DEPARTAMENTO DE ANÁLISIS MATEMÁTICO, MATEMÁTICA APLICADA

Instituto de Matemática Interdisciplinar

COLLOQUIUM DE ANÁLISIS MATEMÁTICO

Mª Ángeles García Ferrero

ICMAT—U.C.M.

Prelectura de Tesis Doctoral:

Global approximation theorems for PDEs and applications

A global approximation theorem for a differential operator P is a result ensuring that a solution v of P[v] =0 in a closed set S satisfying some topological assumptions can be approximated by a global solution u of the same equation P[u]=0 in the whole space. The theory for elliptic equations has been widely developed. In this talk I will show global approximation theorems for parabolic equations. I will apply these results to prove the existence of solutions to parabolic equations with local hot spots of prescribed behavior or with isothermic hypersurfaces of prescribed topologies.In addition, I will present other main results of my thesis: the existence of minimal graphs with prescribed level sets and the generalization of the classical Biot -Savart operator to bounded domains.

Organizado por el Departamento de Análisis Matemático, Matemáticas Aplicada y el Instituto de Matemática Interdisciplinar (IMI)

Fecha: Jueves 24 de mayo de 2018
Hora: 13:00 horas
Lugar: Aula 222
Facultad de CC Matemáticas, UCM