1135-81-2902 **Colleen Delaney*** (cdelaney@math.ucsb.edu). *Applications of equivariantization/de-equivarizantization to topological quantum computing.* Preliminary report.

Equivariantization of fusion categories and its inverse process de-equivariantization provide tools for studying G-crossed braided fusion categories. When a G-crossed braided fusion category arises as an extension of a unitary modular tensor category modeling the anyons of a 2+1 dimensional topological phase of matter, it has the interpretation of a mathematical model for the same anyons together with symmetry defects. Like anyons, symmetry defects can in principle be used for topological quantum information processing. We discuss how equivariantization and de-equivariantization can be used to further understand symmetry defect models and their role in topological quantum computing as well as their role in some open problems in fusion category theory. (Received September 26, 2017)