

Absence of a spectral gap for flows

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Abstract:

The transfer operator is a classical tool in ergodic theory, which has been widely used to prove statistical properties for dynamical systems. In discrete dynamics, a spectral gap of the transfer operator yields important results such as the speed of mixing and the central limit theorem. This method is typically applied on the space of Hölder continuous observables. However, in this talk we will see how the matter becomes more complex in continuous time dynamics: it does not seem plausible that such a spectral gap exists for spaces embedded in the Hölder functions.