
Non-equilibrium dynamics of Ising-like systems at the critical point: a cuda implementation

Francisco Sastre^{*†1} and Malte Henkel^{‡2}

¹División de Ciencias e Ingenierías. Universidad de Guanajuato. (DCI-UG) – Lomas del Bosque 103.
Lomas del Campestre. 37150, León, Guanajuato., Mexico

²Groupe de Physique Statistique, Département de Matière et des Matériaux, Institut Jean Lamour
(GPS-IJL) – Université de Lorraine, CNRS : UMR7198 – B.P. 70239, F-54506, Vandoeuvre lès Nancy
Cedex, France

Abstract

By means of Monte Carlo simulations of the critical Ising and Majority voter models with Glauber dynamics on two dimensional honeycomb lattices we found that the dynamic critical exponents for the Majority voter model are in good agreement with the reported values of the Ising model. We explain how the critical dynamic can be implemented correctly in the Majority voter model using cuda.

^{*}Speaker

[†]Corresponding author: sastre@fisica.ugto.mx

[‡]Corresponding author: malte.henkel@univ-lorraine.fr