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Title:

Axiom A vs. Newhouse phenomena in Benedicks-Carleson "toy model"

Abstract:

During their investigation of the Henon maps, Benedicks and Carleson introduced a "toy model" family of maps as a "preliminary" step towards the analysis of Henon attractors: basically, the geometry of these attractors are simplified to the product of a Cantor set and an interval.

The goal of this talk is the study of the dynamical features of the toy models: more precisely, we will show that this family is rich enough to exhibit the so-called C^2-"Newhouse phenomena" (i.e., the limit set is persistently not hyperbolic in the C^2 topology) although a C^1-generic
element of this family is Axiom A. Here, Pujals and Samabarino's criterion of hyperbolicity and Moreira's recent result on the nonexistence of C^1 stable intersections of Cantors sets will play a central role.

This is a work in progress with C.G. Moreira and E.Pujals.