

Square of a Hamilton cycle in a random graph

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If H is any graph, the square of H , H^2 is the graph with the same vertex set as H such that uv is an edge of H^2 iff u and v have distance 1 or 2 in H . We show that the threshold for the random graph $G_{n,p}$ to contain the square of a Hamilton cycle is $p = \frac{1}{\sqrt{n}}$. This improves the previous results of Kühn and Osthus and also Nenadov and Škorić. This is joint work with Dudek and Frieze.