

Seminário de sistemas dinâmicos e estocásticos

IMECC - UNICAMP

Título: Thermodynamic Formalism on the Skorokhod space of the circle

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Resumo:

We explore Thermodynamic Formalism on the space D of cadlag trajectories on the circle. In the classical setting, one seeks for equilibrium states of a system under the action of a potential. The goal of this work is to construct the Gibbs states as probabilities over D . Introducing a Holder potential V , we define a continuous time Ruelle operator, which coincides with the Feynman-Kac formula in the symmetric case. For this, we use an a priori probability induced by a stochastic semigroup $exp(tL)$ and an initial probability π on the circle. The Gibbs probability is then obtained via a version of the Perron-Ruelle-Frobenius theorem, after a coboundary procedure. We show that it satisfies a variational principle, thus being an equilibrium state.