SEMINARIO DEL DEPARTAMENTO DE MATEMÁTICA APLICADA II

Miércoles, 21 de febrero de 2018

Aula T109, E.E.Telecomunicación

12:00

Jean-Daniel Djida

African Institute for Mathematical Sciences AIMS (Cameroon)

"Regularity for porous medium equation with

fractional time derivative"

In this talk, we will discuss about nonlinear and nonlocal parabolic problem with fractional time derivative in the sense or Caputo or Marchaud. The nonlocal operator in space that we consider is the fractional Laplacian. We will show how to obtain existence and uniqueness of weak solutions for the fractional nonlinear porous medium equation. The solution is a nondecreasing and continuous function, and the initial datum have compact support. We will also show that these solutions turn out to be bounded and Holder continuous for all positive time. The key machinery tools we shall use are the De Giorgi technique.