

SEMINAR

Grupo de Análise Funcional e Aplicações Functional Analysis and Applications Group

Regularity phenomena in nonlocal equations

Makson Santos
Universidade de Lisboa

Abstract

In this talk, we investigate the regularity properties of solutions to a class of fully nonlinear nonlocal equations, both elliptic and degenerate. For the elliptic case, we establish optimal regularity results for equations with a right-hand side in L^p , where the regularity space depends on the value of p . In the degenerate case, we prove the existence of at least one viscosity solution belonging to the class $C_{loc}^{1,\alpha}$ for some constant $\alpha \in (0, 1)$. Additionally, when the order of the operator is sufficiently close to 2, we derive regularity estimates in Hölder spaces for the gradient of any viscosity solution.

Room Sousa Pinto
September 19, 2025 - 14:00

This seminar is supported in part by FCT – Portuguese Foundation for Science and Technology, through the Center for Research and Development in Mathematics and Applications – CIDMA (UID/04106).