On non-commutative AdS/CFT correspondence

Aleksandr Pinzul

Abstract

We address the question whether AdS/CFT correspondence could be applied in a non-commutative (NC) setting. To this end, we construct the NC version of the 2-dimensional AdS space and study 2- and 3-point functions for a scalar field on this space. We show that they have a form that assumes the existence of some (unknown) dual conformal theory. We also discuss this result from the point of view of quantum gravity.