

VIRTUAL EAST-WEST SCV SEMINAR

December 7, 2021

Irina MITREA
Temple University

ON THE LACK OF FREDHOLM SOLVABILITY FOR THE L^p DIRICHLET PROBLEM FOR WEAKLY ELLIPTIC SYSTEMS IN THE UPPER HALF-SPACE

The L^p Dirichlet Problem for constant coefficient second-order systems satisfying the Legendre-Hadamard strong ellipticity condition is well posed in the upper half-space. Surprisingly, this result may fail if only weak ellipticity is assumed, and the failure manifests itself at a fundamental level through lack of Fredholm solvability. In this talk I will discuss a couple of pathological cases, sought in the class of weakly elliptic systems that fail to possess a distinguished coefficient tensor. This is joint work with Dorina Mitrea and Marius Mitrea.
