



Contribution ID: 43

Type: **not specified**

From fluctuating gravitons to Lorentzian quantum gravity and scattering amplitudes

Wednesday 25 September 2024 15:30 (20 minutes)

Over the past decades, the asymptotic safety scenario has matured into a viable contender for a consistent theory of quantum gravity. Recently, the existence of a fixed point and a well-behaved graviton propagator were for the first time confirmed in a direct Lorentzian computation based on running spectral functions. I will detail the latest results in the computation of graviton spectral functions, which leads to the first results for form factors of the quantum effective action and graviton-mediated scattering amplitudes. All results obtained are compatible with the unitarity of asymptotically safe gravity. I will compare the results to theories that are asymptotically safe but perturbatively renormalisable.

Presenter: REICHERT, Manuel

Session Classification: Parallel A