

Endpoint Strichartz estimates for Schrödinger equation on exterior domains

KOICHI TANIGUCHI

Nagoya University, Furocho, Chikusaku, 464-8602
Nagoya, JAPAN

koichi-t@math.nagoya-u.ac.jp

In this talk we consider the initial-boundary value problem of Schrödinger equation with Dirichlet or Neumann boundary condition on the exterior domain of a geometric non-trapping obstacle. Our goal is to prove endpoint Strichartz estimates for solutions to the problem. For this purpose, we start by introducing suitable local extension operators, and then combine these extension operators with Strichartz and smoothing estimates for the free Schrödinger equation, the known local smoothing estimates for the exterior boundary value problem, and some commutator estimates between polynomial weights and fractional differential operators. This talk is based on the joint work with Professor Vladimir Georgiev (University of Pisa).