

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:

**Efficient conservative algorithms for
Schrodinger-type equations**

邀请人: 崔涛 副研究员

报告时间: 2019 年 5 月 6 日 (周六)

晚上 19:00-20:00

报告地点: 数学院南楼二层

222 教室

Abstract:

Plenty of important equations in mathematical physics can be written as Hamiltonian systems, which preserve energy conservation laws and symplectic geometric structures. The basic principle of modern numerical algorithms is to preserve the structures of the original problems. Therefore, it is meaningful to study the numerical algorithms which preserve the energy conservation laws or the symplectic geometric structures of the Hamiltonian partial differential equations. This talk is devoted to construct novel structure-preserving algorithms for some important nonlinear Schrodinger equations. Meanwhile, we investigate the responding discrete conservative properties, convergence and numerical stability of proposed algorithms theoretically, which would guarantee their effectiveness during long-time computations.

欢迎大家参加！