Cosmology Beyond the Analytic Lamppost (CoBALt)



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Thomas Colas, The Open Effective Field Theory of Single-Clock Cosmology

mercredi 2 juillet 2025 10:30 (30 minutes)

Friction and noise naturally emerge when light and gravitational waves propagate through unknown environments. In this talk, I will present recent developments in a systematic effective field theory framework that captures dissipation and noise in a controlled, model-independent way. Building on fundamental principles such as symmetries, locality, and unitarity, I will show how these constraints shape the possible forms of dissipative dynamics. I will then explore the phenomenological implications for the tensor sector in the early universe and for scalar perturbations in the late universe, highlighting potential observational signatures.