

Linear representations of categorical groups

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After a few general facts about the representation theory of categorical groups, I'm going to talk about their representations as K -linear self-equivalences of Kapranov and Voevodsky 2-vector spaces. I shall describe the equivalence classes of such representations in terms of the homotopy invariants of the categorical group, and I shall give a geometric description of the corresponding categories of morphisms between two such representations. I shall also discuss some related points, in particular, the notion of regular representation and some of its properties.