

# Entanglement entropy of a compact of entangled scalar fields in a $D$ -dimensional Riemann-Sennholtz model

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## Abstract

We study the entanglement entropy of a compact of  $U(1)$  scalar fields in a  $D$ -dimensional Riemann-Sennholtz model, in the presence of a  $D$ -dimensional Schwarzschild radiation. We consider the entanglement entropy of the compact in the presence of two spatial dimensions in the  $D$ -dimensional Riemann-Sennholtz model. We find that the entropy of the compact is independent on the spatial dimension of the scalar fields. In the second order model, we find that the entropy of the compact depends on the spatial dimension of the scalar fields.

## 1 Introduction

In this paper we have evaluated the entanglement of a compact of  $U(1)$  scalar fields in a  $D$ -dimensional Riemann-Sennholtz model, in the presence of a  $D$ -dimensional Schwarzschild radiation. In this paper we have studied the entropy of a compact of  $U(1)$  scalar fields in a  $D$ -dimensional Riemann-Sennholtz model in the presence of a  $D$ -dimensional Schwarzschild radiation. In the presence of two spatial dimensions, the entropy of the compact is independent on the spatial dimensions of the scalar fields. In the third order model, we find that the entropy of the compact depends on the spatial dimensions of the scalar fields.

We have analyzed the entanglement of a compact of  $U(1)$  scalar fields in a  $D$ -dimensional Riemann-Sennholtz model, in the presence of a  $D$ -dimensional Schwarzschild radiation. We have assumed that the compact is an ordered solution. In the presence of a non-uniqueness of the curvature constant, we have determined that the compact is an unordered solution. The entropy of the compact is independent on the spatial dimensions of the scalar fields. In the fourth order model, we find that the entropy of the compact is independent on the spatial dimensions of the scalar fields.

We have analyzed the entanglement of a compact of  $N$ -dimensional Schwarzschild radiation. The density of the compact is independent of the spatial dimensions of the scalar fields. As in quantum gravity, we have assumed that the compact is an ordered solution. We have determined that the compact is unordered the first order model. In the second order model, we find that the density of the compact is independent on the spatial dimensions of the scalar fields. In the fourth order model, we find that the density of the compact is independent on the spatial dimensions of the scalar fields.

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In this paper, we have presented a new method to analyze the entanglement of a compact of  $N$ -dimensional Schwarzschild radiation. The method is

## 2 The Schwarzschild radiation

The volume symmetry of the Schwarzschild radiation is a simple function of the spatial dimension of the scalar fields. The space time is the Riemann-Sennholtz coordinate space. We will use the coordinates  $x_t$  in the next section to get the volume symmetry of the radiation. The volume symmetry of the radiation is calculated by taking the hypersurface of the Riemann-Sennholtz radiation. The volume symmetry of the radiation is then

$$V(\vec{x}) = \frac{1}{\sqrt{3}}. \quad (1)$$

The hyperplane  $x_8$  is obtained by taking the volume of the hypersurface of the Riemann-Sennholtz radiation. In this case, the hypersurface is the black string  $\vec{x}_8$  and the volume symmetry is the density of the vector  $x_t$ . The hyperplane  $x_8$  is then

$$H_{\mu\nu} = -\frac{1}{\sqrt{3}}, \quad (2)$$

where the hyperplane  $\vec{x}_8$  is the sphere with four spatial dimensions  $m$ , and

*We have chosen to take the hypersurface of the Riemann – Sennholtz radiation as the black string as*

In this paper, we have considered the case of the compact Riemann-Sennholtz radiation with three spatial dimensions. The compact Riemann-Sennholtz radiation is then an inverse solution of the Klein-Gordon equation with the mass

## 3 The entanglement in the model

As a first step, let us consider the model we have presented here. Recall that the actual interaction between the two spatial dimensions is a product of two

spatial dimensions; the first dimension is given by

$$-\frac{1}{2} - \frac{1}{3} - \frac{1}{4} - \frac{1}{5} - \frac{1}{6} - \frac{1}{7} - \frac{1}{8} - \frac{1}{9} - \frac{1}{10} - \frac{1}{11} - \frac{1}{12} - \frac{1}{13} - \frac{1}{14} - \frac{1}{15} - \frac{1}{16} - \frac{1}{17} - \frac{1}{18} - \frac{1}{19} - \frac{1}{20} - \dots \quad (3)$$

## 4 Conclusion and outlook

We have investigated the entanglement in the Riemann-Sennholtz model of the spatial dimension of the scalar fields. It turns out that the entropy of the compact is independent on the spatial dimension of the scalar fields, which means that the entropy of the compact is independent on the spatial dimension of the scalar fields. This is in contrast to the case of the linearized Riemann-Sennholtz model. In the Riemann-Sennholtz model, the entropy of the compact is independent on the spatial dimension of the scalar fields, which means that the entropy of the compact depends on the spatial dimension of the scalar fields. In contrast, in the case of the linearized Riemann-Sennholtz model, the entropy of the compact depends on the spatial dimensions of the scalar fields, which means that the entropy of the compact depends on the spatial dimensions of the scalar fields. The only way to fix the spatial dimension of the scalar fields is to fine-tune the entanglement.

In both cases the entropy of the compact is independent on the spatial dimension of the scalar fields. The only difference is that in the case of the Riemann-Sennholtz model, the entanglement is also independent on the spatial dimension of the scalar fields. It is interesting to speculate that in the case of the Riemann-Sennholtz model we might be able to fix the spatial dimension of the scalar fields, which would allow us to fine tune the entanglement, unlike the case of the linearized Riemann-Sennholtz model, which is not possible. We will discuss this idea further in the future.

In our next section, we provide the numerical result of the Monte Carlo test. In this section we will present the numerical results of the Monte Carlo test. We start with the main result for the linearized Riemann-Sennholtz model:

$$\int_0^\infty \sigma_{0\sigma\sigma} = 0. \quad (4)$$

In  $\sigma_{0\sigma\sigma} = 0$  we obtain the corresponding binomial distribution for the linearized Riemann-Sennholtz model. This is obtained from eqs. (2) and (3). A more important result is that the linear

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## 6 Appendix

In the case of the Higgs model, the one-loop corrections come from the mechanicals as well as the electroweak interactions. The Minkowski metric has been studied in detail in [5] where one of the primary goals was to determine the one-loop corrections. Here we present a method for calculating the one-loop corrections to the Higgs model.

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