

## Scale-dependent FLRW Cosmology

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In the present work, we investigate the scale-dependence of the FLRW cosmology at the level of the effective action in the presence of a cosmological constant. We promote the classical parameters of the theory,  $\{G_0, (\cdots)_0\}$ , to scale-dependent couplings,  $\{G_k, (\cdots)_k\}$ , and then we solve the corresponding effective Einstein's field equations. To close the system of equations we impose the "null energy condition". Furthermore, perfect-fluid like parameters are induced via the scale-dependent gravitational coupling. Finally, to exemplify the effect of the running of the couplings on the properties of the scale-dependent FLRW solution in the underlying theory, we present a few concrete examples.

### **arXiv**

**Author:** Mr RINCON, Angel (Pontificia Universidad Catolica de Chile)

**Co-authors:** Mr CONTRERAS, Felipe (Pontificia Universidad Catolica de Chile); Prof. KOCH, Benjamin (Pontificia Universidad Catolica de Chile)

**Presenter:** Mr RINCON, Angel (Pontificia Universidad Catolica de Chile)

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