SEMINAR
Grupo de Análise Funcional e Aplicações
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A topological approach to nonlocal second order boundary value problems

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Abstract

We present a methodology for studying the existence of at least one non-negative solution for a class of nonlocal ordinary differential equations with Dirichlet boundary conditions. This approach involves applying a localization fixed point result in cones, which enables us to avoid imposing excessive assumptions on the nonlocal coefficient function of the equation. A key aspect of this methodology is the construction of a non-standard tailored cone that encapsulates the nonlocal nature of the eventual solutions. The objective of this talk is to explore the properties of the functionals that characterize the global behavior of these solutions, thereby rendering the technique suitable for investigating this type of differential equation.

Room 10.2.6
May 8, 2025 - 11:00