



École Polytechnique de Tunisie

Conference by Mourad Bellassoued (ENIT-LAMSIN)



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Title

Stable determination of coefficients in the dynamical Schrödinger equation in a magnetic field

Abstract

In this talk we consider the inverse problem of determining on a compact Riemannian manifold the electric potential or the magnetic field in a Schrödinger equation with Dirichlet data from measured Neumann boundary observations. This information is enclosed in the dynamical Dirichlet-to-Neumann map associated to the magnetic Schrödinger equation. We prove in dimension $n \geq 2$ that the knowledge of the Dirichlet-to-Neumann map for the Schrödinger equation uniquely determines the magnetic field and the electric potential and we establish Hölder-type stability.