1145-94-1253   **Anna Melikyan*** (`anna34@ksu.edu`). *Random Spanning Trees on Homogeneous Graphs.* Preliminary report.

The decision problem to determine whether there exist two completely independent spanning trees in a graph G is NP-hard. In this context, we desire to generate spanning trees that collide as little as possible.This can be done by selecting trees with probability μ so as to minimize the expected overlap of two independent identically distributed spanning trees. We partition the graph into homogeneous components where μ-random spanning trees use every edge fairly. We provide further analysis of an optimal μ for homogeneous graphs. (Received September 20, 2018)