

Zero Temperature Limits of Gibbs States for Almost-Additive Potentials

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Abstract

This paper is devoted to study ergodic optimisation problems for almost-additive sequences of functions (rather than a fixed potential) defined over countable Markov shifts (that is a non-compact space). Under certain assumptions we prove that any accumulation point of a family of Gibbs equilibrium states is a maximising measure. Applications are given in the study of the joint spectral radius and to multifractal analysis of Lyapunov exponent of non-conformal maps.