

A QFT Cookbook

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Preface

In this work I aim to provide an introduction to the topics usually ignored by theoretical physicists, which may be useful for understanding quantum field theories from a more fundamental perspective. The initial motivation behind this work was to create a summarized overview of topics I have studied (and still studying) during my PhD. Therefore, I deeply apologize for the mistakes, errors and inconsistencies you may encounter while reading this book.

Since my initial goal was to learn while writing this quasi-book, I will be heavily referencing well-known books and articles, and basically summarizing them in a (hopefully) easier-to-understand language. Also, I hope you have fun while reading this work!

Part I

Solitons and Instantons

Chapter 1

What are Solitons?