

数学与系统科学研究院
计算数学所系列学术报告

报告人: **Prof. Cristina Anton**

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报告题目:

**Weak Symplectic Numerical
Schemes for Stochastic Hamiltonian
Equations**

邀请人: 曹礼群 研究员

报告时间: **2014年6月24日(周二)**

上午 10:00-11:00

报告地点: **科技综合楼三层 311**

计算数学所报告厅

Abstract:

We propose a systematic approach to construct symplectic schemes in the weak sense for stochastic Hamiltonian systems. This method is based on generating functions, so it is an extension of the techniques used for constructing high-order symplectic schemes for deterministic Hamiltonian systems. Although the developed symplectic schemes are implicit, they are comparable with the explicit weak Taylor schemes in terms of the number and the complexity of the multiple Ito stochastic integrals required. We study the convergence of the proposed symplectic weak order 2 schemes. The excellent long term performance of the symplectic schemes is verified numerically.

欢迎大家参加!