

The standard model of cosmology offers a very successful description of the history of the universe at very large scales. It is based on the theory of General Relativity, which gives a unified picture of the geometry of spacetime and gravity. However, it comes in direct conflict with some observational facts, such as the Cosmic Microwave Background (CMB), an electromagnetic radiation coming from the early stages in the history of the universe. This tension can be cured by the inclusion of an inflationary phase (*i.e.* a phase of accelerated expansion), which also provides an elegant explanation for the observed spectrum of the CMB, at the intersection between quantum physics and general relativity.

During this talk I will try to explain in more details the reason for studying inflation as well as why it motivates the study of quantum fields in de Sitter spacetime, and possibly some hints of the specificity of this setup.

Keywords : Primordial cosmology