Title: Large deviation principles (LDP) of Schramm-Loewner evolutions (SLE)

Speaker: Yilin Wang (MIT)

Dates: Aug. 3rd, 5th, 10th, 12th. Four lectures in total.

Time: 9:00-10:30 am (Beijing time)

Address: Tencent meeting and Zoom.

Abstract:
The theory of large deviations concerns the asymptotic behaviour of the probability of rare events under a sequence of probability measures. Schramm-Loewner evolution is a one-parameter family of random fractal non-selfcrossing curves that arise naturally as interfaces in two-dimentional conformally invariant systems. After explaining the basic ideas and results on LDP and SLE, we describe the large deviations of SLE in two regimes: when the parameter goes to 0 and to infinity. The rate functions of these LDPs are interesting in their own, especially from the point of view of geometric function theory. The LDPs of SLEs then allow us to derive several new results in geometric function theory, by giving probabilistic interpretation to deterministic objects.