SEMINÁRIO DE SISTEMAS DINÂMICOS

Dia 1 de Julho (sexta-feira), às 13H30, na sala 6.2.33

Continuity, positivity and simplicity of the Lyapunov exponents for quasi-periodic cocycles

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Abstract:

The purpose of the first part of this talk is to describe a recent result on the continuity of the Lyapunov exponents for analytic quasi-periodic cocycles. The new feature of this work is extending the availability of such results to cocycles that are identically singular (i.e. non-invertible anywhere), in the several variables torus translation setting. This feature is exactly what allows us, through a simple limiting argument, to obtain criteria for the positivity and simplicity of the Lyapunov exponents of such cocycles. Specializing to the family of cocycles corresponding to a block Jacobi operator, we derive consequences on the continuity, positivity and simplicity of its Lyapunov exponents, and on the continuity of its integrated density of states.

The second part of this talk will be concerned with describing some problems and other work in progress that may be investigated using a similar approach.

Joint work with Pedro Duarte

Local: Departamento de Matemática, C6 - Piso 2, 6.2.33

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