

Random matching problems on the complete graph

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Abstract

The edges of the complete graph on n vertices are assigned independent exponentially distributed costs. A k -matching is a set of k edges of which no two have a vertex in common. We obtain explicit bounds on the expected value of the minimum total cost $C_{\{k,n\}}$ of a k -matching. In particular we prove that if $n = 2k$ then $n^2/12 < EC_{\{k,n\}} < n^2/12 + \log n/n$.

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