A Hochschild homology criterium for the smoothness of superalgebras

Paul Blaga

Abstract

A criterium of smoothness for ordinary algebras, according to which an algebra is smooth if certain Hochschild homology groups vanish (by analogy to what happens with the differential forms on a smooth manifold), was proposed, several years ago, by Luchezar Abramov. We investigate the possibility to extend this result to the case of $\mathbb{Z}_2$-graded algebras (also called *superalgebras*).