

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Yitzhak Fouxon**

(*Technion - Israel Institute of Technology*)

报告题目:

Ergodic theory of Brownian motion

邀请人: 于海军 副研究员

报告时间: **2019年5月7日 (周二)**

上午 8:30-10:30

报告地点: 科技综合楼三层

311 报告厅

Abstract:

This lecture is devoted to the development of mathematically rigorous theory of the Brownian motion. We use as a fundamental model the system of colliding hard balls where the Brownian particle is represented by a much larger and heavier ball. This system was recently proved to be ergodic. We demonstrate that combination of the ergodic theorem and ergodic central limit theorem allows to derive the white noise (Langevin) equation of the Brownian motion from mechanics. Temperature is introduced as the width of the steady state distribution and the fluctuation-dissipation theorem is given.

欢迎大家参加！