



Matemática
PUC-Rio



INSTITUTO DE MATEMÁTICA

Universidade Federal do Rio de Janeiro



Mini-course

Limit theorems in dynamical systems using transfer operator methods

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01/06 às 17:00 DMAT-PUC, sala 856

05/06 às 13:00 IM-UFRJ, CT sala C-119

16/06 às 10:00 IM-UFRJ, CT sala C-119

Abstract: In this mini-course, we will discuss the so-called Nagaev spectral method: a method that exploits properties of the Ruelle-Perron-Frobenius transfer operator in order to establish limit theorems (such as the central limit theorem) for dynamical systems. The course will consist of three sessions. The first two sessions will be devoted to motivating the problem, introducing the required mathematical tools, and discussing some first properties of the transfer operator. In the final session, we will give explicit examples of proving the central limit theorem using the Nagaev method.

The graph shows convergence to a Levy process for a smooth observable under the dynamics of the LSV map (see also <https://khu.dedyn.io/work/scaled-graphs/>).

