

PolyU Numerical PDEs Seminar

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Topic

Ensemble algorithms in computational fluid dynamics

Date | Time

26 July 2024 (Friday) | 10:30 am – 11:30 am (HK Time)

Venue:

TU817

Abstract

In this talk, some problems in computational fluid dynamics (including hemodynamics) will be presented. Accordingly, ensemble algorithms for numerically solving multiple CFD equations will be proposed. For instance, we propose an ensemble algorithm based on the artificial compressibility Crank-Nicolson leap-frog method for solving Stokes-Darcy equations. The method decouples all the unknown components and it results in a common coefficient matrix for all realizations.