

Challenge in realizing de-Sitter space in large scale of Calabi-Yau compactifications

In this talk, I will discuss recent advances in string landscape and swampland. First, I will clarify various corrections in string compactifications and their implications in 4D $N=1$ SUGRA language. Next, I will focus on warping correction and parameter control issues in achieving de-Sitter space in both KKLT and Large Volume Scenarios. Finally, I will examine the feasibility of these constraints in large scale of Calabi-Yau compactifications, including construction of orientifold Calabi-Yau database and the use of Machine Learning techniques to create new geometries and find orientifold string vacua.

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