Séminaire commun

Lightcone bootstrap of higher point functions

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LPENS – L378 / L380 (24 Rue Lhomond)

Résumé

Studying the lightcone limit of CFT correlation functions has been one of the leading methods to analyse the crossing symmetry analytically. In a CFT with a twist gap, a 4-point function of identical scalars leads to interesting predictions of the existence of families of infinite double-twist operators and their OPE data. However a complete knowledge of the CFT spectrum is only accessible from bootstrapping correlators with non-identical external operators with arbitrary spin, which is in general a difficult problem. Alternatively one can look at correlators of more than four identical scalars which, via OPE, captures the same information. I will discuss how to systematically set up the lightcone bootstrap for 5- and 6-point functions of identical scalars.