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# Exploring the AdS conjecture: a positive metric over DGKT vacua

*Tuesday 25 June 2024 17:30 (15 minutes)*

The AdS Distance conjecture proposes a notion of distance between AdS vacua in quantum gravity. Although the need for such a notion is evident, defining and computing this distance is challenging, both conceptually and technically. In my talk, I will address this challenge by proposing a consistent framework for defining and computing the metric over AdS vacua, establishing a well-defined distance. The key idea involves considering the off-shell quadratic variation of the string theory action and evaluating it over the space of on-shell solutions. I will particularly focus on DGKT vacua. Given the ongoing debate regarding whether these vacua exist as fully localized solutions, it is particularly intriguing to test our proposed metric over AdS vacua within this framework. I will show that DGKT vacua exhibit a positive metric, yielding a well-defined AdS distance. In conclusion, I will introduce a potential new Swampland criterion, suggesting that the metric over the space of vacua in quantum gravity, as defined by our proposed procedure, is positive definite.

Talk from the paper https://arxiv.org/pdf/2405.01084 in collaboration with Eran Palti (Ben-Gurion U.)

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**Session Classification:** Parallel session