

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Ju Lili**

(*Department of Mathematics, University of South Carolina*)

报告题目:

**Fast Explicit Integration Factor
Methods for Semilinear Parabolic
Equations**

邀请人: 崔涛 博士

报告时间: **2013 年 12 月 26 日 (周四)**

下午 15:00-16:00

报告地点: 科技综合楼三层 **301**
计算数学所小报告厅

Abstract:

In this talk, we present a numerical method and its fast implementation for the solution of a wide class of semilinear parabolic equations including the Allen-Cahn equation as a special case. The method combines efficient decompositions of spatial difference operators on a regular mesh with stable and accurate exponential time integrators. It can deal with stiff nonlinearity and both homogeneous and inhomogeneous boundary conditions of different types. Numerical experiments demonstrate effectiveness of the new approach for both linear and nonlinear model problems.

欢迎大家参加!