

# Scale-separated AdS<sub>4</sub> vacua of IIA orientifolds and M-theory

*Wednesday 22 September 2021 15:15 (15 minutes)*

Obtaining string compactifications where the KK scale is much higher than the cosmological constant scale is quite challenging. Such a separation of scales is however necessary for the theory to be genuinely lower-dimensional.

In massive type IIA string theory there are such scale-separated vacua, e.g. the DGKT AdS<sub>4</sub> solutions. It has been shown recently that the classical orientifold backreaction in these vacua can be tuned small. In this talk I show that massless IIA on the other hand allows both weakly and strongly coupled AdS<sub>4</sub> vacua that exhibit scale separation and for which the backreaction can be tuned small as well. I will give evidence that the strongly coupled solutions can be lifted to scale separated and sourceless (but classically singular) geometries in 11D supergravity.

## Do you wish to attend the workshop on-site?

yes

## Summary

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**Session Classification:** Parallel Sessions: String & Mathematical Physics

**Track Classification:** Strings & Mathematical Physics