89º EDAÍ 3 de junho de 2022

Salão Moniz Aragão - Av. Pasteur, 250, 2o andar na Praia Vermelha

☞ Atenção: o EDAÍ terá lugar na Zona Sul, no campus da Praia Vermelha.

Matinê: 14h30 – 15h30

Probabilistic aspects of shadowing.

Sergey B. Tikhomirov (St. Petersburg/IMPA)

It is well-known that shadowing holds in a neighborhood of a hyperbolic set. It is known that shadowing can hold for non hyperbolic systems, but due to results of Sakai, Abdenur, Diaz, Pilyugin, Tikhomirov shadowing is "almost"equivalent to structural stability. At the same time numerical experiments by Hammel-Grebogi-Yorke for logistics and Henon maps shows that shadowing holds for relatively long pseudotrajectories. It poses a question which type of shadowing holds for systems, which are not necessarily hyperbolic.

I consider probabilistic approach for the shadowing. I show that for infinite pseudotrajectories it does not change the notion. At the same time we introduce approach in the spirit of Hammel-Grebogy-Yorke and shows that in some cases it works for non-uniformly hyperbolic cocycles.

The talk is based on joint works with G. Monakov

Palestra 1: 15h40 – 16h40

Anosov Endomorphisms on surfaces: regularity of foliations and rigidity.

Marisa do Reis Cantarino (UFF)

We introduce with examples the uniformly hyperbolic dynamics for the non-invertible case and its main properties. We present (in collaboration with R. Varão) a result that characterizes on surfaces the smooth conjugacy between a special Anosov endomorphism and its linearization in terms of the regularity of stable and unstable foliations. This regularity is absolute continuity in a uniformly bounded formulation, which we characterize (in collaboration with R. Varão and S. Targino) using holonomies.

Café: 16h40 – 16h50

Palestra 2: 16h50 – 17h50

Mixed random-quasiperiodic cocycles

Ao Cai (PUC-Rio)

Inspired by an intriguing question of Jiangong You on the stability of the Lyapunov exponent of a quasi-periodic Schrödinger cocycle perturbed by a random noise, we started a long-term project called "Mixed Random-quasiperiodic Cocycles". In this talk, we will introduce the model and talk about our recent progress since 2019, including: ergodic properties, an analog of Furstenberg theory, statistical properties like the large deviation theorem and the central limit theorem, Hölder continuity of the Lyapunov exponent and its stability under random perturbations. This talk is based on a series of joint works with Pedro Duarte (University of Lisbon) and Silvius Klein (PUC-Rio).

Confraternização: Botafogo (local a determinar), 19h00 – ∞

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