

A Holographic Triptych at Large N

Friday 7 June 2024 12:00 (30 minutes)

I will summarize recent results, obtained using supersymmetric localization, about the large N limit of path integrals of 3d SCFTs arising on the worldvolume of N M2-branes placed on compact Euclidean manifolds. The leading $N^{3/2}$ term in the large N expansion of these “free energies” receives $1/N$, $\log(N)$, as well as exponentially suppressed corrections. I will describe how these corrections arise in the context of AdS/CFT and will show that in some instances they can be computed precisely and agree with the field theory results. The implications of these results for the physics of AdS₄ black holes and AdS₄ flux vacua in string and M-theory will also be discussed.

Presenter: BOBEV, Nikolay (KU Leuven)