



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON APPLIED MATHEMATICS

An investigation on the structure-preserving deep learning methods for solving the radiative transport equations

By

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Abstract

In this talk, we present two schemes coupling the neural network methods and the asymptotic-preserving schemes for the solution of the radiative transport equation. The first scheme is based on a micro-macro decomposition scheme, and the second one is designed through an introduction of macroscopic auxiliary equations. The schemes possess advantages on dealing with problems with high dimensionality and multiscale characteristics. Numerical examples are given to demonstrate the efficiency of numerical methods. This is joint work with Hongyan Li, Song Jiang, Wenjun Sun and Guanyu Zhou.

Date : 11 July 2024 (Thursday)

Time : 4:00p.m.-5:00p.m.

Venue : Room 2504 (near Lift 25/26)

All are Welcome!