

## The site-diluted Ising model

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The Ising model with uncorrelated, quenched random-site or random-bond disorder has been controversial in both two and four dimensions. In these dimensions, the leading exponent  $\alpha$ , which characterizes the specific-heat critical behaviour, vanishes and no Harris prediction for the consequences of quenched disorder can be made. In the two-dimensional case, the controversy is between the strong universality hypothesis which maintains that the leading critical exponents remain the same as in the pure case and the weak universality hypothesis, which favours dilution-dependent leading critical exponents. Here the random-site version of the model is subject to a finite-size scaling analysis, paying special attention to the implications for multiplicative logarithmic corrections. The analysis is fully supportive of the scaling relations for logarithmic corrections and of the strong scaling hypothesis in the 2D case. In the four-dimensional case unusual corrections to scaling characterize the model, and the precise nature of these corrections has been debated. Progress made in determining the correct 4D scenario is outlined.