



# SEMINAR

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Sidney Smith Hall, Room 1083

Partition Function of the Ising Model via Factor Graph Duality

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The partition function of a factor graph and the partition function of the dual factor graph are related to each other by the normal factor graph duality theorem. We apply this result to the classical problem of computing the partition function of the Ising model to show that, at low temperature, Monte Carlo methods are more efficient in the dual graphical model than the original graphical model. The viability of the methods is demonstrated by numerical experiments.

Based on a joint work with Prof H.-A. Loeliger (ETH-Zurich, Switzerland)

Two related articles are available  
on arXiv at:

<http://arxiv.org/abs/1307.3645>

<http://arxiv.org/abs/1401.4912>