



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

Seminar

On

**Central Discontinuous Galerkin Methods and Their
Applications to Solve Magnetohydrodynamic and Shallow Water
Equations**

by

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Abstract

In this talk, we first review the central discontinuous Galerkin (CDG) methods on overlapping meshes (Liu-Shu-Tadmor-Zhang, 2007). Then, we discuss our development of CDG methods, including divergence-free, positivity-preserving and well-balanced schemes. These schemes have been applied to solve the Magnetohydrodynamic (MHD) and shallow water equations, and corresponding numerical results will be presented to validate the schemes.

This is a joint work with Prof. Fengyan Li at RPI, Prof. Philippe Guyenne at UD, Prof. Jianxian Qiu at XMU and Dr. Maojun Li at Beijing CSRC.

Date : 15 March, 2013 (Friday)

Time : 3:00 p.m. – 4:00 p.m.

Venue : HJ610, The Hong Kong Polytechnic University

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