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Title: Horseshoes with large stable set

Abstract: To any hyperbolic set is associated the dimension d_s of its stable spaces. To the stable set of K is associated a "dimension" which may be larger than d_s. This is the case if K satisfies a geometric property (K is called a blender). On the other hand if K is contained in a sub-manifold normally expanded the dimension of its stable set is bounded by the dimension of the sub-manifold.

We will present several perturbation tools for horseshoes. They allow in particular to obtain blenders from horseshoes with large topological entropy. A consequence is that robustly ergodic systems are C^1-dense among C^2-conservative partially hyperbolic diffeomorphisms (joint work with A. Avila and A. Wilkinson).