

数学与系统科学研究院

计算数学所学术报告

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报告题目:

**Weak Galerkin Finite Element Scheme and Its Applications**

邀请人: 刘歆 副研究员

报告时间: 2015 年 8 月 27 日 (周四)

下午 16:00~17:00

报告地点: 科技综合楼三层

311 报告厅

## **Abstract:**

The weak Galerkin finite element method (WG) is a newly developed and efficient numerical technique for solving partial differential equations (PDEs). It was first introduced and analyzed for second order elliptic equations. The central idea of WG is to interpret partial differential operators as generalized distributions, called weak differential operators, over the space of discontinuous functions including boundary information. The weak differential operators are further discretized and applied to the corresponding variational formulations of the underlying PDEs. This talk introduces the basic principle and the theoretical foundation for the WG method by using the second order elliptic equation. The WG method is further applied to several other model equations, such as the biharmonic, Stokes equations to demonstrate its power and efficiency as an emerging new numerical method.

**欢迎大家参加！**