

RENORMALIZATION OF CONFORMAL CORRELATORS AND IT'S IMPLICATIONS

SEMINAR

MS. PRATYUSHA CHOWDHURY

University of Southampton



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Abstract

Conformal invariance implies strong constraints on the form of correlation functions of gauge invariant operators, and these correlators diverge when their conformal dimensions satisfy certain relations. These divergences and their renormalization has been understood up to three-point functions in general spacetime dimension, and for specific spacetime dimensions for holographic 4-point function. Going from odd to even dimensions increases the complexity of the analysis and in our work we discuss how to renormalize holographic 4-point functions in $d=4$. Analysis shows that new features arise when these correlators are renormalized and it may impose constraints on the spectrum of the CFT. The natural language to deal with these divergences is momentum space. So in this talk I will first discuss about momentum space CFT and then focus on divergences of these correlators and it's renormalization.

Everyone is invited to attend