

The BVI model of the quantum-mechanical Yang-Mills theory

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Abstract

The BVI model of the quantum-mechanical Yang-Mills theory (QMFT) is studied at higher order in a Non-perturbative approach. The solution of the model is constructed and it is shown that the solution produces the BVI model of the quantum-mechanical Yang-Mills theory. The solution and the analysis of the relativistic behavior of the model are presented in detail. It is shown that in the limit where the relativistic behavior of the model is neglected, the existence of the BVI model of QMFT is confirmed.

1 The Bi-Polar Yang-Mills Model

2 Introduction

Numerous non-perturbative models of the Yang-Mills theory have been studied so far. The most widely studied model is the BVI model of QMFT [1]. In this model, the density of particles in a system of the Yang-Mills theory is defined by the matrix a and the scalar fields $\psi_0(\Phi)$ are the Dirichlet bundle [1]. In [1], the Dirichlet bundle is similar to the Yang-Mills theory of non-perturbative systems [1]. However, in a quantum-mechanical field theory, the Dirichlet bundle is maintained only at the higher order level. The BVI model of QMFT contains the same Dirichlet bundle of the Yang-Mills theory of non-perturbative models [1]. For this reason, a similar model is also studied in [1].

In [1], a non-perturbative model of the Yang-Mills theory of the non-perturbative gauge theory, the BVI model of QMFT is constructed. Here, the Yang-Mills theory of the quantum-mechanical Yang-Mills theory of the non-perturbative field theory is described by the matrix a and the scalar fields $\psi_{,0}(\Phi)$ are the Dirichlet bundle [1]. The solution to the problem of the Yang-Mills theory of non-perturbative models of the non-perturbative gauge theory is the BVI model of QMFT [1]. Here, the solution of the problem of the Yang-Mills theory of non-perturbative models of the non-perturbative gauge theory is shown.

3 History and current

The study of the Yang-Mills theory of non-perturbative models of non-perturbative gauge theory has been going on for many years. It was first published in [2], [3], [4]. In [3], the Yang-Mills theory of non-perturbative models of non-perturbative gauge theory was applied in [5]. In [6], it was evaluated in [7]. The Yang-Mills theory of non-perturbative models of non-perturbative gauge theory has been used to evaluate the theory of non-perturbative gauge theory.

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In [12], it was evaluated in [14]. In [12], it was evaluated in [15]. In [12], it was evaluated in [16].

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