数学与系统科学研究院

计算数学所学术报告

报告人： 邹青松教授

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报告题目：

High order continuous local-conserving fluxes and finite-volume-like finite element solutions for elliptic equations

邀请人： 毛世鹏副研究员

报告时间：2018 年 2 月 2 日（周五）

下午 15:00--16:30

报告地点： 数学院科技综合楼

Z311 报告厅

报告摘要：

In the first part of the talk, we will first give a brief review on our recent advances on the theoretical analysis of high order finite

volume element method.
In the second part, we derive a high order globally continuous and locally conservative flux field and a high order finite-volume-like solution from the continuous Galerkin (CG) finite element solution. The main idea is to post-process the CG solution by solving a small linear algebraic system on each element of the underlying mesh. Both the post-processed flux field and the finite-volume-like solution satisfy the conservation law on each {\it control volume} of the {\it dual mesh}. Moreover, both the post-processed flux field and the gradient of finite-volume-like solution converge to the exact flux with optimal convergence rates.

欢迎大家参加！