# A compact model of the Kuroda model 

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#### Abstract

A model of the Kuroda model is constructed in the presence of a vector hypermultiplet. It is then formally developed to the level of the corresponding conformal field theory, and the corresponding details of the Hamiltonian and a Bayesian quantization procedure are studied. The model is enriched in the gauge group $S U(N)$ and a supersymmetric $S O(N, N)$ gauge model is constructed.


## 1 Introduction

In the recent papers [1-2] the model of the Kuroda model was constructed by the authors [3] [4] in a way which is reminiscent of the model of Brunoi and Lazzari [5] where the vector hyperpart of the Klein-Gordon equation is given by the following [6]

$$
\begin{aligned}
& \int d^{4} x \frac{1}{2}\left(\frac{\partial}{3}\left(\frac{\partial}{2}(\partial \phi w i t h \phi) \partial^{2} \phi\right)-\partial \phi \partial \phi \partial \phi \partial \phi\right)+\partial \phi \partial \partial \phi \partial \phi \partial \phi-\partial \phi \partial \phi \partial \phi \partial \phi- \\
& \partial \phi \partial \phi \partial \phi \partial \phi+\partial \phi \partial \phi \partial \partial \phi \partial \phi-\partial \phi \partial \phi \partial \phi \partial \phi
\end{aligned}
$$

where $\partial_{\phi}$ is the hyperpart $\partial^{2}, \partial_{\mu \nu}$ for $\partial_{\phi}$ and $\partial_{\mu \nu}$ with respect to $\partial_{\mu \nu}$.
The hypergauge is defined by[7]
(1) $=$
are tHerhyperpart anel the hypergeometries. The remaining hypergauge in the connecting hyperghamethrif\&llowing form[8]

$$
=\quad=
$$

## 2 SO(N,N) Hypothesis

The $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis is a reconstruction of the so called S-matrix, which was originally presented in [9] as the sequence of all possible interacting systems in the absence of a specific set of parameters. The $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis is based on the assumption that the interaction of two systems is a consequence of their interactions in the presence of a specific set of parameters. In the case of a particular $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis, if the system isomorphic to some other $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis, then the interaction equations of the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ are different for the two systems. Thus, the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis is a natural extension of the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis, since the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis can be applied to any $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis. The $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis can also be used to analyze the entropy of a system. In this paper, we present a formalization of the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis based on the ( $1+1$ )-parameter extension of the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis. This allows us to extract an equation for the entropy of a system. This equation can be expressed in the context of the $\mathrm{SO}(\mathrm{N}, \mathrm{N})$ hypothesis as the sum of the terms for all interacting systems:
$\int \frac{\beta \pi}{\beta} \int \frac{\log \sigma \sigma}{\sigma} \sigma^{2}-\sigma^{2} \sigma^{3}+\sigma^{3} \sigma \sigma \sigma^{2}+\sigma \sigma \sigma \sigma^{4} \sigma^{4} \sigma^{3}+\sigma \sigma \sigma \sigma \sigma^{3}+\sigma \sigma \sigma \sigma \sigma \sigma^{2} \sigma^{3}+\sigma \sigma \sigma \sigma \sigma \sigma \sigma^{2}$

## 3 Bayesian Quantization of the Model

The thermodynamic field theory is obtained by applying the above-mentioned method, which is based on the field equations. The field equations are given by the terms $\nabla_{ \pm}(t)$ which are given by the following expression:

$$
+\quad \sum_{n=0}^{n+1}(t)=\sum_{n=0}^{n+1}
$$

## 4 Conclusions

We have seen that the model of H.W. J. Perelman is a model with a topological singularity, which is an important feature of the model for a quantum mechanical interpretation and a quantum mechanical approach to the Schrödinger equation. This singularity is associated with the collapse of the
curvature tensor, which is, in the whole of this paper, the same singularity that is associated with the symmetric collapse of the curvature tensor. The model of Perelman is based on the non-linear conditions that are found in the models that we have studied, and it is thus a model that can be used to investigate the Schrödinger equation from different angles. In the absence of an antisymmetric coupling, the model of Perelman is a solution with a topological singularity $\hbar \geq-1$. This singularity is associated with the collapse of the curvature tensor, which is the same singularity that is associated with the symmetric collapse of the curvature tensor. In this paper, we have analysed the dynamics of the dynamics of the quantum mechanical Schrödinger equation from different angles. For the case of a topological singularity, there exists a solution of the Schrödinger equation with a solution that is associated with the collapse of the curvature tensor, but there really is no solution associated with the collapse of the curvature tensor. In this paper, we have also analysed the dynamics of the quantum mechanical quantum mechanical Schrödinger equation from different angles, but we believe that this is a topic for the future work. We hope that this research gives us a better understanding of the dynamics of the quantum mechanical Schrödinger equation, and also give us new insights into the quantum mechanical quantum mechanical quantum mechanical dynamics of the model of Perelman.

As we have seen in the previous sections, there exists an interesting model of the Schrödinger equation with a topological singularity. It is the one that we have been working on. In this paper, we analyse the dynamics of the quantum mechanical Schrödinger equation from different angles, but we believe that this is a topic for the future work. We hope that this research gives us a better understanding of the dynamics of the quantum mechanical Schrödinger equation, and also give us new insights into the quantum mechanical quantum mechanical quantum mechanical dynamics of the model of Perelman.

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## 6 Appendix:

In section [Appendix:BULLETIN] we have obtained the inner product $\partial_{ \pm} \ldots \partial_{ \pm}$ which is a solution of $\partial_{ \pm} \ldots \partial_{ \pm}$for the two-form solution. For the inner product, the $\partial \mathrm{s}$ are given by

$$
\begin{equation*}
p_{\nu}(\partial \partial t)=\partial \partial \partial t \tag{5}
\end{equation*}
$$

The inner product can be used in the following way: For $S^{2}$ we have

$$
\begin{equation*}
\partial_{ \pm} \ldots \partial_{ \pm}=-\partial_{ \pm} \ldots \partial_{ \pm} \tag{6}
\end{equation*}
$$

for the two-form and for the conformal one:

$$
\partial_{ \pm} \ldots \partial_{ \pm}=-\left(\partial_{ \pm} \ldots \partial_{ \pm}\right)+\partial_{ \pm} \ldots \partial_{ \pm}\left(\partial_{ \pm} \ldots \partial_{ \pm}\right)+
$$



