

1116-VP-1900      **Ewa J Infeld\*** ([ewa.j.infeld.gr@dartmouth.edu](mailto:ewa.j.infeld.gr@dartmouth.edu)), Dartmouth College, Department of Mathematics, 27 N Main St, Hanover, NH 03755. *Avoidance Coupling of Simple Random Walks: Graph Conditions*. Preliminary report.

A coupling of two Markov chains is an implementation of the chains on a common probability space, in such a way that each chain, viewed separately, is faithful to its transition matrix. An avoidance coupling of simple random walks on a graph can be represented by two tokens each taking a walk on a graph, such that they never collide and yet if viewed separately, each token appears to be taking a simple random walk. I will present some necessary and some sufficient conditions for a graph to admit an avoidance coupling of simple random walks. (Received September 21, 2015)