

数学与系统科学研究院

计算数学所学术报告

报告人： 周炜恩 助理研究员

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报告题目：

**Analysis of the Damped Nonlinear  
Space-fractional Schrödinger  
Equation**

邀请人： 洪佳林 研究员

报告时间： 2018 年 7 月 7 日 (周六)

下午 15:00-16:00

报告地点： 数学院南楼二层

222 教室

## Abstract:

In this talk, we verify the unique existence of the global smooth solution of the damped nonlinear space-fractional Schrödinger (DNFS) equation and show it follows a conformal mass conservation law. We propose a conformal mass-preserving linearized scheme. It is rigorously proved that this scheme preserves the discrete conformal mass. Furthermore, we prove that the proposed scheme admits a unique solution and is of second order convergence in space and first order convergence in time. Some numerical experiments are carried out to validate the theoretical analysis.

欢迎大家参加！