



[www.mat.puc-rio.br/edai](http://www.mat.puc-rio.br/edai)

35° EDAÍ 19 de outubro de 2012

Auditório Pe. José de Anchieta (em frente do bar das freiras), Edifício Cardeal Leme, PUC-Rio.

 **Atenção:** os horários e o local usuais mudaram! Início às 14h05.

Matinê: 14h05 – 15h05

**The Twin Towers**

Samuel Senti (UFRJ)

We will present two tower constructions: Inducing schemes, a.k.a Young towers, and Markov extensions, a.k.a Hofbauer-Keller towers and explain how these towers are related to each other. We plan to illustrate the original purpose of these constructions by explaining a few of the results which can be obtained from them, e.g. the existence of ACIP's and decay of correlations, and then show how they can be of further usefulness towards solving a wide variety of problems including a general thermodynamical formalism.

Palestra 1: 15h15 – 16h15

**Prime ends rotation numbers and periodic points**

Andrés Koropeccki (UFF)

Given an orientation-preserving homeomorphism of a surface leaving invariant an open simply connected set  $U$ , one may define its rotation number using Caratheodory's prime ends compactification. I will talk about the relationship between this rotation number and the existence of periodic orbits in the boundary of  $U$ .

As an application of the main results, we show that any periodic complementary domain  $U$  which is invariant by a generic area-preserving diffeomorphism has no periodic points in its boundary, and this allows us to provide topological information about the boundary of  $U$ .

This is a joint work with Meysam Nassiri and Patrice Le Calvez.

Café: 16h15 – 16h45

Palestra 2: 16h45 – 17h45

**The Structure of the Mandelbrot Set (colloquium)**

John H. Hubbard (Cornell University)

Understanding the parameter space of dynamical systems is a major problem, investigated by Newton, Lagrange, Gauss, Poincaré, Kolmogorov and many others.

There are few success stories: the parameter space for quadratic polynomials viewed as dynamical systems is probably the most marking.

I will describe why the Mandelbrot set is the natural object to investigate in this dynamical system, and how its exploration, involving complex analysis, number theory, combinatorics and topology has led to a clear understanding of its structure.

Confraternização: 18h30 –  $\infty$

**Garota da Gávea**



Para receber informações sobre e divulgar eventos de Sistemas Dinâmicos na região fluminense, inscreva-se no mailinglist:  
<http://groups.google.com/group/DinamiCarioca>

