

Title: Renormalization group for Ising spins

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Abstract: The Ising model is one of the simplest models from statistical physics which exhibits a critical point. Mathematically a critical point can be characterized as the global manifestation of randomness in a model in which randomness was only introduced locally. An important idea from physics is the "universality" of this critical behavior which says that many features of the critical behavior do not depend on the microscopic details of the model but only on some qualitative features of the model. Physicists's understanding of this universality is based on a set of ideas known as the renormalization group. I will give an introduction to these ideas in the context of the Ising model.