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SEMINÁRIO DE SISTEMAS DINÂMICOS

Dia 26 de Setembro (quarta-feira), às 14h00, sala 6.2.33

Asymptotically sectional-hyperbolic attractors

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Abstract: The notion of *asymptotically sectional-hyperbolic set* was recently introduced. The main feature is that any point outside of the stable manifolds of its singularities has arbitrarily large hyperbolic times. This definition extends the notion of sectional hyperbolic set and satisfies the Hyperbolic Lemma. The *contracting singular horseshoe* is an example of a chaotic asymptotically sectional-hyperbolic set. This example contains a Rovella-like singularity, hence it is not a sectional-hyperbolic set. In this paper we prove the existence, on any three-dimensional manifold, of attractors with Rovella-like singularities satisfying this kind of hyperbolicity. Furthermore, we prove that asymptotically sectional-hyperbolic Lyapunov-stable sets, under certain conditions, have positive topological entropy. Moreover, we show tha any asymptotically sectional-hyperbolic Lyapunov stable set Λ of a vector field X on a compact manifold M supprting a non-atomic SRB-like measure for the time-one map X1, has positive topological entropy.

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