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Title: The percolation phase transition on the n-cube

Abstract: We obtain a detailed analysis of the phase transition for bond percolation on the n-cube $\{0,1\}^n$. In particular, we define a critical value $p_c(n)$ of the bond occupation probability p, such that the largest cluster size jumps from polynomially small in n to exponentially large in n when p crosses from the left to right side of an interval of size n^{-t} centred at $p_c(n)$, for any positive t. The proof is based on the lace expansion, a method that has successfully analysed the percolation phase transition on Z^d for large d. This is joint work with C. Borgs, J. Chayes, R. van der Hofstad and J. Spencer.