
* PROGRAMA DE VERÃO 2012 *

SISTEMAS DINÂMICOS

Transition to chaos in low dimensional dynamics

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This course is about an aspect of the mathematics of dynamical systems, but with a view both

- on applications, in particular to the Physics of the boundary of chaos
and

- on Mathematics issues that may seem quite remote from the description of the boundary of chaos,

when it comes to the motivations for the choice of the items being treated and the issues being raised. Some of the questions that are received full or at least extensive treatment in the recent mathematical literature will be only quickly discussed with pointers to the literature (some in depth treatment may also be given in other lectures that are more focused on a particular issue that is relevant for understanding the boundary of chaos). Rather we will insist on some aspects lesser known of the overall problem and on lesser known aspects of the most popular issues. In particular we will raise questions about whether rigidity and universality can be linked to quite different issues in dynamical systems theory such as:

- Does the Closing Lemma holds true in C^2 and higher smoothness?

- Can arbitrarily smooth counter-example to the Seifert Conjecture be built out of a diffeomorphism of a two-dimensional annulus with an orbit going from the outer bounding circle to the inner bounding circle?

REMARK: Because of the extent of material being covered, that goes over many lines of work on dynamics and beyond, only selected results will be given with a hint for a proof, with even less proofs given in full.

Data: 24, 26, 27 e 31 de janeiro, às 10:00

Local: Auditório Antônio Gilioli (247/262 -- A)