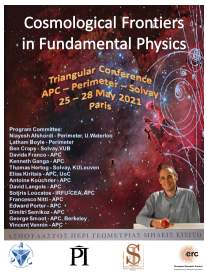

ID de Contribution: **10** Type: **Non spécifié**

Gauge fields in Inflation & Origin of Matter in the Universe

mercredi 26 mai 2021 16:20 (40 minutes)

Modern cosmology profoundly involves particle theory beyond the Standard Model to explain long-standing puzzles: the origin of the observed matter asymmetry, nature of dark matter, massive neutrinos, and cosmic inflation. In this talk, I will explain that a new setup based on embedding axion-inflation in the gauge extensions of the SM can possibly solve and relate these seemingly unrelated mysteries of modern particle physics and cosmology. The baryon asymmetry and dark matter today may be remnants of a pure quantum effect (chiral anomaly) in inflation which is the source of CP violation in inflation. As a smoking gun, this setup has robust observable signatures for the GW background to be probed by future CMB missions and laser interferometer detectors.

Orateur: Prof. MALEKNEJAD , Azadeh (CERN)

Classification de Session: First session, Wednesday