

1163-16-309

Luigi Ferraro* (lferraro@ttu.edu), **Frank Moore** and **Josh Pollitz**. *Support varieties and symmetry of complexity for quotients of skew polynomial rings.*

Building on ideas present in work of Avramov, Buchweitz, Iyengar, and Pollitz, we use color differential graded homological algebra to compute the derived Hochschild cohomology of a skew complete intersection ring R , i.e. a skew polynomial ring modulo an ideal generated by a regular sequence of normal elements. Our calculation uses derivations, which seems to be a new approach even in the commutative case. In addition, we prove that for color modules M and N over R , $\text{Ext}_R(M, N)$ 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 September 01, 2020)