Constructing New Diffeomorphisms with Non-Ergodic Generic Measures and Sets of Non-Trivial Hausdorff Dimensions

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We discuss the combinatorial construction in Ergodic Theory. We briefly discuss a very special technique, "Approximation by conjugation," that allows the construction of exciting maps on the manifolds with pre- scribed interesting topological and measure-theoretic properties. We present an example of an Invariant measure for the smooth category, which is a generic but non-ergodic measure satisfying other topological, mixing and ergodic properties on the 2-Torus. Also, present an explicit collection of the set containing the generic points of the system with interesting values of its Hausdorff dimension. As such, this talk should interest a broad readership, including those interested in Smooth Ergodic Theory, the Existence of Invariant measure, the Anosov Katok Method, Generic measures of the smooth category and the Hausdorff Dimension of the set containing only generic points.

References

[Div]   D. Khurana: *Smooth Anosov Katok Diffeomorphisms With Generic Measure*, http://arxiv.org/abs/2211.06067