

1070-37-153

Anatoly M. Vershik* (vershik@pdmi.ras.ru), St.Petersbrug branch of Steklov Mathemartical, Institute of Russian Academy of Sciences, Fontanka 27, St.Petersburg, 191023, Russia. *Asymptotic theory of the admissible metrics in the measure spaces and scaling entropy*. Preliminary report.

We consider important class of the measurable etrics in the measure space an its evolution under the action of the measure preserving transformations. It happened that the main asymptotic properties of the orbits of metrics does not depend on the initial metric and consequently are the invariant of the transformations. Te first application of this ideas leads to the notion of scaling entropy and concerned to the generalization of the Kolmogorov entropy onto the case of zero entropy. This allow to study the scaling entropy of adic transformations and to give the criteria of the discreteness of the spectrum. There are many relations of this strategy with the old and new papers of the various authors. (Received February 08, 2011)