Snyder@SC: Semisimple Algebras and Subfactors

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4:00 PM

Twisting by 3-cocycles

One way that fusion categories get trickier is that a lot of information is encoded in the associator. For example, we can look at G-graded vector spaces with a nontrivial associator.

Associator

$$\omega_{\alpha,\beta,\gamma} : V_{\alpha\beta\gamma} = (V_\alpha \otimes V_\beta) \otimes V_\gamma \to V_\alpha \otimes (V_\beta \otimes V_\gamma) = V_{\alpha\beta\gamma}$$

assigns a scalar to every triple (α, β, γ).

- Compatibility $= \omega$ is a 3-cocycle
- $\mathrm{Vec}(G, \omega)$ up to equivalence only depends on $\omega \in H^3(G, k^\times)$.

Full slides @ gmail.