

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:

**Finite difference/finite element
method for two-dimensional space
and time fractional Bloch-Torrey
equations**

邀请人: 唐贻发 研究员

报告时间: 2015 年 11 月 5 日 (周四)

上午 10:00-11:00

报告地点: 数学院南楼七层

702 会议室

Abstract:

In this talk, a class of two-dimensional space and time fractional Bloch–Torrey equations (2D-STFBTEs) are considered. Some definitions and properties of fractional derivative spaces are presented. By finite difference method and Galerkin finite element method, a semi-discrete variational formulation for 2D-STFBTEs is obtained. The stability and convergence of the semi-discrete form are discussed. Then, a fully discrete scheme of 2D-STFBTEs is derived and the convergence is investigated. Finally, some numerical examples based on linear piecewise polynomials and quadratic piecewise polynomials are given to prove the correctness of our theoretical analysis.

欢迎大家参加！