

The swampland & (Anti-) de Sitter

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Abstract:

For almost two decades the most popular method to address the cosmological constant problem in string theory consisted of string landscapes arising from flux compactifications and uplift mechanisms. Recently, the string landscape approach has been put in question following the swampland conjectures and critical reflections about the uplift mechanisms. In this set of lectures we will discuss the objections against non-supersymmetric Anti-de Sitter vacua and their implications on particle physics phenomenology. The second part of the lectures presents arguments for and against the de Sitter landscape from string theory and its implications on cosmology.