

Abstract Submitted
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Upper Bound for the Ordering Transition on an Ising Model on a Graph TIMOTHY DOWNING, LEONID PRYADKO, Univ of California - Riverside — We present an upper bound for the ordering transition of a ferromagnetic Ising model on a graph. Namely, we show that at any given temperature, the magnetic susceptibility per spin cannot exceed that on an infinite tree, the universal cover of the original graph. Exact solution of the Ising model on the tree can be obtained using Bethe-Peierls expansion (also known as Belief Propagation). The corresponding transition point is given by a solution of an eigenvalue problem.

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