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Rohit Nagpal* (nagpal@math.uchicago.edu). *Generic representations of the finite general linear groups.*

Let F be a finite field of characteristic p and K be a commutative ring. A functor V from F -vector spaces to K -modules encodes a sequence $(V_n)_{n \geq 0}$ where V_n is a $GL_n(F)$ representation over K . The category of such functors, which we call VA-modules, behaves very differently depending on whether p is invertible in K . We will discuss a recent result of Nick Kuhn that proves that the category of VA-modules is of Krull dimension 0 when K is a field of characteristic different from p . We will also discuss conjectures and known results in the case when the characteristic of K is p and some related results in other categories. (Received February 06, 2017)