Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Advances in N=4 conformal supergravity

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N=4 conformal supergravity is both interesting and notoriously difficult. The usual techniques of N=2 superconformal multiplet calculus fails to be trivially extended for the N=4 case. And that is the reason why an invariant action for N=4 conformal supergravity was lacking despite the Weyl multiplet being known almost 3 decades back. In one of the previous work, notwithstanding the lack of techniques, we developed a direct method of constructing the invariant action. In this talk we will discuss how we can obtain a more general class of action by developing an invariant N=4 density formula that is a generalization of the N=2 chiral density formula. This opens up the possibility of studying the supergravity aspects of N=4 black holes in a complete N=4 setting which was so far being studied in a truncated N=2 setting.

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