International Conference on Nonlinear Analysis:
Kinetic Theory, Gas Dynamics, and Related Fields
Institute of Mathematics, Academia Sinica, Taipei, Taiwan
October 28 – 31, 2017

Quantitative uniqueness estimates and inverse problem for the Schrödinger equation with singular coefficients: pursuit of optimality

Jenn-Nan Wang

National Taiwan University
E-mail:**jnwang@math.ntu.edu.tw**

Abstract

In this talk I would like to discuss some local behaviors of solutions to the Schrödinger equation with singular coefficients and related inverse boundary problems. The aim is to investigate how the vanishing order of the solution depends on the coefficients. The vanishing order is a quantitative form of the strong unique continuation property for the solution. It has been known that the unique continuation property is closely related to the uniqueness of the inverse boundary value problem. Here we consider coefficients belonging to some Lebesgue spaces. We are especially interested in the borderline case where the unique continuation property holds.