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Siu-Hung Ng* (rng@math.lsu.edu), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803. *A new family of braided quasi-Hopf algebras and their representation categories.*

The construction of twisted quantum doubles of finite groups G was motivated by holomorphic orbifold in conformal field theory. In this talk, we present a generalized construction of braided quasi-Hopf algebras $D^\omega(G, A)$ from a central subgroup A and a 3-cocycle ω of G . The modularity of their representation categories is equivalent to the nondegeneracy of some bicharacter induced on A . We particularly consider some finite groups with a unique involution as examples. This talk is based on some joint works with Geoffrey Mason. (Received February 20, 2018)