DMat
Universidade de Aveiro

CIDMA
CENTRO DE I&D EM MATEMÁTICA E APLICAÇÕES
CENTER FOR R&D IN MATHEMATICS AND APPLICATIONS

SEMINAR

Grupo de Análise Funcional e Aplicações
Functional Analysis and Applications Group

Harnack inequality for nonlinear pdes

Eurica Henriques
Dep. Matemática - UTAD; CMAT- Polo CMAT-UTAD

Abstract

In the last few years many progresses were made in understanding the right form of the Harnack inequalities for singular parabolic equations. For doubly nonlinear equations whose prototype is

$$u_t - \operatorname{div}\big(|u|^{m-1}|Du|^{p-2}Du\big) = 0, \qquad p > 1,$$

the singular case corresponds to the range $m + p < 3$. For $3 - p/N < m + p < 3$, where N denotes the space dimension, intrinsic Harnack estimates hold. In the range $2 < m + p \leq 3 - p/N$ only a weaker Harnack form survives. In this talk we present our contribution to this subject when considering $m + p = 2$ and $p > 1$ (joint work with S. Fornaro (Univ. Pavia) and Vincenzo Vespri (Univ. Florence).

Room *Sousa Pinto*
September 30, 2020 - 11:30

This seminar is supported in part by the Portuguese Foundation for Science and Technology (FCT - Fundação para a Ciência e a Tecnologia), through CIDMA - Center for Research and Development in Mathematics and Applications, within project UIDB/04106/2020.

FCT Fundação para a Ciência e a Tecnologia

REPÚBLICA PORTUGUESA