

Singular perturbation of symbolic dynamics via thermodynamic formalism

田中 晴喜 (広島大学)

We consider singular perturbation of a mixing subshift of finite type using thermodynamic formalism. In our formulation, the perturbed systems are described by a family of potentials $\{\Phi(\alpha, \cdot)\}$ with large parameter α on a fixed subshift of finite type and the unperturbed system is characterized as the system at infinity obtained by collapsing the perturbed system by letting $\alpha \rightarrow \infty$. We apply our formulation to the collapse of cookie-cutter systems and dispersing open billiards.