SEMINARIO

ECUACIONES DIFERENCIALES PARCIALES

$14:30$ **horas, PRIMERA SESIÓN**

EXPOSITOR

Mouhamed Mustafa Fall
(African Institute for Mathematical Sciences of Senegal)

TITULO

Asymptotic behaviour of solutions to relativistic Schrodinger equation and its applications.

Abstract:

We will discuss about sharp asymptotic behaviour of solutions to relativistic Schrdinger equation together with it's applications to unique continuations properties (weak, strong, from sets of postive meassure) and sharp essentially self-adjointness of relativistic Schrodinger equation with Coulomb potential."

$15:30$ **horas, SEGUNDA SESIÓN**

EXPOSITOR

Eleonora Cinti
(Universit degli Studi di Pavia)

TITULO

Boundedness and regularity of isoperimetric sets with density.

Abstract:

We show that every isoperimetric set in ^{N} with density is bounded if the density is continuous and bounded by above and below. This improves the previously known boundedness results, which basically needed a Lipschitz assumption; on the other hand, the present assumption is sharp, as we show with an explicit example. To obtain our result, we observe that the main tool which is often used, namely a classical "$\epsilon - \epsilon$" property already discussed by Allard, Almgren and Bombieri, admits a weaker counterpart which is still sufficient for the boundedness, namely, an "$\epsilon - \epsilon^\beta$" version of the property. And in turn, while for the validity of the first property the Lipschitz assumption is essential, for the latter the sole continuity is enough. As consequences of the "$\epsilon - \epsilon^\beta$" property, we derive some results about the existence and regularity of isoperimetric sets. This is a joint work with Aldo Pratelli.

Miércoles 06 de Noviembre del 2013, a contar de las $14:30$ hrs, en la Sala 19 Sur, edificio Escuela, Beauchef 850.