Contribution ID: **79** Type: **not specified**

Two-loop power-spectrum of the Effective Field Theory of Large Scale Structure

Monday 15 April 2024 16:30 (30 minutes)

The main analytical tool for analyzing Large Scale Structure surveys is the Effective Field Theory of Large Scale Structure (EFTofLSS). With increasing survey detail, higher precision in theoretical predictions becomes essential. However, extending integrations beyond the one-loop power spectrum faces limitations due to analytical challenges and computational costs. In this presentation, we discuss an approach that enhances both analytical and numerical efficiency by fitting the linear power spectrum with cosmology-independent functions. This enables us to map loop integrals in cosmology to QFT integrals featuring massive propagators. Additionally, we present novel numerical computations of the two-loop corrections to the power spectrum.

Primary author: FAVORITO, Andrea (ETH Zurich)

Presenter: FAVORITO, Andrea (ETH Zurich)

Session Classification: Parallel A