



# SEMINÁRIO

## SISTEMAS DINÂMICOS

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Geometric and ergodic aspects of  
nonuniformly hyperbolic flows

**Luciana Silva Salgado**

(Universidade Federal do Rio de Janeiro)

**ABSTRACT:**

The study of hyperbolic structures (uniform and nonuniform ones) is a central subject in Dynamical Systems.

Nowadays, there are many notions of weak hyperbolicity, and here I am interested in the setting of flows with singularities (e.g., Lorenz systems). In this talk I am going to talk about some notions of (nonuniform) sectional hyperbolicity (in the sense of  $p$ -planes expansion) for  $C^1$  flows. And, how to use of the powerful tool of quadratic forms (Lyapunov Functions) to characterize dynamical properties and to obtain ergodic features for those kind of systems.

Finally, if time permits, I will state some new result involving SRB measures for it, in a jointly work with V. Araujo (UFBA, Brazil) and Sergio Sousa (UFRJ, Brazil).

