Jiansheng Cai* (healthcai@163.com), Peoples Rep of China. $C_4$-Factor in Random Graphs.

For a graph $G$ with $n$ vertices, where 4 divides $n$, a $C_4$-factor is a subgraph of $G$ consisting of $n/4$ vertex disjoint $C_4$. We consider the minimal probability $p = p(n)$, for which a random graph $G = G(n, p)$ almost surely contains a $C_4$-factor. In this paper, we prove that for $p = O(n^{-\frac{3}{2}})$, the random graph $G(n, p)$ almost surely contains a $C_4$-factor. (Received January 15, 2017)