DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

The Hong Kong Polytechnic University
Department of Applied Mathematics

Seminar

High Degree Immersed Finite Element Spaces by a Least Squares Method

by

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Abstract

We present a least squares framework for constructing p-th degree immersed finite element (IFE) spaces for solving typical second-order elliptic interface problems. The IFE shape functions are constructed according to two different types of extended jump conditions which are weakly satisfied by minimizing a penalty along the interface. The least squares formulation naturally guarantees the existence of IFE shape functions on each interface element of an interface independent mesh. The uniqueness of the proposed p-th degree IFE shape functions is also discussed under some conditions

Date : 15 August, 2017 (Tuesday)
Time : 11:00a.m. – 12:00noon
Venue : TU801, The Hong Kong Polytechnic University

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