1139-18-694 **Henry Tucker*** (hjtucker@ucsd.edu), UC San Diego. *Reconstructing Kac quasi-Hopf algebras for group-theoretical fusion categories via cleft extensions.* Preliminary report.

A fusion category with all objects having integer dimension is realized by representations of a semisimple quasi-Hopf algebra. Group-theoretical fusion categories are an important example; these are fusion categories that may be obtained from finite groups and their cohomology. We consider examples of group-theoretical fusion categories given by the representations of a Kac quasi-Hopf algebra, which is equivalent to the given category fitting in a certain exact sequence of fusion categories. We construct these quasi-Hopf algebras as cleft extensions of Hopf algebras by cocommutative quasi-Hopf algebras. We see in our family of examples that these cleft extensions correspond to elements of Masuoka's OpExt' cohomology group. (Received February 20, 2018)