

# Matrix thermodynamic formalism

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Classical thermodynamic formalism studies invariant measures on symbolic shift spaces which maximise a functional of the form "entropy plus ergodic average" and has had numerous applications in and around the ergodic theory of hyperbolic dynamical systems.

Recent work in the dimension theory of self-affine fractals has stimulated the study of matrix equilibrium states, which are invariant measures which maximise a functional of the form "entropy plus Lyapunov exponent". I will describe some recent work on the classification of matrix equilibrium states and applications to self-affine fractals.