

Intersections of Topological Recursion, Conformal Field Theory, and Random Geometry



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Conformal Bootstrap for boundary Liouville CFT.

In this talk, I will explain how to compute the Liouville correlation function for surfaces with boundary via the conformal bootstrap method. In the first part, I will explain my previous work establishing the integrability of Liouville CFT on the annulus. This result leveraged the known spectral resolution for the bulk Liouville theory and rigorously implemented Cardy's doubling trick. As an application, we derived explicit formulas for the annulus/torus partition function. In the second part, I will discuss the joint work with Colin Guillarmou and Remi Rhodes. This includes our work on Segal's axioms for boundary Liouville CFT and our ongoing project on conformal bootstrap for boundary Liouville CFT.