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

A Pod-Based Fast Algorithm for The Nonlocal Unsteady Problems

By

Prof. Yufeng NIE
Northwestern Polytechnical University

Abstract

A fast algorithm for the nonlocal unsteady problems was proposed, which can be employed in the numerical simulation of nonlocal diffusion and peridynamic. The surrogate model constructed by the proper orthogonal decomposition (POD) speeds up the process of solving equations by reducing the order of linear equations. Then, the accuracy and efficiency of the proposed algorithm was verified by numerical experiments. The results showed that this approach ensures accuracy while reduces the computational burden of the nonlocal model.

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Date: 19 May 2022 (Thursday)
Time: 10:00-11:00 (Hong Kong Standard Time GMT +8)
Venue: Online Talk via Zoom (Meeting ID: 956 5113 5593)
Speaker: Prof. Yufeng Nie, Northwestern Polytechnical University
Host: Prof. Zhonghua Qiao, The Hong Kong Polytechnic University
Click to join:
https://polyu.zoom.us/j/95651135593?pwd=MWdZYm85YkcrdkpZbHNSTEh2RVM2QT09

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

For enrolment, please send your name and email to wai-yan.moon@polyu.edu.hk on or before 18 May 2022