

Superconformal index of the 6d (2,0) theory via the AdS/CFT correspondence

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We study the superconformal index of the 6d (2,0) theory by using the AdS/CFT correspondence. It is well known that on the gravity side at the large N limit, the index can be calculated from the contribution of the Kaluza Klein modes. For the AdS₅/CFT₄ cases, recent works show that in addition to Kaluza Klein modes, D3-branes wrapped on the compact space contribute to the index at the finite N region. In this talk we apply this method to M-theory on AdS₇×S⁴ and propose the superconformal index of the 6d (2,0) theory. Namely, we calculate the index of the 6d (2,0) theory from dual gravity side at finite N by considering the M2-branes wrapped on compact space S⁴. We also discuss the validity of the results obtained from our proposing formula.

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