

APCTP SEMINAR

Large N Topologically Twisted Indices, Holography, and Black Holes

Junho Hong

KU Leuven

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512, APCTP

In this talk, I will present a simple closed form expression for the topologically twisted index of the ABJM theory as a function of the magnetic fluxes and complexified electric chemical potentials valid at fixed k and to all orders in the large N expansion. This in turn leads to analytic expressions for the topologically twisted index at fixed genus in the 't Hooft limit, to all orders in the large $\lambda=N/k$ expansion. These results have important implications for holography and the microscopic entropy counting of supersymmetric static AdS₄ black holes. I will also briefly discuss generalizations to other SCFTs arising from M2-branes.

■ Contact information

- Host: Prof. Heecheol Kim (heecheol1@gmail.com)
- Office: Research Support Team (ra@apctp.org)