

# 概率论系列报告 Probability Seminar

报告题目(Title): Continuity of the time constant of finitary random interlacements

报告人(Speaker): Sarai Hernandez-Torres (Technion)

时间(Time): 2022/04/18 14:00-15:00

地点(Venue):

摘要(Abstract):

Finitary random interlacements (FRI) is a Poisson point process of geometrically killed random walks on  $\mathbb{Z}^d$ , with  $d \geq 3$ . A parameter  $u > 0$  modulates the intensity of the point process, while  $T > 0$  is the expected path length. The model has gained attention because, although it lacks global monotonicity on  $T$ ,  $\text{FRI}(u, T)$  exhibits a phase transition.

In the supercritical regime,  $\text{FRI}(u, T)$  has a unique infinite cluster on which we consider its chemical distance (or graph distance). This talk focuses on the associated time constant. The time constant is a normalized limit of the chemical distance between the origin and a sequence of vertices growing in a fixed direction, defining a deterministic norm. Our main result is its continuity (as a function of the parameters  $u$  and  $T$ ).

This work is joint with Zhenhao Cai, Eviatar Procaccia, Ron Rosenthal and Yuan Zhang.

欢迎参加

Everyone is welcome.