

Raul URES, SUSTech, China

Title: Measures of maximal entropy that are SRB

Abstract: How often does it occur that the measure of maximal entropy of a system is an SRB measure? We study this question for partially hyperbolic diffeomorphisms isotopic to Anosov (DA-diffeomorphisms) on the 3-torus, and establish a rigidity result: the measure of maximal entropy is an SRB measure if and only if the sum of its positive Lyapunov exponents coincides with that of the linear Anosov map A on all periodic orbits of the support of the measure. We also show non-Anosov examples satisfying this condition, both in the conservative and in the non-conservative setting.

Finally, we prove that a volume-preserving DA-diffeomorphism on The 3-torus is Anosov if all Lyapunov exponents coincide almost everywhere with those of the linear Anosov in the isotopy class. Consequently, a smooth DA-diffeomorphism is smoothly conjugated to its linear part if and only if all Lyapunov exponents coincide almost everywhere with those of its linear part.

This talk is based on a joint work with Fernando Micena, Ryo More, and Jana Rodriguez Hertz.