Abstract: We show that the permeability, permittivity and conductivity in a body are uniquely determined by surface measurements of the tangential components of the electric and magnetic fields satisfying the time-harmonic Maxwell equations, on any subset of the boundary which contains an open set. This generalises earlier results of other authors which required measurements to be made everywhere on the boundary.

This is joint work with Malcolm Brown and Pedro Caro and is part of a joint project with Paul Ledger at Swansea University School of Engineering.