THE UNIVERSITY   **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

Numerical Analysis Seminar

Solving high-dimensional partial differential equations by machine learning: Two cases study

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Abstract

Solving high-dimensional partial differential equations (PDEs) by machine learning is of increasing interests in recent years. In this talk, I will discuss two cases, including discontinuous solutions in high dimension and the accuracy of machine-learned solutions. Concepts and tools from classical numerical methods, including total variation and discontinuous Galerkin method, are shown to be very helpful in designing accurate and reliable machine learning methods for PDEs.

Date:	November 16, 2021 (Tuesday)
Time:	3:30 – 4:30pm (Hong Kong Time)
Venue:	Room 210, Run Run Shaw Bldg., HKU and ZOOM: https://hku.zoom.us/j/ Meeting ID: 913 6532 3891 Password: 310656

Attendance limited
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All are welcome