

Equilibriumlike extension of the invaded cluster algorithm

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We propose [1] an extension of the nonequilibrium invaded cluster (IC) algorithm [2], which reestablishes a correct scaling of fluctuations at criticality and also self-adjusts to the critical temperature. We show that by introducing a single constraint to the intrinsic quantity of the IC algorithm the temperature becomes well defined and the sampling of the equilibrium ensemble is regained. The procedure is applied to the Potts model in two and three dimensions.

[1] I. Balog, K. Uzelac: Equilibriumlike extension of the invaded cluster algorithm, submitted to Phys. Rev. E Rapid Communications section.

[2] J. Machta, Y. S. Choi, A. Lucke, T. Schweizer, L. V. Chayes, Phys. Rev. Lett. **75**, 2792 (1995); J. Machta, Y. S. Choi, A. Lucke, T. Schweizer, L. M. Chayes, Phys. Rev. E **54**, 1332 (1996).