Bologna Workshop on:

CFT AND INTEGRABLE MODELS

and their applications to Quantum Field Theory, Statistical Mechanics and Condensed Matter Physics

Contribution ID: **40** Type: **Talk**

Entanglement Entropy of the Lee-Yang Model from Branch Point Twist Fields

Wednesday, 17 September 2014 11:00 (30 minutes)

In this talks I will present new (unpublished) results regarding the entanglement entropy of one of the simplest integrable models: the Lee-Yang theory. Despite its simplicity, the Lee-Yang theory is non-unitary. One of the most famous consequences of this non-unitarity was the realization by Zamolodchikov that the form factor expansion of correlation functions is now given in terms of an alternating series. In my talk I will explain how form factors of twists fields and their correlators may be computed for this model which enter an expression for the entanglement entropy of the theory. I will show how this form factor expansion reproduces the predicted CFT behaviour for short distances and how next-to-leading order corrections to the entanglement entropy of large sub-systems differ from those found for unitary models.

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