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：

Inchworm Monte Carlo method for open quantum systems

邀请人： 邸亚娜 副研究员

报告时间：**2018 年 12 月 26 日（周三）**

上午 10:00-11:00

报告地点： 科技综合楼三层

311 报告厅

Abstract：

We investigate in this work a recently proposed diagrammatic quantum Monte Carlo method --- the inchworm Monte Carlo method --- for open quantum systems. We establish its validity rigorously based on resummation of Dyson series. Moreover, we introduce an integro-differential equation formulation for open quantum systems, which illuminates the mathematical structure of the inchworm algorithm. This new formulation leads to an improvement of the inchworm algorithm by introducing classical deterministic time-integration schemes. The numerical method is validated by applications to the spin-boson model.

欢迎大家参加！