

QM, QFT et Relativité

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Chapitre 1

Mécanique Quantique, Théorie Quantique des Champs et Relativité

1.1 Introduction

Ce document explore les connexions entre la mécanique quantique, la théorie quantique des champs et la relativité dans le cadre T0.

1.2 Mécanique quantique

L'équation de Schrödinger :

$$i\hbar \frac{\partial \psi}{\partial t} = \hat{H}\psi \quad (1.1)$$

1.3 Théorie quantique des champs

Les champs quantiques sont des opérateurs sur l'espace de Fock.

title

Le champ ξ unifie QM et QFT :

$$\mathcal{L}_{T0} = \mathcal{L}_{SM} + \mathcal{L}_\xi \quad (1.2)$$

1.4 Relativité

La relativité restreinte et générale sont des limites de la théorie T0 quand $\xi \rightarrow 0$.

1.5 Gravitation quantique

Le champ ξ fournit un pont entre la mécanique quantique et la gravitation.

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