

数学与系统科学研究院  
计算数学所网络学术报告

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报告题目:

**Asymmetric Fermi-Pasta-Ulam  
recurrence in integrable systems**

邀请人: 胡星标 研究员

报告时间: 2021 年 11 月 24 日 (周三)

晚上 19:00-19:45

报告工具: 腾讯会议 (ID: 454145612)

## **Abstract:**

**Fermi-Pasta-Ulam (FPU) recurrence is a nonlinear phenomenon of spectral expansion and follow up contraction back to a single mode that can be observed in many physical systems. It plays a fundamental role in understanding various nonlinear phenomena in physics. In integrable systems, such dynamics can be described strictly by a family of exact periodic solutions. Simulations and experiments demonstrated that FPU recurrence can exhibit broken reflection symmetry at the nonlinear stage of evolution. We present exact analytic results for such asymmetric dynamics.**

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