Chromatic thresholds in random graphs

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There has been a recent trend in Combinatorics towards proving 'random analogues' of extremal results in Graph Theory and Additive Number Theory. We are interested in random analogues of the chromatic threshold, which has been completely determined for all graphs H only very recently. It turns out that chromatic thresholds and their natural random analogues in random graphs behave (non-trivially) differently for certain ranges of p. However, the original behaviour can be recovered if we are allowed to delete a few edges from the random graph.

In the talk I will present a number of results in this direction. These leave many gaps and open questions, which I will mention as well.

Part of this is based on joint work with Peter Allen, Simon Griffiths, Yoshiharu Kohayakawa and Robert Morris, and part with Peter Allen, Yoshiharu Kohayakawa and Barnaby Roberts.