

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 11 de Setembro (segunda-feira), às 13h30, sala 6.2.33

On s -harmonic functions on cones

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Abstract: We deal with functions satisfying

$$\begin{cases} (-\Delta)^s u_s = 0 & \text{in } C, \\ u_s = 0 & \text{in } \mathbb{R}^n \setminus C, \end{cases}$$

where $s \in (0,1)$ and C is a given cone on \mathbb{R}^n with vertex at zero. We are mainly concerned with the case when s approaches 1. These functions are involved in the study of the nodal regions in the case of optimal partitions and other free boundary problems and play a crucial role in the extension of the Alt-Caffarelli-Friedman monotonicity formula to the case of fractional diffusions. This is a joint work with Giorgio Tortone and Stefano Vita.

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