Institut Henri Poincaré

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String Theory in Greater Paris

Rencontres Théoriciennes

“Supergravité, théorie des cordes et théorie M”

Jeudi 25 Avril 2024, 10:00

Francesco Russo

Pisa University

Bounding Effective Field Theories by bootstrap methods

We show how to use general assumptions of the unknown UV theory to constrain the IR physics. Specifically, we can consider causality and unitarity of the S-matrix to set up a bootstrap problem. By solving it with numerical optimisation methods, we obtain the allowed EFT coefficients which are consistent with a unitary and causal UV completion. We focus on the scattering of photons in four dimensions with and without gravity. Finally, we present a method to compute all partial waves for spinning particles in arbitrary dimensions.

Institut Henri Poincaré, salle 314, 3ème étage

Retrouvez les activités de la communauté parisienne de théorie des cordes sur
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