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Bootstrapping holographic defect correlators

Tremendous progress has been achieved during the last years in bootstrapping conformal correlators at strong coupling using analytical bootstrap methods and the AdS/CFT correspondence. In particular the development of Lorentzian inversion formulae revealed helpful in reconstructing four-point functions. In this work we present how this technology can be adapted to defect setups in order to compute scalar two-point functions in the presence of a conformal defect in the strong-coupling regime. We derive a dispersion relation that allows us to efficiently generate elegant closed-form expressions for a variety of setups, and in particular we apply this method to two-point functions of single-trace half-BPS operators in the presence of the supersymmetric Wilson line defect in $4d$ $\mathcal{N} = 4$ SYM, using minimal input from holography.

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