SECTIONAL ANOSOV FLOWS: EXISTENCE OF VENICE MASKS WITH TWO SINGULARITIES

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Resumo/Abstract:

A *sectional-Anosov flow* on a manifold M is a C^1 vector field inwardly transverse to the boundary for which the maximal invariant is sectional-hyperbolic [**?**]. We say that a sectional Anosov flow is a *Venice mask* if it has dense periodic orbits which is not transitive [**?**], [**?**], [**?**],[**?**].

The only known examples of venice masks have one or three singularities, and they are characterized by having two properties: are the union non disjoint of two homoclinic classes and the intersection of its homoclinic classes is the closure of the unstable manifold of a singularity.

We provide two examples of venice masks with two singularities (with different approaches). Here, each one is the union of two different homoclinic classes. However, for the first, the intersection of homoclinic classes is the closure of the unstable manifold of two singularities. Whereas for the second, the intersection of homoclinic classes is just a hyperbolic periodic orbit.[**?**]

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