

Almost-spanning universality in random graphs

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A graph G is said to be $\mathcal{H}(n, \Delta)$ -universal if it contains every graph on n vertices with maximum degree at most Δ . It is known that for any $\varepsilon > 0$ and any natural number Δ there exists $c > 0$ such that the random graph $G(n, p)$ is asymptotically almost surely $\mathcal{H}((1 - \varepsilon)n, \Delta)$ -universal for $p \geq c(\log n/n)^{1/\Delta}$. Bypassing this natural boundary, we show that for $\Delta \geq 3$ the same conclusion holds when $p = \omega\left(n^{-\frac{1}{\Delta-1}} \log^5 n\right)$.

This is joint work with David Conlon, Asaf Ferber and Nemanja Škorić.