

ON THE RATE OF CONVERGENCE IN THE INDIVIDUAL ERGODIC THEOREM FOR THE ACTION OF A SEMIGROUP

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We consider the individual ergodic theorem for the action of a semigroup of measure-preserving mappings. We estimate the rate of convergence using estimates for the probability of large deviations for the ergodic averages with an essentially bounded averaging function. We find estimates for the rate of convergence of the ergodic averages in the cases of Benedicks–Carleson quadratic mappings, expanding mappings of Pomeau–Manneville type with a neutral point, and multidimensional shifts.

Key words and phrases: the rate of convergence in an ergodic theorem, large deviations, quadratic mapping, multidimensional shift.

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Received

November 13, 2014

Translated into English:

Siberian Advances in Mathematics, V. 26, N 2, 139–151 (2016).

DOI: 10.3103/S105513441602005X