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Projective 2-representations

I will briefly recall the classical notion of a projective group representation, and then talk about how this concept has been categorified. In particular, I will talk about Frenkel and Zhu's *gerbal representations*, and how to modify the definition of a *2-representation* (as defined by Ganter–Kapranov and Bartlett) to allow for these so-called *projective 2-representations*, which may be thought of as a categorical representation of a 2-group.

This naturally leads to the question of what the *character* of a projective 2-representation should be. I will briefly explain how we define this, and how the character of a projective 2-representation forms a module over the twisted Drinfel'd double.

This is joint work with Nora Ganter.