数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. David Cohen**

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报告题目：

Full discretisation of semi-linear stochastic wave equations driven by multiplicative noise

邀请人： 洪佳林 研究员

报告时间：2018 年 5 月 23 日（周三）

下午 15:00-16:00

报告地点： 科技综合楼三层

311 报告厅

Abstract：

A fully discrete approximation of the semi-linear stochastic wave equation driven by multiplicative noise is presented. A standard linear finite element approximation is used in space and a stochastic trigonometric method for the temporal approximation. This explicit time integrator allows for mean-square error bounds independent of the space discretisation and thus do not suffer from a step size restriction as in the often used Störmer-Verlet-leap-frog scheme. Furthermore, it satisfies an almost trace formula (i.e., a linear drift of the expected value of the energy of the problem). Numerical experiments are presented and confirm the theoretical results. The presentation is based on joint works with Rikard Anton, Stig Larsson, Lluis Quer-Sardanyons, Magdalena Sigg, and Xiaojie Wang.

欢迎大家参加！