UCCS Department of Mathematics Math Colloquium Series JOSÉ MARÍA MARTELL

INSTITUTO DE CIENCIAS MATEMATICAS (MADRID)



DATE: FEBRUARY 18, 2016

<u>TIME:</u> 12:30PM-1:30PM (REFRESHMENTS AT 12:15PM)

LOCATION: OSBORNE CENTER ROOM# A327

The Dirichlet Problem for Elliptic Systems In The Upper-Half Space

Abstract: Take an arbitrary secondorder, homogenous, elliptic system, with constant complex coefficients (e.g., the Laplacian or the Lamé system of elasticity). Consider the associated Dirichlet problem in the upper-half space with (possibly non-smooth) boundary data in some class of functions (e.g., Lebesgue

spaces, the space of bounded mean oscillation functions or the space of vanishing mean oscillation functions.) We identify the class of solutions for which the corresponding problems are well-posed. We also establish Fatou type theorems guaranteeing the existence of the pointwise nontangential boundary trace for null-solutions of such systems. Joint work with D. Mitrea, I. Mitrea, and M. Mitrea.