MM809 - Tópicos de Análise Funcional I

Language of instruction: English

The objective of this course is to study some operator theoretic and functional analytic aspects of ergodic theory with some applications to dynamical systems and number theory. Some of the topics covered will include

A. Ergodic measures and systems

B. Mean and point-wise ergodic theorems

C. The Koopman operator and Banach Lattices

D. Markov operators and group representations

E. Some spectral theory of dynamical systems

F. Arithmetic progressions: The Furstenberg principle and Szemerédi's Theorem

Main text

1. Eisner, Farkas, Haase, Nagel, Operator theoretic aspects of ergodic theory, GTM 272, Springer, 2015.