

Properties of strange attractors in certain piecewise hyperbolic families

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We will discuss the existence and properties of strange attractors in a certain family of piecewise smooth maps exhibiting hyperbolic properties which is modelled on the Lozi family. In particular, we will introduce a Lozi-like family (see [1, 5]), which can be thought of as a C^1 perturbation of piecewise affine border-collision normal forms (see [4]). We will discuss recent results based on the renormalization introduced in [3] regarding the maximality and existence of strange attractors in the said family. We will also present cases where perturbation techniques fail in transitioning results from one dimension to two dimensions.

References

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