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**Irina Mitrea\*** ([imitrea@temple.edu](mailto:imitrea@temple.edu)), 1805 N Broad Street, Wachman Hall, Department of Mathematics, Temple University, Philadelphia, PA 19122. *Harmonic and Functional Analysis Methods for Elliptic Boundary Value Problems in the Upper Half Space.*

In this talk I will discuss well-posedness results for the Dirichlet problem for second-order, homogeneous, elliptic systems, with constant complex coefficients, in the upper half space, with boundary data from Lebesgue spaces, variable exponent Lebesgue spaces, Lorentz spaces, Zygmund spaces, as well as their weighted versions. A key tool in this analysis is establishing boundedness of the Hardy-Littlewood maximal operator on appropriate Kothe function spaces. This is joint work with Dorina Mitrea, Marius Mitrea, and Jose Maria Martell. (Received July 26, 2017)