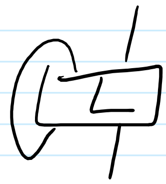
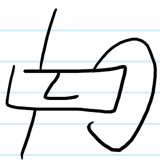
Geer in Toulouse

May 15, 2017 8:01 AM

j.w/ Belikova, Blanchet, Costantino, Kujawa, Patureau-Mirand, Turaev, Virelizier

Sometime the RT functor $\overbrace{\text{vanishes}}^{F_{\mathcal{C}}(L)}$ on some links; we give methods to define $F'_{\mathcal{C}}$ that doesn't.

Tool An object V is <u>ambi</u> if

$F_{\mathcal{C}}($  $) = F_{\mathcal{C}}($  $)$

for all $L \in End(V \otimes V)$

extend to

$d(W) \langle F_{\mathcal{C}}($  $)\rangle = d(V) \langle F_{\mathcal{C}}($  $)\rangle$

$\underline{\text{II}}$ Algebra.

Let $\mathcal{C}$ be a pivotal k-linear category

[pivotal: $\otimes$ (strictly associative.), Hom spaces linear, has $\cap, \cap, \cup, \cup$]

For this talk, $\mathcal{C} = U$-mod or $\overline{U}$-mod

$$U = \langle E, F, K, K^{-1} \rangle \Big/ \begin{array}{l} KE = q^2 EK \\ KF = q^{-2} FK \\ EF - FE = \frac{K - K^{-1}}{q - q^{-1}} \end{array}$$

$q = e^{2\pi i/l}$

$r = \begin{cases} l & l \text{ odd} \\ l/2 & l \text{ even} \end{cases}$

$\bar{U} = U \big/ (E^r, F^r, K^{2r} - 1)$

Let $\mathcal{D}$ & $\bar{\mathcal{D}}$ be the categories of f.d. wt modules over U & $\bar{U}$.

Both $\mathcal{D}$ and $\bar{\mathcal{D}}$ are not SS nor braided.