

Boğaziçi MATH GRAD SEMINAR

Smoothing of PDEs

Murat Keçkin
Boğaziçi University

Abstract: There are several notions of smoothing in the study of dispersive partial differential equations. In this seminar talk, we focus primarily on Duhamel smoothing, which was first introduced by Bourgain in his work on the cubic Schrödinger equation on \mathbb{R}^2 . We begin by reviewing the relevant background, including definitions and basic concepts related to Sobolev spaces, dispersion, well-posedness, and smoothing effects. We then conclude by presenting a list of open problems.

Date : Wednesday, November 26th, 2025

Time: 19:30 *Note the unusual time*

Place: Online