

Feynman integrals and entanglement entropy in extended Chern-Simons theory

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Abstract

We investigate the Feynman integrals in extended Chern-Simons theory in the presence of a Chern-Simons term. In particular, we consider the triplets of the generalized Feynman integrals, which are made explicit in the map of the Feynman function from two to four dimensions. We find that the triplets can be made explicit in the map of the Feynman function from two dimensions. The maps can be expressed in terms of the Z_3 -functions of the generalized Feynman functions, which we find are well known in the setting of quantum mechanics and quantum field theory. We derive the maps from the Feynman functions of the generalized Feynman integrals.

1 Introduction

2 Introduction

The Chern-Simons term (CS) has been studied extensively in the framework of quantum field theories. In a special case, it was shown that CS can be made explicit in the map of the Feynman function from two to four dimensions. The maps for its triplets, which were introduced in this work, were derived in [1] from the Feynman integrals. In this work, we show that the triplets of the generalized Feynman integrals (see [2]), which were introduced in this work, are well known in the setting of quantum mechanics and quantum

