Contribution ID: **1** Type: **not specified**

Junior Prize I - Manuel Loparco

Wednesday, 7 January 2026 10:15 (45 minutes)

QFT in cosmology and beyond

Abstract: Quantum Field Theory (QFT) is the paradigm at the basis of the modern understanding of statistical physics, particle physics and cosmology. While most progress has been made in understanding QFT at weak coupling and in flat space, many questions remain in the contexts of cosmology and strongly coupled QFT. In this talk I will report on recent progress in understanding aspects of QFT on a cosmological background with the use of representation theory. If time permits, I will also discuss on-going research on a new framework for strongly coupled QFTs, where the computation of local observables is reduced to the problem of solving an infinite set of coupled differential equations which can be systematically truncated.