数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. Xia Chen**

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报告题目：

Free energy in a mean field of Brownian particles

邀请人： 洪佳林 研究员

报告时间：2017 年 1 月 4 日（周三）

下午 **16:00-17:00**

报告地点： 数学院思源楼六层

615 教室

Abstract：

We compute the limit of the free energy of the mean field generated by the independent Brownian particles pairwise interacting through a non-negative definite function. Our main theorem is relevant to the high moment asymptotics for the parabolic Anderson models with Gaussian noise that is white in time, white or colored in space. Our approach makes a novel connection to the celebrated Donsker-Varadhan's large deviation principle for the i.i.d. random variables in infinite dimensional spaces. As an application of our main theorem, we provide a probabilistic treatment to the Hartree's theory on the asymptotics for the ground state energy of bosonic quantum system.

This talk is based on a joint work with Tuoc V. Phan.

欢迎大家参加！