

The number of ergodic invariant measures for Bratteli diagrams

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We study the simplex $\mathcal{M}_1(B)$ of probability measures on a Bratteli diagram B which are invariant with respect to the tail equivalence relation. Equivalently, $\mathcal{M}_1(B)$ is formed by probability measures invariant with respect to a homeomorphism of a Cantor set. We prove a criterion of unique ergodicity of a Bratteli diagram. In the case of a finite rank k Bratteli diagram B , we give a criterion for B to have exactly $1 \leq l \leq k$ ergodic invariant measures and describe the structures of the diagram and the subdiagrams which support these measures. We also find sufficient conditions under which a Bratteli diagram of arbitrary rank has a prescribed number (finite or infinite) of probability ergodic invariant measures. The talk contains the results of the work partially supported by the NAS of Ukraine (project “Qualitative, asymptotic and numerical analysis of various classes of differential equations and dynamical systems, their classification, and practical application”, 0119U102376).

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