How does a coarsening ferromagnet lose the memory of its origin?

Abstract: In theoretical and computational studies of ordering dynamics typically one starts with random initial configurations. In temperature driven phase transitions, e.g., in a standard para- to ferromagnetic transition, these correspond to infinite temperature. On the other hand, from experimental point of view, it is more relevant to prepare the initial configurations at finite temperatures, with large starting correlation lengths. In this talk I will address this physically relevant situation in the context of uniaxial ferromagnets. Results will be presented from Monte Carlo simulations of non-conserved Ising model. The focus will be on the understanding of scaling behavior, if any, in the loss of memory of the initial correlation. I will also provide discussion on whether the equilibration time, following a quench, should depend upon the extent of initial correlation.

Ort: ITP, Raum 210 (gr. SR)

Interessenten sind herzlich eingeladen!