M. Andersson

Title:

Bifurcations of physical measures vs. statistical stability in partially hyperbolic dynamics

Abstract:

We discuss an open class of partially hyperbolic systems whose central direction is mostly contracting. As was shown in a work of Bonatti, Viana (Israel J. Math. 2000), almost every orbit of such systems is asymptotic to one out of finitely many probability measures --- so called physical (or SRB) (Bull. Amer. Math. Soc. 1994), several physical measures may coexist on the same transitive piece of the dynamics, leading to a pathological (and seemingly rare) phenomenon, known as intermingled basins of attraction, and possibly to bifurcations in the space of physical measures. In this talk we give a description of the type of bifurcations allowed and obtain results on statistical stability and stable ergodicity for mostly contractive systems.