THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

The Hong Kong Polytechnic University
Department of Applied Mathematics

Colloquium

Low-regularity integrators for KdV equations

By

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Wuhan University

Abstract

We consider the numerical solution of KdV equation under rough initial data. The roughness causes accuracy order reductions for traditional time discretizations, and the regularity requirements of some popular methods will be reviewed. Then a class of embedded exponential-type integrators will be presented, which can offer the first and second order accuracy at the lowest possible regularity requirements so far. Combined with a nonlinear transform, the extension is made to the mKdV equation case.

Click to join (Zoom)

Date: 31 March 2022 (Thursday)
Time: 14:30-15:30 (Hong Kong Standard Time GMT +8)
Venue: Online Talk via Zoom (Meeting ID: 967 0452 8906)
Speaker: Prof. Xiaofei Zhao, Wuhan University
Host: Dr. Buyang Li, The Hong Kong Polytechnic University
Click to join:
https://polyu.zoom.us/j/96704528906?pwd=SHI5U09FWmtsRnZpdWtmOERVU2tFdz09

*** * * ALL ARE WELCOME * * ***

For enrolment, please send your name and email to wai-yan.moon@polyu.edu.hk on or before 30 March 2022