101º EDAÍ
5 abril de 2024

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DMAT-PUC-Rio
Sala de Reuniões do Decanato do CTC
12 andar prêdio Leme

Matinê: 14h00 – 15h00

Two devil's staircases in holomorphic dynamics
Shaun Bullett (Queen Mary, Univ. of London, Reino Unido)

Binary sequences and continued fraction expansions play key roles in the dynamics of iterated rational maps, Kleinian groups and holomorphic correspondences. I will talk about two devil?s staircases relating expressions for real numbers, and their application to Julia sets and the Mandelbrot Set (Douady and Hubbard) and to ?matings? between rational maps and Kleinian groups (Bullett, Penrose and Lomonaco): these matings are holomorphic correspondences which display the behaviour of a rational map on one part of the Riemann sphere, and of a Kleinian group on the complement. No background knowledge of complex dynamics will be assumed.

Palestra 2: 15h10 – 16h10

Abundance of periodic orbits for typical impulsive semiflows
Jaqueline Siqueira (UFRJ Rio de Janeiro, Brasil)

Impulsive Dynamical Systems (IDS) can be seen as suitable mathematical models of real world phenomena that display abrupt changes in their behaviour. More precisely, an IDS is described by three objects: a continuous semiflow on a space X; a set D contained in X where the flow undergoes sudden perturbations; and an impulsive function from D to X, which determines the change in the trajectory each time it collides with the impulsive set D. A key challenge, inherent to the dynamics, is that in general, an impulsive semiflow is not continuous.
In this talk I will show that, despite several examples which display the wilderness of impulsive semiflows, a C^1 typical impulsive semiflow presents some features of the ones without discontinuities, namely, the existence of plenty of hyperbolic periodic orbits. The talk is based on a work in collaboration with Maria Joana Torres (Minho University) and Paulo Varandas (UFBA & Porto University).

Café: 16h10 – 16h40

Palestra 3: 16h40 – 17h40

Measures of maximal entropy, old and new results
Ali Tahzibi (ICMC-USP, São Carlos, Brasil)

We try to understand the problem of uniqueness/finiteness and hyperbolicity of ergodic measures of maximal entropy for partially hyperbolic diffeomorphisms with one-dimensional center bundle. I will talk about some previous results with Joas Elias Rocha and Richard Cubas in the compact center leaves case, where we extended previous results with Hertz,Hertz and Ures. Finally, we expose the ideas of recent results with Buzzi, Crovisier and Poletti, studying the same problem in the discretized Anosov flows setting.

Confraternização: Local a determinar, 19h00 – ∞

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