

Séminaire de matrices, cordes et géométries aléatoires

Vendredi 08/11/2019, 14:15-15:15

Orme des Merisiers Salle Claude Itzykson, Bât. 774

**Is the Scattering Amplitude Analytic in a Field Theory
with a Compact Spatial Coordinate?**

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It is recognized that higher dimensional spacetime $D \geq 4$ play an important role in physics. Khuri pointed out several years ago, in nonrelativistic potential scattering with a compact space dimension, that the forward scattering amplitude has nonanalytic behavior under certain circumstance. If such were the case in QFT (with a compact dimension) it will be matter of concerns. We consider a massive, scalar field in flat $D=5$ dimension and compactify a spatial coordinate on a circle. We study analyticity property of four point amplitude.
