

R. Leplaideur

Title:

Non-existence of measure which minimizes the unstable Lyapunov exponent for a family of non-uniformly hyperbolic horseshoes

Abstract:

We study the existence and uniqueness of the equilibrium state for $t \mapsto -t \log j_t$ ($t \geq 0$) and for the class of non-uniformly hyperbolic Horseshoes which was introduced by I. Rios. We describe the two possibilities for the graph of $t \mapsto \mathcal{CP}(t)$, where $\mathcal{CP}(t)$ is the pressure for $-t \log j_t$.

We prove that these maps do not have a measure which minimizes the unstable Lyapunov exponent, even if the unique equilibrium state μ_t converges when t increases.