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Yuan Liu* (yliu@math.wisc.edu) and **Melanie Matchett Wood**. *A non-abelian version of Cohen-Lenstra heuristics.*

We construct a model of random groups that is a non-abelian version of the random groups that feature in the Cohen-Lenstra heuristics. This random group is obtained from, as n goes to infinity, the free group on n generators modulo $n+u$ random relations. In this talk, we will use this model to define a probability measure on the space of profinite groups and discuss known results about the distribution of non-abelian analogs of class groups that motivate our work. Then we will assign a Γ -action to the free group, consider the random Γ -group obtained by this construction, and discuss how this model has moments matching those we see in the function fields results. This is a joint work with Melanie Matchett Wood. (Received September 24, 2018)