

SEMINARIO

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On boundary value problems for the two dimensional magneto-hydrostatic equations

Abstract: Magneto-hydrostatics is relevant in a wide variety of problems in astrophysical plasmas describing coronal field structures and stellar winds as well as in the study of plasma confinement fusion. In this talk, we will give a brief introduction to those problems and discuss the solvability of different boundary value problems for the two dimensional magneto-hydrostatic equations. In particular, we will focus on a boundary value problem originally proposed by Grad and Rubín in the late 50's. The idea towards the proof relies on a fixed point argument which combines the so-called transport method together with Hölder estimates for a class of non-convolution singular integral operators. Time permitting, we will also mention some related open problems.

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Organiza: G.I.R. Modelización, Teoría y Análisis Numérico en Problemas de Optimización y Ecuaciones de Evolución

