

Unité associée au CNRS UMR 7589

## Laboratoire de Physique Théorique et Hautes Energies

Université P. et M. Curie

Université Denis Diderot

### SEMINAIRE du L.P.T.H.E.

*Vendredi 9 Novembre 2018, 11:00*

## Hirohiko Shimada

*OIST Okinawa*

### The hierarchy of the OPE coefficients and the low-lying operators in CFT

*The continuous families of CFT with varying central charge has gained importance after the revival of the conformal bootstrap in  $d > 2$ . Unlike the 2d rational CFTs, the 4-point function of the fundamental fields has infinitely many intermediate channels, which shows a tree-like pattern of the unitarity violation. The  $O(n)$  model for  $|n| < 2$  offers one nice example, where such properties are studied in detail. We discuss the basic examples in arXiv :1803.06938, where the analytic properties and exponential decays of the OPE coefficients are related to the symmetry of the hyperbolic geometry. We also use a special polynomial of  $n$  arising from the multiplicities in the torus partition function and see how the low-lying dimensions are constrained from the modular invariance.*

**Bibliothèque du L.P.T.H.E., tour 13 / 4<sup>ème</sup> étage**

*N.B. La liste de tous les séminaires en région parisienne est disponible sur  
<http://string.lpthe.jussieu.fr/semparis>*