# 102º EDAÍ

**3 de maio de 2024**

Auditório do bloco G
Campus do Gragoatá, UFF

PUC RIO
Universidade Federal Fluminense
UFRJ

**Matinê: 14h00 – 15h00**

## Linear cocycles as an interface between dynamical systems and mathematical physics

Silvius Klein (PUC-Rio)

A linear cocycle is a dynamical system on a vector bundle, which preserves the linear bundle structure and induces a measure preserving dynamical system on the base. Important examples of linear cocycles arise in connection with solving the eigenvalue equation of a discrete Schrödinger operator. Studying their statistical properties (such as large deviations), besides being interesting in itself, has applications in dynamics (for instance regarding the regularity of the Lyapunov exponents) and in mathematical physics (for instance in establishing spectral properties such as Anderson localization). The goal of this talk is to explain these connections and to describe some interesting models.

**Palestra 1: 15h10 – 16h10**

## Equilibrium states for the classical Lorenz attractor and sectional-hyperbolic attractors in higher dimensions

Maria Jose Pacifico (UFRJ)

It has long been conjectured that the classical Lorenz attractor supports a unique measure of maximal entropy. In this talk, we give a positive answer to this conjecture and its higher-dimensional counterpart by considering the uniqueness of equilibrium states for Hölder continuous functions on a sectional-hyperbolic attractor $\Lambda$. We prove that in a $C^1$-open and dense family of vector fields (including the classical Lorenz attractor), if the point masses at singularities are not equilibrium states, then there exists a unique equilibrium state supported on $\Lambda$. In particular, there exists a unique measure of maximal entropy for the flow $X|_\Lambda$. This corresponds to a joint work with Fan Yang and Jiagang Yang.

**Café: 16h10 – 16h40**

**Palestra 2: 16h40 – 17h40**

## Dispersão de órbitas com taxas sub-exponenciais

Javier Correa (UFMG)

Num trabalho em conjunto com Enrique Pujals, desenvolvemos o conceito de entropia generalizada que permite quantificar a dispersão de órbitas de um sistema no espaço das ordens de crescimento. Este objeto permite classificar famílias de sistemas dinâmicos com entropia clássica 0. A ideia desta palestra é fazer uma introdução, expor os resultados obtidos até agora (com Enrique e com Hellen de Paula) e discutir sobre novos projetos ao respeito.

**Confraternização: Local a determinar, 18h00 – $\infty$**

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