

Critical behaviour of the surface tension in the 3D Ising model

Federico Belliardo
Marco Costa

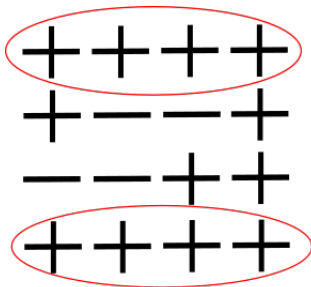
Dipartimento di Fisica
Università di Pisa

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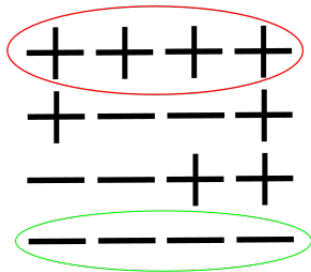
Summary

- Definition of the surface tension
- Algorithm for generating the Markov chain
- (Notes on the implementation?)
- Estimation of the errors and autocorrelation
- Fit of the free energy
- Fit of the critical behaviour
- Conclusion

Definition of the surface tension



Z_{++}



Z_{+-}

$$\sigma = \lim_{\substack{L \rightarrow +\infty \\ T \rightarrow +\infty}} \frac{1}{L^2} \log \frac{Z_{+-}}{Z_{++}}$$

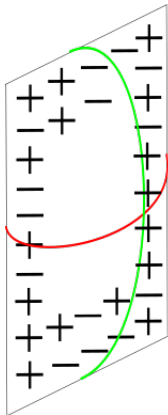
Definition of the surface tension

$$\sigma = \lim_{\substack{L \rightarrow +\infty \\ T \rightarrow +\infty}} \frac{1}{L^2} \log \frac{Z_{+-}}{Z_{++}} = \frac{1}{L^2} (F_{+-} - F_{++})$$

Free energy per area of the interface between phases.

Definition of the surface tension

left part



Definition of the surface tension