

# 概率论系列报告 Probability Seminar

报告题目(Title): Multitype Particle Systems

报告人(Speaker): 姚东 (Jiangsu Normal University)

时间(Time): 2021/11/08 14:00-15:00

地点(Venue): 理科一号楼 1114

摘要(Abstract):

Abstract: I will present some known results and open questions in multitype interacting particle systems. In ecology and epidemiology, often there are two types of species/diseases that may either compete or cooperate with each other. We consider three different examples. In the symbiotic contact process, a particle has smaller death rate if the other type of particle is also present at the same site. In the competitive contact process, a single site can host at most one particle, thus the two different species need to compete for space. In the cooperative SIR process, an individual infected with one type of diseases becomes more susceptible to the other type than those never infected. We are interested in whether the interaction mechanisms change the critical value and the nature of the phase transitions (compared to one type particle system).

The talk is based on joint work with Rick Durrett, Tai-Heng Liu and Ruibo Ma.

欢迎参加

Everyone is welcome.