



Main Talks

IV Seminar on Categories and Applications

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Functor category associated to quadratic spaces over \mathbb{F}_2

The category $F(p)$ of functors from the category Ef of finite Fp -vector spaces to the category E of all \mathbb{F}_p -vector spaces is connected to several areas of mathematics. An important algebraic motivation for the particular interest in the category $F(p)$ follows from the link with the modular representation theory and the cohomology of finite general linear groups. A fundamental result obtained by Betley-Suslin relates the calculation of extension groups in the category $\mathcal{F}(p)$ with certain stable cohomology groups of general linear groups. It is natural to seek to construct other categories of functors that play a similar role for other families of algebraic groups and, in particular, for the orthogonal groups.

In this talk I will explain the construction of the functor category \mathcal{F}_{quad} , which has some good properties as a candidate for the orthogonal group over the field with two elements and I will give several results about the structure of this category.

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