

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



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N = 1 Super Topological Recursion.

A concrete relation between topological recursion and (modules of) the Virasoro algebra is well understood from the perspective of Airy structures. In fact, the notion of Airy structures plays an important role to generalise into the higher-rank setting, i.e. higher-ramified spectral curves and W-algebras of higher rank. Now, an interesting question is: can we incorporate supersymmetry into topological recursion by considering modules of the N=1 super Virasoro algebra? In this talk, I will introduce what we call the N=1 super topological recursion from the super-geometric perspective. I will present similarities and differences from the classical case, and will discuss phenomena that appear only in the super setting. This is based on joint work in progress with N. Aghaei, R. Kramer, and N. Orantin.