



# Structural Aspects of Quantum Field Theory and Noncommutative Geometry

*Gerhard Grensing*

Download now

[Click here](#) if your download doesn't start automatically

# Structural Aspects of Quantum Field Theory and Noncommutative Geometry

*Gerhard Grensing*

## **Structural Aspects of Quantum Field Theory and Noncommutative Geometry** Gerhard Grensing

This book is devoted to the subject of quantum field theory. It is divided into two volumes. The first can serve as a textbook on the main techniques and results of quantum field theory, while the second treats more recent developments, in particular the subject of quantum groups and noncommutative geometry, and their interrelation.

The first volume is directed at graduate students who want to learn the basic facts about quantum field theory. It begins with a gentle introduction to classical field theory, including the standard model of particle physics, general relativity, and also supergravity. The transition to quantized fields is performed with path integral techniques, by means of which the one-loop renormalization of a self-interacting scalar quantum field, of quantum electrodynamics, and the asymptotic freedom of quantum chromodynamics is treated. In the last part of the first volume, the application of path integral methods to systems of quantum statistical mechanics is covered. The book ends with a rather detailed investigation of the fractional quantum Hall effect, and gives a stringent derivation of Laughlin's trial ground state wave function as an exact ground state.

The second volume covers more advanced themes. In particular Connes' noncommutative geometry is dealt with in some considerable detail; the presentation attempts to acquaint the physics community with the substantial achievements that have been reached by means of this approach towards the understanding of the elusive Higgs particle. The book also covers the subject of quantum groups and its application to the fractional quantum Hall effect, as it is for this paradigmatic physical system that noncommutative geometry and quantum groups can be brought together.

Readership: Graduate students and professionals in theoretical and mathematical physics.



[Download Structural Aspects of Quantum Field Theory and Non ...pdf](#)



[Read Online Structural Aspects of Quantum Field Theory and N ...pdf](#)

## **Download and Read Free Online Structural Aspects of Quantum Field Theory and Noncommutative Geometry Gerhard Grensing**

---

### **From reader reviews:**

#### **Scott Peters:**

Book is to be different per grade. Book for children until eventually adult are different content. To be sure that book is very important normally. The book Structural Aspects of Quantum Field Theory and Noncommutative Geometry has been making you to know about other information and of course you can take more information. It doesn't matter what advantages for you. The guide Structural Aspects of Quantum Field Theory and Noncommutative Geometry is not only giving you a lot more new information but also to become your friend when you sense bored. You can spend your personal spend time to read your e-book. Try to make relationship with all the book Structural Aspects of Quantum Field Theory and Noncommutative Geometry. You never experience lose out for everything in the event you read some books.

#### **Augustine Klotz:**

Now a day people who Living in the era where everything reachable by connect with the internet and the resources in it can be true or not demand people to be aware of each information they get. How many people to be smart in acquiring any information nowadays? Of course the answer is reading a book. Studying a book can help people out of this uncertainty Information specifically this Structural Aspects of Quantum Field Theory and Noncommutative Geometry book because book offers you rich details and knowledge. Of course the data in this book hundred per cent guarantees there is no doubt in it everybody knows.

#### **Hubert Drummond:**

This book untitled Structural Aspects of Quantum Field Theory and Noncommutative Geometry to be one of several books this best seller in this year, here is because when you read this reserve you can get a lot of benefit on it. You will easily to buy that book in the book retailer or you can order it by using online. The publisher of this book sells the e-book too. It makes you easier to read this book, because you can read this book in your Cell phone. So there is no reason to your account to past this e-book from your list.

#### **Beverly Rosa:**

Typically the book Structural Aspects of Quantum Field Theory and Noncommutative Geometry has a lot associated with on it. So when you make sure to read this book you can get a lot of benefit. The book was compiled by the very famous author. Mcdougal makes some research ahead of write this book. This book very easy to read you can obtain the point easily after perusing this book.

**Download and Read Online Structural Aspects of Quantum Field Theory and Noncommutative Geometry Gerhard Grensing #YSVQ16J7GBD**

# **Read Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing for online ebook**

Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing books to read online.

## **Online Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing ebook PDF download**

**Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing Doc**

**Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing MobiPocket**

**Structural Aspects of Quantum Field Theory and Noncommutative Geometry by Gerhard Grensing EPub**