概率论系列报告

报告题目(Title): Some limit theorems for subcritical branching processes in random environment

报告人(Speaker): Prof. V. Vatutin,
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时间(Time): 4 月 18 日(周一)下午 4: 00-5: 00

地点(Venue): 北京大学理科一号楼 1303

摘要(Abstract): Let Z_n be the number of individuals in a branching process evolving in the environment generated by i.i.d. probability distributions. Let X be the logarithm of the expected offspring size per individual given the environment. Assuming that $\boldsymbol{E}\, X < 0$ we study the probability of survival, prove Yaglom type limit theorems for the distribution of the number of particles in the process conditioned on its survival up to a distant moment n and describe the environments providing survival.

The proofs use, in particular, a fine study of a random walk (with negative drift and heavy tails) conditioned to stay positive until time nand to have a small positive value at time n, with $n \to \infty$.

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