Upper tail wags random graphs

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Streszczenie

Let random variable X be the number of copies of a fixed graph G in the random graph $G(n, p)$. Consider the (exponentially small) probability $\mathbb{P}(X > 2\mathbb{E}X)$ - known as the Upper Tail. In 2012 Demarco and Kahn conjectured the order of magnitude of the exponent and confirmed when G is any clique. We give an infinite set of graphs G for which the conjecture does not hold. Joint work with L. Warnke.