

Fluid limit for the coarsening phase of the condensing zero-range process.

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In this work we prove that the first phase of coarsening in the condensing zero range process on a finite number of sites with N particles, as N tends to infinity, is described by a fluid limit, when time is appropriately rescaled. According to this limit, in a finite time determined by the initial distribution of particles, the process reaches an state in which mass concentrates at the sites having maximal weight under the invariant measure of the underlying random walk.