

The Calderón problem with partial measurements

Kim Knudsen

Department of Mathematical Sciences, Aalborg University

kim@math.aau.dk

Abstract

In this talk we will discuss recent progress on the inverse conductivity problem, which is the mathematical problem behind electrical impedance tomography. We will show that for the three-dimensional problem measurements of the Dirichlet-to-Neumann map on particular subsets of the boundary uniquely determine a non-smooth conductivity. Moreover, we will discuss the unique determination of a non-smooth magnetic field from partial measurements of the associated Dirichlet-to-Neumann map.