

Correlation functions for disorder-type defects in $N=4$ super-Yang-Mills theory

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Résumé

The admissible boundary conditions and defects of a given quantum field theory are fundamental pieces of information that characterise it. Although finding the space of admissible boundaries and defects is generally difficult, much progress can be made for highly symmetric systems that enjoy conformal symmetry and/or supersymmetry. In this talk I will discuss 1/2-BPS superconformal defects in $N=4$ super-Yang-Mills theory and closely related systems, which are specified by imposing singularity conditions at the location of the defect. By focusing on simple correlation functions in the presence of such defects, I will describe how characteristic data can be extracted using perturbation theory, (super-)conformal symmetry, and integrability.