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Equilibrium states through potential theory

Equilibrium states play a central role in the theory of thermodynamic formalism. They are invariant measures that maximize the *pressure* functional, depending on a given function ϕ. They can be seen as a generalization of the measure of maximal entropy. I will present in this course a recent construction of equilibrium states for rational maps, and more generally for endomorphisms of $\mathbb{P}^k(\mathbb{C})$ in any dimension, based on (pluri)potential theory. This approach permits to establish the existence, uniqueness, and very fine statistical properties of the equilibrium states for very general continuous functions ϕ (including Hölder ones).