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Anirban Basak*, anirbanb@math.duke.edu. *Mean-field Ising models.*

We consider the asymptotics of the log-partition function of an Ising model on a sequence of growing graphs. We show that under a fairly general condition the mean-field prediction to the log partition function is asymptotically tight. This covers many naturally occurring graph ensembles such as regular graphs with degree going to infinity, graphs converging in cut-metric sense, bi-partite bi-regular graphs. This is joint work with Sumit Mukherjee. (Received February 22, 2016)