



*Déviations pour les temps locaux
d'auto-intersections*

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Mixing time for zero temperature stochastic 3D Ising model

François SIMENHAUS

We consider the Glauber dynamics for the Ising model in a ball of radius L in dimension 3. We study the case of “+” boundary conditions and zero temperature. We prove that, starting from the “-” configuration, the time τ_+ to reach the configuration with all spins equal to +1 is of polynomial order L^2 . The proof of the upper bound proceeds via comparison with an auxiliary dynamics which mimics the motion by mean curvature that is expected to describe, on large time-scales, the evolution of the interface between “+” and “-” domains. The analysis of the auxiliary dynamics requires

- results on the fluctuations of the height function associated to dimer coverings of the infinite honeycomb lattice
- the mixing time of a Glauber dynamic for monotone surfaces.

This is a joint work with P. Caputo, F. Martinelli and F.L. Toninelli.