



The Hong Kong Polytechnic University **Department of Applied Mathematics**

Colloquium

Can DG go beyond FE in efficiency?

By

Prof. Ruo LI **Peking University**

Abstract

The discontinuous Galerkin method has attracted tremendous amount of attentions in the last decades since it has been applied to problems with regular solutions, the 2nd order elliptic equation for example. In spite of its well-known advantages, the efficiency of discontinuous Galerkin method for problems with very regular solutions is a weak point which has often been attacked at. In this talk, I will show that the discontinuous Galerkin method may go beyond the continuous finite element method in efficiency for elliptic problems, where is the traditional area for the finite element method to outperform. Our technique to help DG out is to construct a brand-new approximate space which will be clarified in my talk.

Date: 27 April 2022 (Wednesday) Time: 10:00-11:00 (Hong Kong Standard Time GMT +8) Venue: Online Talk via Zoom (Meeting ID: 992 2936 6682) Speaker: Prof. Ruo Li, Peking University Host: Prof. Zhonghua Oiao, The Hong Kong Polytechnic University Click to join: https://polvu.zoom.us/j/99229366682?pwd=dU9YNGl4SGF3TFZVOEM3bVArUzFPUT09



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