

Analyseseminarier

Johannes Sjöstrand, Palaiseau, :

The Calderón problem with partial data (joint work with C. Kenig and G. Uhlmann).

Abstract: For a Schrödinger operator on a smooth bounded domain in \mathbf{R}^n , with $n \geq 3$ it is a classical result by R. Novikov and Sylvester-Uhlmann that the Dirichlet to Neumann (DN) map determines uniquely the potential. Here we discuss the case when the image of the DN-map is known only on a part of the boundary. A corollary of our main result (obtained jointly with C. Kenig and G. Uhlmann) says that if the domain is strongly starshaped with respect to a boundary point, then the images of the DN-map in an arbitrarily small neighborhood of that point determine the potential uniquely. This is an improvement of a previous work by Bukhgeim-Uhlmann.

Tisdagen den 24/2, kl. 15.15

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