



Quantum field theory is arguably the most far-reaching and beautiful physical theory ever constructed, with aspects more stringently tested and verified to greater precision than any other theory in physics. Unfortunately, the subject has gained a notorious reputation for difficulty, with forbidding looking mathematics and a peculiar diagrammatic language described in an array of unforgiving, weighty textbooks aimed firmly at aspiring professionals. However, quantum field theory is too important, too beautiful, and too engaging to be restricted to the professionals. This book on quantum field theory is designed to be different. It is written by experimental physicists and aims to provide the interested amateur with a bridge from undergraduate physics to quantum field theory. The imagined reader is a gifted amateur, possessing a curious and adaptable mind, looking to be told an entertaining and intellectually stimulating story, but who will not feel patronized if a few mathematical niceties are spelled out in detail. Using numerous worked examples, diagrams, and careful physically motivated explanations, this book will smooth the path towards understanding the radically different and revolutionary view of the physical world that quantum field theory provides, and which all physicists should have the opportunity to experience.

Tom Lancaster is a Lecturer in the Department of Physics at the University of Durham.

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'There is a need for a book on Quantum Field Theory that is not directed at specialists but, rather, sets out the concepts underlying this subject for a broader scientific audience and conveys joy in their beauty. Lancaster and Blundell have written with this goal in mind, and they have succeeded admirably.'

Michael Peskin, SLAC National Accelerator Laboratory, Stanford University

Cover image: *main* Quantum field theory self-assembly instructions (authors' schematic).
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OXFORD
UNIVERSITY PRESS

www.oup.com

ISBN 978-0-19-969932-2



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