概率论系列报告

报告题目(Title)： Boundary Harnack Principle for Critical Fractional Laplacian with Drift

报告人(Speaker)： 王龙敏 副教授 南开大学

时间(Time)： 3 月 3 日(周一)下午 3:00-4:00

地点(Venue)： 北京大学理科一号楼 1493

摘要(Abstract)：Let $d \geq 2$ and b a Hölder continuous vector field on $\mathbb{R}^d$. In this talk, we will prove the boundary Harnack principle with explicit rate for $-(-\Delta)^{1/2} + b \cdot \nabla$ in a bounded $C^{1,1}$ open set D under some regularity assumptions on b. The rate depends on the boundary value of the drift b and equals to $1/2$ only when b is tangent to the boundary ∂D. As an application, we will establish the sharp two-sided estimates for the Green function of $-(-\Delta)^{1/2} + b \cdot \nabla$ in *D* with zero exterior condition. In general, the Green function is also not comparable to that of unperturbed operator $-(-\Delta)^{1/2}$. The talk is based on a joint work with Zhen-Qing Chen

欢迎参加