

Date: 2020.10.15. 9:00-10:00 (Beijing time).

Tencent meeting: 606 1859 8357

Zoom: 658 538 25947(psw123456)

Speaker: Xin Sun (UPenn)

Title: Integrability of SLE and Liouville Conformal Field Theory through Conformal Welding

Abstract:

There are two frameworks to study quantum surfaces in Liouville quantum gravity: random planar geometry and Liouville conformal field theory (LCFT). A key feature of the first framework is the coupling with Schramm-Loewner evolution (SLE). A key feature of the second framework is the application of conformal field theoretical techniques. We report an ongoing program that unifies these two frameworks using conformal welding of quantum surfaces, which gives strong links between the integrability of SLE and LCFT. We obtain exact formulae for both SLE and LCFT which are hard to obtain via traditional methods. Based on a joint work with Ang and Holden, an ongoing project with Remy and Zhu; an ongoing project with Ang, Holden, and Remy; and several ongoing projects with Ang.