SEMINÁRIO

SISTEMAS DINÂMICOS

23 fevereiro | sala 6.2.33

14:00

Marcelo Durães (PUC-Rio (Pontifícia Universidade Católica do Rio de Janeiro))

Hölder continuity for Lyapunov exponents of random linear cocycles.

Abstract: In 2017, Baraviera and Duarte extended a classical theorem from Le Page. They obtained an elegant proof for the local Holder continuity of the Lyapunov exponents of random linear cocycles defined over the Bernoulli Shift under generic hypothesis. The authors proved local Holder continuity with respect to the cocycle, with a fixed measure. The main tools are Furstenberg`s Formula and regularity properties from the stationary measure. In the same context, with analogous hypothesis, we will show that, for a fixed cocycle, the top Lyapunov exponent is locally Holder continuous with respect to the measure, in Wasserstein`s metric. In particular, this implies the result from Baraviera and Duarte. This is a joint work with Silvius Klein.

15:00

Aline Melo (PUC-Rio (Pontifícia Universidade Católica do Rio de Janeiro))

Uniform convergence rate for Birkhoff means of certain uniquely ergodic toral maps.
Abstract: In this talk, we will present an estimate on the uniform convergence rate of the Birkhoff average of a continuous observable over torus translations. This convergence rate depends explicitly on the modulus of continuity of the observable and on the arithmetic properties of the frequency defining the transformation. Furthermore, we obtained similar results for affine skew product toral transformations and, in the case of one dimensional torus translation, these estimates are nearly optimal. This is a joint work with Xiao-Chuan Liu and Silvius Klein.

FCT – Fundação para a Ciência e a Tecnologia
no âmbito do projeto UIDB/04561/2020