

Workshop on Integrability



Contribution ID: 7

Type: 20 Min Talk

3D Chern-Simons gravity and $osp(1|2)$ CFT

Monday, 28 March 2022 16:30 (30 minutes)

In this talk, I will talk about the holographic description of the $osp(1|2)$ super conformal blocks on the sphere and the torus. I will concentrate on the 2-point and 3-point conformal blocks on the sphere and the 1-point and 2-point blocks on the torus. I will present some results we have obtained in a work in process (to be published soon). It is known that the holomorphic part of primary superfields can be decomposed into two ordinary primary fields (the even (bosonic) and odd part (fermionic)), thus we can express the general correlation functions in terms of these ordinary primary fields (the obtained terms we call them component of the correlation functions). I will show how these components of the correlation functions can be obtained from the 3D Chern-Simons theory context. This idea of computing the conformal blocks from the 3D Chern-Simons theory has been proposed and developed (for some specific algebras, e.g. the $sl(2)$ and $sl(3)$ algebras) in some previous works of one of the authors and other authors, in this talk I will talk about the case of the $osp(1|2)$ algebra.

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Track Classification: Participants Talks: Abstracts of Participants Talks