Tensor categories in positive characteristic

Abstract:

Tensor categories are abelian k-linear monoidal categories modeled on the representation categories of affine (super)group schemes over k. Deligne gave very succinct intrinsic criteria for a tensor category to be equivalent to such a representation category, over fields k of characteristic zero. These descriptions are known to fail badly in prime characteristics. In this talk, I will present analogues in prime characteristic of these intrinsic criteria. Time permitting, I will comment on the link with a recent conjecture of V. Ostrik which aims to extend Deligne's work in a different direction.