Abstract

We define and study cohomological tensor functors from the category T_n of finite-dimensional representations of the supergroup $Gl(n|n)$ into T_{n-r} for $0 < r \leq n$. In the case $DS : T_n \to T_{n-1}$ we prove a formula $DS(L) = \bigoplus \Pi^{n_i} L_i$ for the image of an arbitrary irreducible representation. In particular $DS(L)$ is semisimple and multiplicity free. We derive a few applications of this theorem such as the degeneration of certain spectral sequences and a formula for the modified superdimension of an irreducible representation.