

Topological entropy of piecewise smooth vector fields

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(joint work with **André Antunes, Régis Varão, Jeferson Cassiano and Marco Florentino**)

In this talk/poster, we will extend to the context of piecewise smooth vector fields the notion of **topological entropy**. This will be done using the time 1 map and, due to the possibility of non uniqueness of solution passing through a point of the domain, some equivalence classes must to be considered in order to produce a well defined time 1 map. As consequence of our results we are able to exhibit **planar** piecewise smooth vector fields with non null entropy, in fact, we prove the existence of planar piecewise smooth vector fields with entropy being a positive real number or even infinite.

References

- [1] Carvalho, Tiago and Antunes, André and Varão, Régis *On topological entropy of piecewise smooth vector fields*, Journal Journal of Differential Equations, **362** (2023), 52-73.
- [2] Carvalho, Tiago and Florentino, Marco and Cassiano, Jeferson *Some aspects of thermodynamic formalism of piecewise smooth vector fields*, preprint, (2023),

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