Contribution ID: **54** Type: **not specified**

Renyi entropy and conformal defects

Wednesday, 18 May 2016 17:50 (20 minutes)

After introducing the concept of Rényi entropy, we develop a field theoretic framework for calculating its dependence on the shape of the entangling surface in a conformal field theory. Our approach rests on regarding the corresponding twist operator as a conformal defect. We propose a simple constraint between the coefficient defining the two-point function of the displacement operator and the conformal weight of the twist operator, which consolidates a number of distinct conjectures on the shape dependence of the Rényi entropy. To conclude we give an explicit example for the free scalar in 4d and we comment on a recent holographic discrepancy.

Primary author: Dr BIANCHI, Lorenzo (Universität Hamburg)

Presenter: Dr BIANCHI, Lorenzo (Universität Hamburg)

Session Classification: Parallel Session 18 pm