Stable determination of electromagnetic coefficients

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Abstract

The main goal of this talk is to present a result about stable determination of the coefficients of Maxwell's equations by non-invasive boundary measurements of the electromagnetic fields. To this end, we shall set an inverse boundary value problem and we shall show a formula relating the boundary data with the electromagnetic properties inside the medium. Finally, we shall use exponential growing solutions and Carleman estimates to prove log-type stability for this inverse problem.
The result to be presented in the talk can be found in:
Pedro Caro, Stable determination of the electromagnetic coefficients by boundary measurements, *Inverse Problems* **26** (2010) 105014.