
QING ZHANG, Texas A&M University
Congruence Subgroups and Super-Modular Categories

A super-modular category is a unitary ribbon fusion category with Müger center equivalent to the unitary symmetric ribbon category of super-vector spaces. For modular categories, Ng and Schauenburg showed that the kernel of the associated projective representation of the modular group is a congruence subgroup. In the super-modular setting, one gets a representation of the theta subgroup of the modular group by taking the fermionic modular quotient. It is conjectured that the kernel of this representation is also congruence of some level. We verify this for any super-modular category having a minimal modular extension. We also provide evidence for the conjecture by looking at super-modular categories arising from quantum groups at roots of unity.