

Contribution ID: 20

Type: Oral

Emergent Cosmology from Quantum Gravity

Wednesday 19 June 2024 14:30 (30 minutes)

In this talk, I will show how cosmological physics emerge from the collective behavior of spacetime quanta within the Group Field Theory (GFT) approach to quantum gravity. In particular, I will review key aspects of the resulting quantum cosmological physics, including the resolution of the initial singularity into a quantum bounce, the presence of a purely quantum geometric inflationary mechanism, the deep connection between cosmological perturbations and quantum gravitational entanglement, and the effects of quantum gravity on the dynamics of these perturbations.

Author: Dr MARCHETTI, Luca (University of New Brunswick)Presenter: Dr MARCHETTI, Luca (University of New Brunswick)Session Classification: Session 2.3