

Date: 2020.11.4. 3:30-4:30 (Beijing time).

Tencent meeting: 416 4789 4755

Zoom: 610 394 59712 (psw 123456)

Speaker: Jinjiong Yu (East China Normal University)

Title: Densities of coalescing particle systems

Abstract: In this talk, we will discuss n -point densities ρ_n of several instantaneously coalescing particle systems. The most important case is the system of coalescing simple symmetric random walks on \mathbb{Z}^d , which starts from all sites of \mathbb{Z}^d . For $d \geq 3$, the density ρ_n decays with time as ρ_1^n due to the transience of the underlying random walks. In contrast, the system has significant correlation effects for $d \leq 2$, and therefore ρ_n decays faster than ρ_1^n with the correction term given by a noncollision probability. We will also review related interacting particle systems such as annihilating random walks.