Bologna Workshop on:
CFT AND INTEGRABLE MODELS
and their applications to Quantum Field Theory, Statistical Mechanics and Condensed Matter Physics

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Energy flow correlations in CFT

Monday, 15 September 2014 14:30 (1 hour)

We present a new approach to computing energy flow correlations in a generic CFT. These infrared finite observables are familiar from collider physics studies and describe the angular distribution of energy in outgoing radiation created from the vacuum by some source. The energy correlations can be expressed in terms of Wightman correlation functions in a certain limit. We explain how to compute these quantities starting from their Euclidean analogues by means of a non-trivial analytic continuation which, in the framework of CFT, can elegantly be performed in Mellin space. We illustrate the general formalism in N=4 SYM, making use of the well-known results on the four-point correlation function of half-BPS scalar operators.

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