

1160-16-313

Luigi Ferraro, W. Frank Moore* (moorewf@wfu.edu) and **Josh Pollitz**. *Derived Hochschild cohomology over quotients of skew polynomial rings by normal elements*. Preliminary report.

Building on ideas present in work of Avramov, Buchweitz, Iyengar, and Pollitz, we use color differential graded homological algebra to compute derived Hochschild cohomology of a skew complete intersection ring R . Our calculation uses derivations, which seems to be new, even in the commutative case. In addition, we prove that for color modules M and N over R , $\mathit{Ext}_R(M, N)$ is a finitely generated module over a (potentially different) skew polynomial ring. When the parameters defining the original skew polynomial ring are roots of unity, this allows us to define the support variety of a pair of color modules over such a ring, and we extend many commutative results to this new context. (Received August 11, 2020)