

# SEMINAR

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

### The Navier–Stokes equation in some general Banach spaces

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#### Abstract

We investigate the Cauchy problem for the incompressible Navier–Stokes equations, focusing on initial data situated within generalized Besov or Triebel–Lizorkin spaces defined by a Banach lattice over  $\mathbb{R}^n$  with  $n = 2, 3, \dots$ . The external force term is assumed to belong to a Bochner space associated with another Besov or Triebel–Lizorkin space constructed over the same Banach lattice. The conditions imposed on this Banach lattice allow for the applicability of the results to a wide range of spaces. This is a joint work with Mieczyslaw Mastyló at Adam Mickiewicz University.

**Room Sousa Pinto**  
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