Condensation time scale of a stochastic transport process with pair factorized steady state

Hannes Nagel
with Bartłomiej Wacław and Wolfhard Janke

[1] University of Leipzig, Institut für Theoretische Physik

[2] School of Physics and Astronomy, University of Edinburgh

25. November 2010

- Simple dynamic stochastic transport model
- indistinguishable particles hop from site to site, just like in the zero range process
- **but** with nearest neighbor interactions added
- system shows extended particle condensate in the steady state
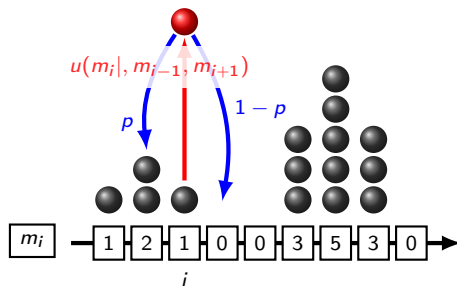
i departure site index

m_i particle occupation at i

$u(m_i| \ldots)$ hopping rate

p probability to hop left

periodic ring, but other structures are possible as well

- Study the time scale of the non-equilibrium condensation process on 1D/2D lattices and regular graphs