

Combinatorics and Discrete Probability Seminar

Notes on two-point concentration of the independence number of the random graph

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Abstract: It is well known that for any constant probability p there exists a function $k(n)$ such that the independence number of the binomial random graph $G(n,p)$ is concentrated on two values (i.e. the independence number of $G(n,p)$ is $k(n)$ or $k(n)+1$ with high probability). In this talk we discuss the extension of this result to $p(n)$ that tends to 0 with n . In particular, we determine the probability at which two point concentration of the independence number of $G(n,p)$ breaks down. We also discuss the independence number of $G(n,m)$, and show that there is a range of values for m in which the independence number of $G(n,m)$ is concentrated on two values while the independence number of the corresponding $G(n,p)$ is not concentrated on two values.

Joint work with Jakob Hofstad.

Monday, November 11 at 3:00 PM in 1227 SEO