

# Multidimensional sectional-hyperbolic attracting sets are expansive

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## Abstract

It is known that tridimensional sectional-hyperbolic attractors are expansive as it was proved by Arajo-Pacifico-Pujals-Viana [1]. Now we have proved that multidimensional sectional-hyperbolic attracting sets, not necessarily transitive, are *expansive*. In fact, this expansiveness is obtained on a neighborhood of the attracting set. As consequence of this result, we conclude a flow restricted to a multidimensional sectional-hyperbolic attracting set is *sensitive to initial data*.

## References

- [1] Arajo, V., Pujals, E., Pacifico, M.J., Viana, M.: Singular-hyperbolic attractors are chaotic, Trans. Am. Math. Soc. 361, 2431-2485 (2009).
- [2] Araújo, V., Pacifico, M. J., Three-dimensional flows, Vol. 53 of *Ergebnisse der Mathematik und ihrer Grenzgebiete. 3. Folge. A Series of Modern Surveys in Mathematics [Results in Mathematics and Related Areas. 3rd Series. A Series of Modern Surveys in Mathematics]*, Springer, Heidelberg (2010), ISBN 978-3-642-11413-7. With a foreword by Marcelo Viana.

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