数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. Hong Wang (王宏)**

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报告题目：

An Eulerian–Lagrangian Formulation for Porous Medium Flow

邀请人： **崔俊芝院士**

报告时间： **2007 年 7 月 13 日(周五)**

上午 10:00—11:00

报告地点： **科技综合楼三层 311**

计算数学所报告厅

Abstract：

The mathematical models used to describe these fluid flow processes are coupled systems of nonlinear advection-diffusion equations, which are advection-diffusion type with advection being the dominant process, and constraining equations. Due to the nonlinearity and couplings of these equations, the moving steep fronts and complicated structures present in the solutions to these systems, the singularities of the solutions at sources and sinks, the numerical treatment of these systems often encounters severe difficulties. In this talk, we discuss Eulerian-Lagrangian methods for the numerical simulation of multi-phase, multi-component compositional flow and transport. Our numerical experiments show that the resulting numerical scheme generates stable and physically reasonable numerical solutions. Finally, convergence analysis for the Eulerian - Lagrangian methods will be discussed.

欢迎大家参加！