

NEW PERSPECTIVES IN CONFORMAL FIELD THEORY AND GRAVITY

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26 - 29 September 2023 DESY Hamburg, Germany



Contribution ID: 278

Type: **not specified**

Analytic bootstrap for defect CFTs

Thursday 28 September 2023 14:08 (18 minutes)

A powerful way to study Conformal Field Theories analytically is the Lorentzian inversion formula, which allows to extract the CFT data of a given four-point function from its double discontinuity. One can also derive a dispersion relation that reconstructs directly the full correlator from the same double discontinuity. I will consider the generalisation of these methods to defect CFTs, discussing a recently derived dispersion relation that allows to compute the two-point functions of bulk operators in presence of a defect. I will show an application of this formalism to the $O(N)$ model in the presence of a magnetic line defect, and to the case of a line defect representing a spin impurity.

Summary

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Session Classification: Parallel Session Thursday: Strings / Mathematical Physics I

Track Classification: Strings & Mathematical Physics