

1067-18-1719

Alin Stancu* (stancu_alin1@colstate.edu), Department of Mathematics, Columbus State University, 4225 University Avenue, Columbus, GA 31907. *The Invariance and the General Cohomology Comparison Theorems.*

The *Invariance Theorem* of M. Gerstenhaber and S. D. Schack states that if \mathbb{A} is a diagram of algebras then the subdivision functor induces a natural isomorphism between the Yoneda cohomologies of the category $\mathbb{A}\text{-mod}$ and its subdivided category $\mathbb{A}'\text{-mod}$. In this paper we generalize this result and show that the subdivision functor is a full and faithful functor between two suitable derived categories of $\mathbb{A}\text{-mod}$ and $\mathbb{A}'\text{-mod}$. This result combined with our work on the *Special Cohomology Comparison Theorem*, constitutes a generalization of M. Gerstenhaber and S. D. Schack's *General Cohomology Comparison Theorem*. (Received September 21, 2010)