Random graphs:
sandwiching, subgraph counts extension statements

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In this talk I will present some results on random graphs. First result (joint with A. Dudek, A. Frieze and A. Rucinski) concerns embedding of the random graph $G(n, m)$ into the random $d$-regular graph $R(n, d)$, where $m \sim nd/2$. This allows to transfer monotone increasing properties from $G(n, m)$ to $R(n, d)$. In the remaining time I will cover some results on the subgraph counts in the random graph $G(n, p)$ (the “infamous upper tail” problem) as well as joint work with L. Warnke on extension statements (a generalization of the fact that whenever $np \gg \log n$, the degree sequence of $G(n, p)$ is concentrated around $np$).

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