

Department of Applied Mathematics Seminar

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Topic

Low regularity Fourier integrators for some nonlinear dispersive equations

Date| Time

19 March 2025 (Wednesday) | 10:30 – 11:30 (HK Time)

Venue

TU817

Abstract:

In recent years, driven by practical considerations in modeling complex physical systems characterized by rough initial data and non-smooth potentials, there has been growing interest in developing numerical methods capable of handling low regularity scenarios. In this talk, some Fourier integrators are proposed for solving the KdV equation and the nonlinear Schrodinger equation, including the rough initial data and non-smooth potentials. The designation of the scheme is based on the exponential-type integration, Splitting methods and the Phase-Space analysis of the nonlinear dynamics.

ALL ARE WELCOME