

***PDE, COMPLEX ANALYSIS AND
DIFFERENTIAL GEOMETRY SEMINAR***

Guest Speaker: Dionyssis Mantzavinos
University of Kansas



Date: Tuesday, October 20, 2020

Time: 2:00 PM

Location: Zoom

Zoom URL: notredame.zoom.us/j/91234665460

Lecture Title:

The Nonlinear Schrödinger Equation on the Half-Plane

Abstract

The initial-boundary value problem for the nonlinear Schrödinger (NLS) equation on the half-plane is studied by advancing into two dimensions an approach recently developed for the well-posedness of NLS on the half-line. Using the solution formula produced via the unified transform of Fokas for the associated linear problem, it will be shown that the nonlinear problem is well-posed in the Hadamard sense for initial data in Sobolev spaces and boundary data in appropriate Bourgain spaces. This is joint work with Alex Himonas.