

New dualities from orientifold projections

Wednesday, 15 June 2022 10:30 (35 minutes)

The brane tiling machinery allows us to construct 4d SCFTs that represent the gauge side of the AdS/CFT correspondence. These theories arise from D3 branes probing a singular toric CY cone. One can add orientifold planes to the system, and the projected gauge theory can still be read from the brane tiling. One may expect that either the orientifold yields subleading correction to R-charges and conformal invariance is preserved at large N, or that the orientifold breaks scale invariance. In this talk, I will focus on the orientifold projection of the specific toric singularities denoted as $L^{a,b,a}$ and show that when conformal invariance is broken, a new fixed point arises in the infrared. Moreover, we show evidence for the new SCFT to be dual to the orientifold projection of a different toric geometry.

Presenter: MANCANI, Salvo (Roma Tor Vergata)