Logarithmic Sobolev Inequality for Zero--Range Dynamics: Independence of the Number of Particles

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Abstract

We prove that the logarithmic-Sobolev constant for Zero-Range Processes in a box of diameter L may depend on L but not on the number of particles. This is a first, but relevant and quite technical step, in the proof that this logarithmic-Sobolev constant grows as the square of L, that is presented in a forthcoming paper.

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Pages: 525-576

Published on: June 13, 2005

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