

# COLÓQUIO DE MATEMÁTICA

Quarta-feira, 20 de fevereiro de 2019 às 14h30

## The exponents of Aleksandr Lyapunov

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*Convívio antes do Colóquio na Sala d Docentes do DM,  
com café, chá e bolos (14h até 14h30)*

**Sumário:**  
By the end of the nineteenth century Aleksandr Mikhailovich Lyapunov introduced the concept of characteristic exponent of an ordinary differential equation to characterize the stability of its solutions. Lyapunov's characteristic exponents measure the sensitivity of a dynamical system on the initial conditions. The butterfly effect is an allegory for chaotic dynamics which can be expressed in terms of the positivity of Lyapunov exponents. We will outline the origin, evolution and applications of this concept.

