Abstract: Let $\mathcal{F}$ (correspondingly $\mathcal{P}$) denote the abelian category of functors (strict polynomial functors in the sense of Friedlander and Suslin) from finite dimensional vector spaces over F_p to vector spaces over F_p. These two categories are related via the exact forgetful functor

$$\iota : \mathcal{P} \to \mathcal{F}.$$

The category $\mathcal{F}$ is strongly related to topology and representation theory of symmetric and general linear groups but the homological algebra in $\mathcal{F}$ is rather mysterious. The category $\mathcal{P}$ is easier for cohomological calculations. The known $Ext_{\mathcal{F}}(.,.)$ calculations are obtained only for functors which belong to the image of ι and are performed using comparison of $Ext_{\mathcal{P}}$- and $Ext_{\mathcal{F}}$-groups induced by ι. In my talk I am going to overview the categories $\mathcal{F}$ and $\mathcal{P}$ and their relation to concepts from algebraic topology. The aim of the talk is to present cohomological conditions which guarantee that a given functor $F \in \mathcal{F}$ comes from $\mathcal{P}$ via ι.