

Conformal spacetime for the Einstein-Gauss-Bonnet theory in three dimensions

R. F. T. L. S. M. S. Nambu F. L. J. S. L. S. F. Nambu

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Abstract

We consider the Einstein-Gauss-Bonnet theory in three dimensions and show that the continuum limit of the theory contains a form of a subleading black hole. We also show that the form of the black hole corresponds to the superpotential of the Gauss-Bonnet theory in four dimensions. We conclude that the form of the black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions.

1 Introduction

The description of the Einstein-Gauss-Bonnet theory in three dimensions is still in its infancy, partly due to the difficulty in considering the black hole as a function of the three dimensions of the world-sheet. Secondly, it is difficult to introduce in the non-negative gauge theories the Schwarzschild black hole. The Einstein-Gauss-Bonnet theory, however, is one of the most widely used gauge theories and it is based on the three dimensional Einstein-Jacobi equations. The largest valid formulation of the theory is the one based on the gravity potential. We have shown that the three dimensional Einstein-Gauss-Bonnet theory contains a subleading black hole in four dimensions. This consequence of the generalizations of the Einstein-Gauss-Bonnet theory has been discussed in the papers [1] and [2].

In the two previous sections we have described the three dimensional Einstein-Gauss-Bonnet theory in four dimensions. In this paper we concentrate on the different types of the SUSY three dimensional U(1) models. In Section 3 we present the four dimensional Einstein-Gauss-Bonnet theory in three dimensions. In Section 3 we show that the two different types of the SUSY three dimensional U(1) models in four dimensions are equivalent. In Section 4 we present a continuum limit of the Einstein-Gauss-Bonnet theory, which contains a subleading black hole in four dimensions, and therefore we also present the continuum limit of the Einstein-Gauss-Bonnet theory in three dimensions. In Section 5 we compare the existence of a subleading black hole with the one of the Gauss-Bonnet theory, which is in four dimensions. In Section 6 we show that the subleading black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in four dimensions. In Section 7 we show that the form of the subleading black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. We conclude that the form of the subleading black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions.

We have studied the three-dimensional form of the subleading black hole in four dimensions. We have shown that the form of the subleading black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in four dimensions and the Gauss-Bonnet theory in three dimensions. In Section 8 we show that the form of the subleading black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. In Section 9 we show that the subleading black holes in four dimensions can be obtained from the Gauss-Bonnet theory in three dimensions. In Section 10 we show that the form of the subleading black holes in four dimensions is the one of the Gauss-Bonnet theory in four dimensions. In Section 11 we show that the form of the subleading black holes in four dimensions can be obtained from the Gauss-Bonnet theory in three dimensions. In Section 12 we show that the form of the subleading black holes in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. In Section 13 we show that the subleading black holes in four dimensions in four dimensions correspond to the Gauss-Bonnet theory in three dimensional form of the subleading black holes in four dimensions. The form of the subleading black holes in four dimensions is the one of the Gauss-Bonnet theory in three dimensions. In Section 14 we show that the form of the subleading black holes in four dimensions is the one of the Gauss-Bonnet theory in three dimensions. In Section 15 we show that the form of the subleading

Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the superpotential of the Gauss-Bonnet theory in three dimensions.

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3 Non-linear form of the black hole

In this section, we will consider the non-linear form of the black hole. The first thing that we notice is that it is an event horizon in a three dimensional Euclidean manifold. This means that there is a uniform distribution of the coordinates and the time is any fixed point. This gives us a solution to the Einstein equation which is the following

$$+ + + - = + \frac{1}{2} \text{ }^{(3)} \text{ } \quad (1)$$

4 Conclusions

We have studied the Einstein-Gauss-Bonnet theory in three dimensions in four dimensions and found in this framework the form of the black hole in four dimensions. It is important to realize that the form of the black hole in four dimensions is not the one of the Gauss-Bonnet theory in four dimensions as it is the one of the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions may be the one of the Gauss-Bonnet theory in three dimensions. The form of the black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. Therefore, our results are valid in three dimensions only.

In this paper we showed that the form of the black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. This

can be verified in three dimensions only. This is the best approximation we have found to the form of the black hole in four dimensions and it is valid in four dimensions only. It is important to realize that the form of the black hole in four dimensions is not the one of the Gauss-Bonnet theory in four dimensions as it is the one of the Gauss-Bonnet theory in three dimensions.

In this paper we have seen that the form of the black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. This can be verified in three dimensions only. This is the best approximation we have found to the form of the black hole in four dimensions and it is valid in four dimensions only. It is important to realize that the form of the black hole in four dimensions is not the one of the Gauss-Bonnet theory in four dimensions as it is the one of the Gauss-Bonnet theory in three dimensions. Hence, our results are valid in three dimensions only. The form of the black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. Therefore, our results are valid in four dimensions only. The form of the black hole in four dimensions corresponds to the one of the Gauss-Bonnet theory in three dimensions. Therefore, our results are valid in four dimensions only. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions. Therefore, our results are valid in four dimensions only. The form of the black hole in four dimensions corresponds to the Gauss-Bonnet theory in three dimensions.

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