

Institut Henri Poincaré
11 rue Pierre et Marie Curie, 75231 Paris cedex 05
String Theory in Greater Paris

Rencontres Théoriciennes
“Supergravité, théorie des cordes et théorie M”

Jeudi 25 Fevrier 2021, 11:00

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An EFT/CFT “Duality” : from the modular-hedron to the EFT-hedron

In this talk we will show that the space of consistent EFTs and 2D CFTs are governed by the same geometry. For the former, the theory space stems from a four-point S-matrix that is consistent with having a crossing symmetric unitary and Lorentz invariant UV completion, while the latter is deduced from modular invariant torus partition functions. We will show that in both cases, the space is given by a product geometry of convex hull of points on positive moment curves, intersecting with the subplane reflecting crossing/modular symmetry. We will provide evidence that a particular vertex of the intersecting geometry gives the extremal spectrum of the discretize (derivative expansion) bootstrap problem.

Institut Henri Poincaré, salle 314, 3^{ème} étage

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