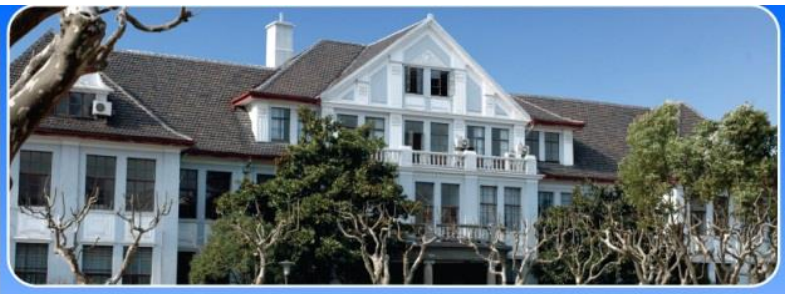


复旦大学数学科学学院
数学综合报告会

报告题目：Nevanlinna's Second Main Theorems for Random Entire Functions II

报 告 人：Prof. Zhuan Ye （University of North Carolina Wilmington, USA）

时间：2020-08-14 星期五 9:00-10:00

地点：腾讯会议 ID: 172 354 848

报告摘要：

Abstract: Let $f_\omega(z)=\sum_{j=0}^{\infty}\chi_j(\omega)a_jz^j$ be a random entire function, where $\chi_j(\omega)$ are independent and identically distributed random variables defined on a probability space $(\Omega,\mathcal{F},\mu)$. In this presentation, I will talk about a joint work with Hui Li, Jun Wang, and Xaio Yao. We first define a family of random entire functions, which includes Gaussian, Rademacher, Offord entire functions. Then we prove that the Nevanlinna characteristic function of almost all functions in the family is bounded by a weighed Nevanlinna counting function, rather than by two weighted counting functions in Nevanlinna theory. For instance, we show that for almost all Gaussian entire functions f_ω, for any $\varepsilon>0$, there is r_0 such that for $r>r_0$,

$$T(r,f)\le N(r,0,f_\omega)+(\frac{1}{2}+\varepsilon)\log N(r,0,f_\omega).$$

This inequality could be regarded as a Nevanlinna's second main theorem for Gaussian entire functions.

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