

Ohad Mamroud. D-branes in the superconformal index

Wednesday, 11 September 2024 10:40 (40 minutes)

I'll discuss the superconformal index of $N=4$ $SU(N)$ super Yang-Mills and its holographic interpretation as the Euclidean partition function of the dual theory. In both the large N limit and a Cardy-like limit, one can identify certain Euclidean black holes and orbifolds thereof within the index. On the gravity side there are also various SUSY branes on top of these backgrounds. I will describe their origin in the index computation, both in the Cardy limit (as eigenvalue instantons) and in the Bethe Ansatz approach (as certain continuous solutions of the BA equations), and mention their effect on the phase diagram of the theory.