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Anosov diffeomorphisms and tilings

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Abstract

We consider a toral Anosov automorphism $G : \mathbb{T} \rightarrow \mathbb{T}$ given by $G(x, y) = (ax + y; x)$, where $a > 1$ is a fixed integer, and introduce the notion of γ -tiling to prove the existence of a one-to-one correspondence between (i) smooth conjugacy classes of Anosov diffeomorphisms with invariant measure absolutely continuous with respect to the Lebesgue measure and topologically conjugate to G , (ii) affine classes of γ -tilings and (iii) solenoid functions. Solenoid functions provide a parametrization of the infinite dimensional space of the mathematical objects described in these equivalences. This talk is based on a joint work with Alberto Pinto

References

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