PHYSICAL MATHEMATICS SEMINAR

STEADY-STATE AND TRANSIENT NUCLEATION IN AN ISING FERROMAGNET WITH GLAUBER DYNAMICS

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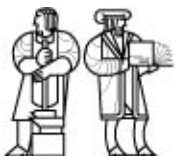
ABSTRACT:

A non-equilibrium nearest-neighbor Ising model on a square lattice is considered at low temperatures. Once the spin flip dynamics (Glauber/Metropolis) is specified, the model provides a unique opportunity of first-principle evaluation of the nucleation rate. Several unexpected phenomena, such as modulations of the pre-exponential of the steady-state rate or collapse of transient fluxes, are observed. Limitations of the phenomenological Becker-Doring picture which become apparent in light of the obtained results will be discussed.

TUESDAY, FEBRUARY 13, 2007
2:30 PM
Building 2, Room 146

Refreshments at 3:30 PM in Building 2, Room 349
(Applied Math Common Room)



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