

## 清北师概率 webinar

**报告人:** 万艺君 (DMA, Ecole Normale Supérieure)

**题目:** On the crossing estimates for simple conformal loops ensembles and the convergence of probabilities of cylindrical events for the double-dimer model

**时间:** 2022 年 6 月 14 日 (周二) 下午 4:00-5:00

**地点:** 腾讯会议 775-9358-5442

**摘要:** Conformal loop ensembles (CLE) serve as candidates for the scaling limits of certain statistical physics models at critical temperature, which can be interpreted as random collections of disjoint, non-self-crossing loops. For such limiting continuum objects, crossing-type estimates or regularity properties can be instrumental to study the scaling limits of certain models. For simple CLEs, we prove the super-exponential decay of probabilities that there exist  $n$  crossings of a quadrilateral uniformly on its conformal modulus as  $n$  goes to infinity. Besides being of independent interest, this also implies the convergence of probabilities of cylindrical events for the double-dimer loop ensembles to those for the nested  $CLE(4)$  based on the convergence of topological correlators studied by Basok and Chelkak. This talk is based on a joint work with Tianyi Bai (NYU, Shanghai).