Séminaire de matrices, cordes et géométries aléatoires

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Vendredi 24/05/2019, 14h15-15h15

Orme des Merisiers Salle Claude Itzykson, Bât. 774

Einstein Gravity from ANEC correlators

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In this talk, I will discuss properties of the averaged null energy (ANEC) operator in conformal field theories. I will describe how to compute correlation functions involving ANEC operators and local operators, by deriving an OPE between the ANEC operator and local operators. This technology is particularly useful for large N CFTs with a large gap to higher spin operators. In such a scenario, I will show that the correlation function with two local operators and an arbitrary number of ANECs is simply given by a sequence of differential operators acting on the local two-point function. I will use this technology to show that in any large N CFT with a large gap, the bulk dual must be Einstein gravity, in the sense that the OPE coefficients must match those of Einstein gravity with minimally coupled matter.