

Boğaziçi MATH COLLOQUIUM

Smoothing for dispersive PDE

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Abstract: Smoothing effect is well studied for many dispersive equations on \mathbb{R}^d where dispersion becomes the primary character of the evolution. On circular, semi-bounded or bounded domains, however, the effect of dispersion is somewhat more complicated to handle. After Bourgain's work and introduction of the Banach spaces tailored for the particular dispersive PDE of interest, many of the previous well-posedness results have been improved, and new ones have been obtained on different domains. We will discuss the nonlinear smoothing effect and Bourgain spaces as refinements of Sobolev spaces. Then we will present some recent smoothing results for Cauchy and initial-boundary value problems of Schrödinger type equations.

Date : Wednesday, February 14, 2018

Time: 13:30

Place: TB 130, Boğaziçi University