ID contributo: **3** Tipo: **non specificato**

Trace anomalies and the dilation-graviton amplitude

mercoledì 21 febbraio 2024 11:00 (45 minuti)

We consider 3+1 dimensional Quantum Field Theories (QFTs) coupled to the dilaton and the graviton. We show that the graviton-dilaton scattering amplitude receives a universal contribution which is helicity flipping and is proportional to ($\Delta c - \Delta a$) along any RG flow, where Δc and Δa are the differences of the UV and IR c- and a-trace anomalies respectively. This allows us to relate ($\Delta c - \Delta a$) to spinning massive states in the spectrum of the QFT. We test our predictions on a simple example of a massive free scalar. We discuss possible applications.

Relatore: KARATEEV, Denis (University of Geneva)