



MANHATTAN ALGEBRA DAY

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Searching for permutation groups

Friday, December 7, 2018
CUNY Graduate Center, Science Center

Abstract:

A common way of sampling random subgroups is to choose generators at random from the ambient group. This approach fails for symmetric groups because, as is well known, a random pair of permutations generates the symmetric or alternating group with asymptotic probability 1. However for another method of random choice, a random pair of permutations generates every two-generator permutation group (up to conjugacy) with positive asymptotic probability. This method is based on Kolmogorov complexity and cannot be implemented, but a heuristic variation seems to work. We present some experimental results.