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Equilibrium states for S -unimodal maps. (English) Zbl 0916.58020
Ergodic Theory Dyn. Syst. 18, No. 4, 765-789 (1998).

The authors study for S -unimodal maps f equilibrium states maximizing the free energies $F_t(\mu) := h(\mu) + t \int \log |f'| d\mu$ and the pressure function $P(t) := \sup_{\mu} F_t(\mu)$. It is shown that if f is uniformly hyperbolic on periodic orbits, then $P(t)$ is analytic for $t \approx 1$. Moreover, the authors investigate the stability of F_t for a large class of functions but also give an example of a logistic map that is not stable and has no equilibrium state.

Reviewer: [Messoud Efendiev \(Berlin\)](#)

MSC:

[37D20](#) Uniformly hyperbolic systems (expanding, Anosov, Axiom A, etc.)
[37D35](#) Thermodynamic formalism, variational principles, equilibrium states
for dynamical systems

Cited in **1** Review
Cited in **37** Documents

Keywords:

[S-unimodal map](#); [equilibrium state](#); [uniformly hyperbolic](#); [logistic map](#); [pressure function](#)

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