

1165-18-191

Tolulope Oke*, Department of Mathematics, Texas A&M University, Department of Mathematics, Texas A&M Univers, College Station, TX 77845. *On the Hochschild cohomology of a family of quiver algebras.*

Let A^e, B^e be the enveloping algebra of k -algebras A, B and $Mod(A^e)$ the category of A^e -modules. It is natural to ask when an exact functor from $Mod(A^e)$ to $Mod(B^e)$ gives rise to a graded homomorphism between the Hochschild cohomology of A and B . A recollement of module categories can be thought of as a “short exact sequence” of categories with maps being adjoint functors. Reiner Hermann showed that recollements of module categories give rise to homomorphisms between the associated Hochschild cohomology algebras preserving the strict Gerstenhaber structure. This led to a formulation of another variation of the Snashall-Solberg finite generation conjecture which asks whether the Hochschild cohomology modulo the Gerstenhaber ideal generated by homogeneous nilpotent elements is finitely generated. We present an answer to this question using Nicole Snashall’s counterexample to the Snashall-Solberg finite generation conjecture. (Received January 18, 2021)