



FMSP Lectures

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Inverse boundary value problem for a
hyperbolic equation in an infinite guide

February 18 (Thu) 10:30 ~ 11:30 Room 118

Abstract:

We consider the multidimensional inverse problem of determining the conductivity coefficient of a hyperbolic equation in an infinite cylindrical domain, from a single boundary observation of the solution. We prove Hölder stability with the aid of a Carleman estimate specially designed for hyperbolic waveguides. I will provide numerical simulations in multiple backgrounds.

Inverse problems for parabolic operators :
comparison of three different approaches

February 22 (Mon) 17:00 ~ 18:00 Room 118

Abstract:

Basing my talk around a toy problem : reconstruction of the potential for a linear parabolic problem, I will recall the two main classical following methods : Dirichlet to Neumann map and Carleman estimates. Then I will present a different and recent approach based on pointwise observations and I will underline some points to be improved for each method. Then, I will finish my talk by a review of some results related to this technic of pointwise observations.