Pós-Graduação em Matemática
Universidade Federal Fluminense

Seminário de Sistemas Dinâmicos 2023

Título:

On proper extensions of the conformal group

Palestrante: Ulisses Lakatos (UFF)

Data: 26/05
Hora: 14h
Local: Sala 407 - Bloco H - Campus Gragoatá

Resumo

A full characterization of the transitive groups of homeomorphisms acting on the unit circle was carried out by Ghys, Giblin & Markovic in the early 2000's. An analogous program was initiated by F. Kwakkel and F. Tal for the unit 2-sphere. A question posed both by them and F. Le Roux is whether PSL(2,C) is maximal in the full group of homeomorphisms of the sphere, a result known to hold for the unit circle. We present a partial result, showing that proper C^1 extensions of PSL(2,C) contain maps with positive topological entropy and act transitively on 4 points. This is a joint work with F. Tal [USP].

Título:

u-Gibbs measure rigidity for uniformly expanding partially hyperbolic endomorphisms on surfaces

Palestrante: Marisa Cantarino (UFF)

Data: 26/05
Hora: 15h30
Local: Sala 407 - Bloco H - Campus Gragoatá

Resumo

We say that a uniformly expanding map f has partially hyperbolic splitting if it has a Df-invariant unstable cone family. In the context of the two-dimensional torus, this means that f has a one-dimensional direction with weak expansion and a cone with strong expansion, that may contain infinitely many one-dimensional unstable directions depending on the past orbits of the point. We prove that, if f is not special (has more than one unstable direction for a point on T^2), then any fully supported u-Gibbs measure is absolutely continuous with respect to the Lebesgue measure, therefore being the unique absolutely continuous invariant measure for the system. We give examples with unstable leaves being either compact or dynamically transitive. As u-Gibbs measures are u-saturated, this implies a classification of these measures for the examples: either they are supported on a union of horizontal compact circles, or they are equivalent to the Lebesgue measure. This is a joint work with Bruno Santiago [UFF].