

Graph flip processes

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We define a class of graph processes where in each step a graph is transformed by altering a subgraph induced by a uniformly chosen set of k vertices (with k fixed) according to a predefined rule. For example, the rule may be "if you see a clique, remove its edges" or "whatever graph you see, replace it by its complement". Assuming the initial graph is large, we discuss the concentration of trajectories of such processes from the perspective of dense graph limits (graphons) by relating it to a graphon-valued differential equation. Based on work with P. Araújo, F. Garbe, J. Hladký, E. K. Hng and F. Skerman.