Infinite Distances : UV or IR physics ?

Eran Palti*[1]

[1]Ben-Gurion University of the Negev (BGU) – P.O.B. 653 Beer-Sheva, Israel

Abstract

Infinite distances in moduli spaces have been extensively studied in the context of the Swampland program. In the setting of type IIB string theory on Calabi-Yau manifolds, the vector-multiplet moduli space is known exactly in the infinite infrared, so at zero energy. We will consider the question of whether all infinite distance variations in the infrared must correspond to infinite distance variations in the ultraviolet? The two differ by the presence of threshold corrections from integrating out intermediate scale physics. There does not exist a no-go theorem against an infinite distance locus in the infrared being induced solely from threshold corrections. In this talk, I will describe possible candidates for such a situation. They are defined through type IIB string theory, but microscopically are more closely related to a limit of Heterotic string theory where a Kaluza-Klein monopole becomes lighter than the fundamental string.

*Speaker