SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 9 de Fevereiro (quinta-feira), às 13h30, sala 6.2.33

On maximum principles for higher-order fractional Laplacians

Alberto Saldaña

(CAMGSD - Instituto Superior Técnico)

Abstract: Maximum principles are one of the most powerful tools in the analysis of linear and nonlinear elliptic partial differential equations. In particular, they guarantee that a solution of an equation inherits the sign of the data of the problem, this can be used, for example, to show symmetry properties of solutions, regularity, a priori bounds, existence and nonexistence of solutions. It is well known that higher-order operators do not satisfy in general maximum principles. In this talk we focus on positivity preserving properties for higher-order fractional powers of the Laplacian. We discuss counterexamples and some positive results. The aim of this talk is to be introductory and as much self-contained as possible.

Local: FCUL – Edf. C6 - Piso 2, 6.2.33