Transfer operators and Besov spaces

Daniel Smania

ICMC-USP

Abstract:
We use the method of atomic decomposition to study the action of
transfer operators associated to piecewise-expanding maps on Besov
spaces. It turns out that these transfer operators are quasi-compact
even when the associated potential, the dynamics and the underlying
phase space have very low regularity. In particular it is often pos-
sible to obtain exponential decay of correlations, the Central Limit
Theorem and almost sure invariance principle for fairly general ob-
servables, including unbounded ones. Joint work with Alexander
Arbieto.