# 数学与系统科学研究院

## 计算数学所学术报告

**报告人：** **Dr. Yuwei Fan**

（ *Department of Mathematics, Stanford University* ）

**报告题目：**

# Entropy monotonic spectral method for Boltzmann equation

**邀请人：** 邸亚娜 副研究员

**报告时间：2017 年 6 月 26 日（周一）**

**上午 10:00~11:00**

**报告地点：** 科技综合楼三层

**311 报告厅**

## Abstract：

In this talk, I will introduce a spectral method that discretizes the Boltzmann collision operator and satisfies a discrete version of the H-theorem. The method is obtained by modifying the existing Fourier spectral method to match a classical form of the discrete velocity method. It preserves the positivity of the solution on the Fourier collocation points and also satisfies the H-theorem. The fast algorithms appeared previously in the literature can be readily applied to this method to speed up the computation. A second-order convergence rate is validated by numerical experiments.

## 欢迎大家参加！