

# SEMINAR

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

### Generalised Morrey smoothness spaces: different approaches and embeddings

**Susana Moura**  
Universidade de Coimbra

#### Abstract

Over the past few decades, several scales of function spaces built upon Morrey spaces  $\mathcal{M}_{u,p}(\mathbb{R}^d)$ ,  $0 < p \leq u < \infty$ , have been introduced and intensively studied. Commonly referred to in the literature as smoothness Morrey spaces, these spaces have attracted a lot of interest, primarily due to their potential applications in PDEs. In this talk we consider generalised Morrey spaces  $\mathcal{M}_{\varphi,p}(\mathbb{R}^d)$ , where the parameter  $u$  is replaced by a general function parameter  $\varphi$ , and related smoothness spaces. We provide an overview of recent results on these spaces, with particular emphasis on embedding theorems. The talk is based on joint work with Dorothee Haroske (Jena), Zhen Liu (Beijing), and Leszek Skrzypczak (Poznan).

**Room Sousa Pinto**  
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