

# SEMINAR

## Grupo de Análise Funcional e Aplicações Functional Analysis and Applications Group

### On fractional diffusion problems with boundaries

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#### Abstract

Anomalous diffusive transport can be described by fractional diffusion equations and it is observed in a wide range of physical problems. We focus on a model consisting of the fractional diffusion equation with Dirichlet boundary conditions. The equation has a spatial fractional operator based on the Riemann-Liouville fractional derivative which is closely related to Lévy flights. The main purpose of this talk is to show how the presence of the boundary can significantly change the properties of the problem and consequently the properties of a numerical method, namely its consistency and convergence.

*Room Sousa Pinto*  
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