Institut Henri Poincaré

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String Theory in Greater Paris

Rencontres Théoriciennes

"Supergravité, théorie des cordes et théorie M"

Jeudi 12 Novembre 2020, 11:00

Nikolay Bobev

KU leuven

e unreasonable effectiveness of higher-derivative supergravity in AdS4 hologra

I will describe the four-derivative corrections to four-dimensional N=2 minimal gauged supergravity and show that they are controlled by two constants. Interestingly, the solutions of the equations of motion in the two-derivative theory are not modified by the higher-derivative corrections. I will use this to arrive at a general formula for the regularized on-shell action for any asymptotically locally AdS4 solution of the theory and show how the higher- derivative corrections affect black hole thermodynamic quantities in a universal way. I will employ these results in the context of holography to derive new explicit results for the subleading corrections in the large N expansion of supersymmetric partition functions on various compact manifolds for a large class of three-dimensional SCFTs arising from M2- and M5-branes. I will also briefly discuss possible extensions and generalizations of these results.

Institut Henri Poincaré, salle 314, 3ème étage

Retrouvez les activités de la communauté parisienne de théorie des cordes sur
http ://string.lpthe.jussieu.fr
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