Inverse boundary value problems with partial data.

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In this talk I will discuss recent progress on the inverse conductivity problem, which is the mathematical problem behind electrical impedance tomography. I 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, I will discuss the unique determination of a non-smooth magnetic field from partial measurements of the associated Dirichlet-to-Neumann map.