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：

A Numerical Method for Solving the Nonlinear Fermi–Pasta–Ulam Problem

邀请人： 毛士鹏 副研究员

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下午 **16:00~17:00**

报告地点： 科技综合楼三层

311 报告厅

Abstract：

An effective finite difference scheme for solving the nonlinear Fermi–Pasta–Ulam (FPU) problem is derived. The most important feature of the scheme inherits energy conservation property from the nonlinear FPU problem. The unique solvability and the convergence of the difference scheme are proved by the energy method. The convergence order is $O(\tau^2 +h^2)$ in the maximum norm, where τ is the temporal grid size and h is the spatial grid size, respectively. In addition, the stability of the difference scheme is obtained. Numerical results are presented to support the theoretical analysis and verify numerically the energy conservation property.

欢迎大家参加！