. I will survey results from the last 6 years that deal with characterizing homological dimensions of non-finitely generated modules over non-local rings in terms vanishing of Ext and Tor with coefficients in residue fields. (Received January 13, 2022)